AWLGRIP®

APPLICATION GUIDE

WWW.AWLGRIP.COM

EDITION 18

AkzoNobel

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GENERAL GUIDELINES
INTRODUCTION

This guide is designed to supply the professional applicator with the necessary information required to apply our products; it is not intended as a 'How To' guide for the do-it-yourselfer. We encourage you to read the entire guide carefully, especially those sections on safety before applying any product.

Material Safety Data Sheets (MSDS) should be read by the applicator before applying an Awlgrip Product. These documents contain extensive information for safe handling of our products. Please contact your local distributor or go to **www.awlgrip.com.**

Along with application systems information, the guide contains a complete section containing technical product datasheets for each product. These product datasheets contain the basic mixing and application specifications for each product. The appropriate product datasheets should be reviewed before using a product.

The Awlgrip Premium Coating Systems are available worldwide. Local regulations may limit the availability of certain products in some parts of the world. In some cases packaging will differ depending on local specifications and standards.

Please remember that the Awlgrip Premium Coating Systems are designed specifically for the pleasure craft industry and provide chemically cured finishes that are resistant to abrasion, chalking, corrosion and chemical attack. Only a complete Awlgrip Coating System will provide these characteristics.

Do not incorporate any thinner, additive, modifier, converter, primer or related product that is not specifically recommended by Awlgrip into any Awlgrip Coating System. Such substitution can jeopardize the unique characteristics of the Awlgrip Coating System resulting in poor cosmetics and/or premature failure of the system and will void Awlgrip's Limited Warranty.

SAFETY CONSIDERATIONS

Awlgrip is committed to providing you with state-of-the-art chemical coatings technology and systems. With that commitment comes a responsibility of much greater consequence, a dedication to provide you with the necessary safety information concerning the application and handling of these products.

Please read the cautions and warnings on the Awlgrip labels carefully. They are there for your benefit. The recommended safety equipment ensures the safe use of our products.

If you have any questions, contact:

ASIA: +65 62615033
AUSTRALIA: 13 11 26
EUROPE: 32.14.25.7770
NEW ZEALAND: 0800 764 766
NORTH AMERICA: CHEMTREC (800) 424–9300

Material Safety Data Sheets (MSDS's) are available on **awlgrip.com.**

SURFACE CLEANING

A clean, dry surface is essential to the success of any coatings application. Our systems include products and procedures which will enable you to obtain proper surface conditions.

Remember – Clean ***before*** sanding. Sanding often melts grease, wax and oils into the surface making it impossible to obtain a clean surface.

Detergent Scrubbing

Many applicators scrub the surface they are going to paint with powdered household scouring cleanser and a 3M™ Scotch-Brite® Pad before any other prep work is performed. This is an excellent practice as careful observation of the rinse water will tell you when you have a clean surface. Breaks, holes or beading of the rinse water indicates areas which need additional attention.

Two Cloth Cleaning Method

1. The surface should be cleaned thoroughly of all dust, using a vacuum or clean dry compressed air to blow while wiping with clean, oil free, dry cotton cloths.
2. Soak one cloth in **Awlgrip Wipe-Down Solvent** (NA/AP**: Awlprep T0008**, **Awlprep Plus T0115** or **Awlprep 400 T0170**; EU**: Surface Cleaner T0340**). Use this cloth to wet the surface.
3. Use a dry second cloth to wipe the surface dry and lift the contamination off the surface.
   * Work small areas (4 sq. ft or less) to keep the surface cleaner from drying before the second rag wipes it clean.
   * Repeat steps 2 and 3, changing rags frequently, until the surface is residue free.

WARNING:
Wiping the surface with one wet cloth only smears contamination around. Be sure the cloth used does not have any contaminates; clean cotton works the best. The surface must be dry before using tack rags.

DELUXE TACK RAGS

Tack rags are used just before painting to remove the lightest dust or dirt from what would otherwise be considered a clean, ready to paint surface.

Tack rags are used before final primer and topcoat applications. They are usually not needed when applying fairing materials or surfacers.

When tacking a primer or topcoat surface, use only **Deluxe Tack Rags (#73009)**. They have the proper type and amount of resin to pick up dust without leaving contamination on the surface. Other tack rags can easily leave a residue that causes fisheyes and cratering of the topcoat. Be careful not to use excessive hand pressure when using tack rags. A light dusting is all that is necessary, let the resin do the work. Even **Deluxe Tack Rags** can leave a resin on the surface if used improperly.

Notes:

TAPING AND MASKING MATERIALS

Masking Tapes:

Masking tapes are produced in various grades. Review tape manufacturers' recommendations and then make your selection based on your working conditions and technique. A minimum requirement is tape designed for use with urethane and epoxy coatings.

Common problems with tapes not designed for use with these types of coatings are poor solvent resistance, creeping, adhesive residue remaining on the surface and poor moisture resistance.

For striping, a thin plastic tape such as 3M Fine Line® #218 is recommended. Pushing the edge of the tape to be painted down with fine sandpaper, a green Scotch-Brite® pad and/or a plastic spreader will help insure a sealed edge and a fine, even, no creep line.

Masking Paper:

Masking papers are manufactured in various grades. The solvents in urethane and epoxy coatings require a paper with excellent resistance to solvent penetration. 3M's Scotchblok® Masking Paper is highly recommended.

WARNING:

1. Do not use lightweight plastic masking materials that 'cling' to the surface. This can leave tracks or marks on the paint film which cannot be removed.
2. Do not use plastic sheeting on a surface longer than two days. Condensation can form under the plastic causing blistering, bubbling or loss of gloss in the paint finish.
3. Do not use newsprint or newspapers; these can stain the paint finish.

COMPRESSORS AND COMPRESSED AIR

Clean, oil-free, dry air is essential for operating spray equipment, air power tools and blowing off surfaces prior to priming or painting.

Air supply lines should have oil and water separators. For separators to be effective, air from the compressor must have time to cool before reaching them. Usually a minimum of 30 ft. is required between the compressor and the separators. Additional separators may be required.

SANDING AND SANDPAPER

Read all health and safety information contained in Material Safety Data Sheets. Always thoroughly clean the surface before sanding. See surface cleaning on ***page 3***.

1. When sanding or grinding, work in areas with adequate ventilation, maintaining a continuous flow of fresh air.
2. Do not breathe sanding or grinding dust.
3. Keep sanding dust off skin and out of eyes.
4. Wear a properly fitted chemical cartridge/mechanical filter respirator (such as 3M 6000 series or equivalent) during sanding, grinding and blowing off.
5. Keep bystanders and unprotected workers out of sanding and grinding areas.

Proper sanding promotes adhesion for the next coat. Excessive sanding or using too coarse a grit can open pores in the surface or create a sanding scratch profile too deep to be filled by the next product to be applied. This can cause porosity holes in gelcoat and sand scratch print–through.

There are four basic types of sanding and throughout this book, references are made to each type. All four types may be accomplished by hand, machine or block. The surface shape, size and quality requirements will determine the tools or combination of tools required.

1. **Scratch Sanding:** Scuffing or scratching a smooth surface to create a profile to promote adhesion of another coating. 3M Scotch-Brite® Pads #'s 7447 or 7448 may be used to push stripe edges down or remove light overspray from primer. Caution is recommended when considering Scotch-Brite® for scratch sanding between topcoats as adhesion will be questionable. Sandpaper is recommended.
2. **Smooth Sanding:** Sanding the surface smooth of orange peel or fine texture. This is usually done with small blocks, small pad machine or hand sanding using relatively fine grits. This type of sanding is not considered fairing.
3. **Block Sanding:** Block sanding is used for fairing. Block sanding by hand-board or machine is used to level a surface. The depth and height of the highs and lows, and the width between them, will determine the size block as well as the amount of filler/surface products needed to fair the surface.
4. **Grinding:** Is for the removal of material. Grits are coarse, 24–36–60, with the primary purpose being removal of undesirable material and creating surface profile. Grinding would be used to brighten corroded metal, remove old coatings and to remove heavily oxidized or damaged gelcoat.

SANDING GRIT CROSS REFERENCE:

The finish sanding grits in this book are for 3M Tri-M-ite® Fre-Cut® sandpaper.

When choosing 3M Gold, or Wetordry® sandpapers, a finer grit choice will be necessary to match the sanding scratch profile or depth of the Tri-M-ite® Fre-Cut®.

Example:

Tri-M-ite® Fre-Cut®	Gold	Imperial®	Wetordry®
220	280	280	400
320	400	400	500/600

Clears and dark topcoat colors tend to show sanding scratches more than lighter colors. Using finer grits will help overcome this condition. Use:

Tri-M-ite® Fre-Cut®	Imperial®	Wetordry®
220	280	400
320	400	500/600

to sand before applying clears or dark topcoat colors.

Notes:

APPLICATION EQUIPMENT

Ventilation/Respiratory Protection

IMPORTANT:
Use only with adequate ventilation. Maintain continuous flow of fresh air. Do not breathe vapors, spray mists or sanding dusts. Wear appropriate, properly fitted, supplied air respirator during and after application unless air monitoring demonstrates vapor and particulate levels are below applicable limits. Follow respirator manufacturer's directions for respirator use. Engineering or administrative controls should be implemented to reduce exposure. Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV's (Threshold Limit Values).

Personal Protective Equipment

CAUTION:
Do not get in eyes, on skin or on clothing. Use solvent resistant safety eyewear with splash guards. Solvent impermeable gloves, clothing and boots should be worn to prevent skin contact. When applying an **Awlgrip, Awlcraft 2000**, **Awlcraft SE** or any other isocyanate containing product, a respirator that is approved for use with such products must be used. A positive pressure air supplied respirator (TC19C NIOSH/MSHA approved) is recommended.

SPRAY EQUIPMENT

'Ten Steps to Success' –
Key points on Equipment for Awlgrip Applications

1. ***You need good quality, well maintained equipment.***
   If you are using the best paint you limit your chances of success if you are not using the best equipment in the best condition. This includes ensuring the air hoses are of the correct type and capacity.
2. ***Standardize your equipment.***
   When more than one sprayer will be working the job, it pays to have everyone using the same make and model of gun/pressure pot etc. This also includes having the same aircap, tip and nozzle, as recommended by the gun manufacturer.
3. ***Ensure clean gun/hoses/air.***
   If the air hoses are dirty; replace them. Check the air cleanliness by running air for 10–15 mins through a tack rag. Change filters and service traps regularly.
4. ***Check environmental conditions.***
   Temperature (air and substrate), Humidity and Air Flow all may need controlling to optimize your result.
5. ***Once the environmental situation is known***, choose the correct reducer and thin to the recommended viscosity.
6. ***Determine the optimum gun setup.***
   Use the '3 step fan check' to get your paint atomization set right. Check the fluid flow rate and air pressure at the gun.
7. ***Synchronize gun settings.***
   Check all sprayers have the same fluid flow and air pressure, and that these are not modified during application.

APPLICATION EQUIPMENT
continued...

8. ***Record the settings for future reference***.
9. ***Spray a test area.***
   At the start of the job and before each coat spray a decent sized area on a separate panel and check the appearance and wet film thickness.
10. ***Work well within the pot life***. As the paint continues to induct, the rheology can change, affecting the final result.

AIR ATOMIZED

For use with **Awlgrip, Awlcraft 2000**, **Awlcraft SE**, and lower viscosity Awlgrip primers such as **545 Epoxy Primer**, **321 HS Undercoat**, **Quik-Grip**, **Awlquik**, **Awlbrite** and **Awlspar**.

AIRLESS EQUIPMENT

For use with high viscosity primers, surfacers, **Awlquik**, **High Build, Hullgard, Sprayable Fairing Compound, Ultra Build** and **Awlstar Gold Label Antifouling.**

Spray Gun:.....Airless
Orifice size: ..... .028"–.043"
Fan size & angle:.....8" & 80˚ or 6" & 60˚
On a 25:1 pump, the pressure gauge should read 4.8–5.5 Bar (70–80psi).
On a 40:1 pump, the pressure gauge should read 3.4–4.1 Bar (50–60psi).

HIGH VOLUME LOW PRESSURE GUNS

True HVLP equipment operates at a maximum gun pressure of 0.7 bar (10psi). It is difficult to achieve optimum results with this equipment. Contact your local Awlgrip representative and gun manufacturer to arrange a consultation.

When consulting the DeVilbiss spray gun set-ups for Awlgrip materials on the following, please make note of the points below:

1. Gun air pressures are measured at handle with trigger pulled.
2. Some gun models and fluid tip combinations shown are not available in an 'off-the-shelf' suction gun. Customers will have to buy a pressure gun and a separate KR suction cup assembly.
3. Some Fluid Needles listed are suitable for use with more than one size fluid nozzle.
4. Care must be taken to balance fluid and air quantities and pressures or distorted fan patterns and bad spray results will occur.
5. Pot pressure given is typical for a hand held 0.6 gallon (2.2lt) Tank with 1.2–2m fluid hoses 6mm internal diameter.
6. Maximum fluid nozzle size available for this gun model.

DEVILBISS SPRAY GUN SET-UPS FOR GRAVITY GUNS

Product	Spray Gun	Fluid Nozzle Size	Fluid Nozzle Part No.	Fluid Needle Part No.	Air Cap No.	Approx. Fluid Flow	Handle Air Input Pressure
545 Epoxy Primer - Small Areas	GFG Gravity	1.1 or 1.2	AV-645-FX or FZ	JGA-421-FX or FZ	AV-4239-43 or 186+	180 - 210ml/min	2.0 - 3.0 bar (29 - 44psi)
	GTI Gravity	1.0 or 1.1	GTI-213-10 or 11-K	GTI-413-K	GTI-407-110	160 - 190ml/min	1.8 - 2.5 bar (26 - 36psi)
Awlquik Epoxy Primer/Surfacer	GFG Gravity	1.4	AV-645-FF	JGA-421-FF	AV-4239-43 or 30	180 - 200ml/min	2.5 - 3.5 bar (36 - 51psi)
	GTI Gravity	1.3	GTI-213-13-K	GTI-413-K	GTI-407-110	160 - 180ml/min	2.0 - 3.0 bar (29 - 44psi)
Epoxy Sprayable Fairing Compound - Small Areas	GFG Gravity	1.6	AV-645-FF	JGA-421-FF	AV-4239-43 or 30	160 - 180ml/min	2.5 - 3.5 bar (36 - 51psi)
	GTI Gravity	1.6	GTI-214-16-K	GTI-420-K	GTI-407-110	150 - 170ml/min	2.0 - 3.0 bar (29 - 44psi)
Ultra Build Epoxy Primer High Build Epoxy Primer - Small Areas	GFG Gravity	1.4	AV-645-FF	JGA-421-FF	AV-4239-43 or 30	180 - 200ml/min	2.5 - 3.5 bar (36 - 51psi)
	GTI Gravity	1.3	GTI-213-13-K	GTI-413-K	GTI-407-110	160 - 180ml/min	2.0 - 3.0 bar (29 - 44psi)
Hullgard Primer	GFG Gravity	1.8, 2.0 or 2.2	AV-645-EX, D or DE	JGA-421-DEX	AV-4239-43, 30 or MB-4039-880	220 - 280ml/min	2.5 - 3.5 bar (36 - 51psi)
	GTI Gravity	1.8, 2.0 or 2.2	GTI-214-18, 20 or 22-K	GTI-420-K	GTI-407-110	210 - 270ml/min	2.0 - 3.0 bar (29 - 44psi)
Awlstar Gold Label Antifouling	GFG Gravity	1.8, 2.0 or 2.2	AV-645-EX, D or DE	JGA-421-DEX	AV-4239-43, 30 or MB-4039-880	220 - 280ml/min	2.5 - 3.5 bar (36 - 51psi)
	GTI Gravity	1.8, 2.0 or 2.2	GTI-214-18, 20 or 22-K	GTI-420-K	GTI-407-110	210 - 270ml/min	2.0 - 3.0 bar (29 - 44psi)
Topcoats F/G/H Line	GFG Gravity	1.1	AV-645-FX	JGA-421-FX	AV-4239-43 or 186+	180 - 200ml/min	2.0 - 3.0 bar (29 - 44psi)
	GTI Gravity	1.1	GTI-213-11-K	GTI-413-K	GTI-407-110	170 - 190ml/min	1.8 - 2.5 bar (26 - 36psi)
Max Cor CF	GFG Gravity	1.4 or 1.6	AV-645-FF or FW	JGA-421-FF	AV-4239-43 or 30	100 - 140ml/min	2.5 - 3.5 bar (36 - 51psi)
	GTI Gravity	1.4 or 1.6	GTI-213-14-K or GTI-214-16-K	GTI-413-K or GTI-420-K	GTI-407-110	90 - 130ml/min	2.0 - 3.0 bar (29 - 44psi)
321 HS Undercoat	GFG Gravity	1.6-2.0	AV-645-FW, EX, D	JGA-421-FF, DEX	AV-4239043, or 30	250-300/min	2.0 - 3.0 bar (29 - 44 psi)
	GTI Gravity	1.6-2.0	GTI-214-16-K/GTI-214-20-K	GTI-420K	GTI-407-110	250-300ml/min	2.0 - 3.0 bar (29 - 44 psi)

DEVILBISS SPRAY GUN SET-UPS FOR SUCTION GUNS

Product	Spray Gun	Fluid Nozzle Size	Fluid Nozzle Part No.	Fluid Needle Part No.	Air Cap No.	Approx. Fluid Flow	Handle Air Input Pressure
545 Epoxy Primer - Small Areas	JGA Suction	1.1 or 1.2	AV-645-FX or FZ	JGA-421-FX or FZ	AV-4239-43 or 186+	160 - 190ml/min	2.0 - 3.0 bar (29 - 44psi)
	GTI Suction	1.2	GTI-213-12-K	GTI-413-K	GTI-407-110	160 - 180ml/min	1.8 - 2.5 bar (26 - 36psi)
Awlquik Epoxy Primer/Surfacer	JGA Suction	1.4	AV-645-FF	JGA-421-FF	AV-4239-43 or 30	160 - 180ml/min	2.5 - 3.5 bar (36 - 51psi)
	GTI Suction	1.4	GTI-213-14-K	GTI-413-K	GTI-407-110	150 - 170ml/min	2.0 - 3.0 bar (29 - 44psi)
Epoxy Sprayable Fairing Compound - Small Areas	JGA Suction	1.8	AV-645-EX	JGA-421-DEX	AV-4239-43 or 30	160 - 180ml/min	2.5 - 3.5 bar (36 - 51psi)
	GTI Suction	18	GTI-214-18-K	GTI-420-K	GTI-407-110	150 - 170ml/min	2.0 - 3.0 bar (29 - 44psi)
Ultra Build Epoxy Primer High Build Epoxy Primer - Small Areas	JGA Suction	1.4	AV-645-FF	JGA-421-FF	AV-4239-43 or 30	160 - 180ml/min	2.5 - 3.5 bar (36 - 51psi)
	GTI Suction	1.4	GTI-213-14-K	GTI-413-K	GTI-407-110	150 - 170ml/min	2.0 - 3.0 bar (29 - 44psi)
Hullgard Primer	JGA Suction	1.8	AV-645-EX, D or DE	JGA-421-DEX	AV-4239-43, 30 or MB-4039-880	200 - 220ml/min	2.5 - 3.5 bar (36 - 51psi)
	GTI Suction	1.8, 2.0 or 2.2	GTI-214-18, 20 or 22-K	GTI-420-K	GTI-407-110	190 - 250ml/min	2.0 - 3.0 bar (29 - 44psi)
Awlstar Gold Label Antifouling	JGA Suction	1.8	AV-645-EX, D or DE	JGA-421-DEX	AV-4239-43, 30 or MB-4039-880	200 - 220ml/min	2.5 - 3.5 bar (36 - 51psi)
	GTI Suction	1.8, 2.0 or 2.2	GTI-214-18, 20 or 22-K	GTI-420-K	GTI-407-110	190 - 250ml/min	2.0 - 3.0 bar (29 - 44psi)
Topcoats F/G/H Line	JGA Suction	1.1	AV-645-FX	JGA-421-FX	AV-4239-43 or 186+	160 - 180ml/min	2.0 - 3.0 bar (29 - 44psi)
	GTI Suction	1.2	GTI-213-12-K	GTI-413-K	GTI-407-110	160 - 180ml/min	1.8 - 2.5 bar (26 - 36psi)
Max Cor CF	JGA Suction	1.4, 1.6 or 1.8	AV-645-FF, FW or EX	JGA-421-FF or DEX	AV-4239-43 or 30	80 - 140ml/min	2.5 - 3.5 bar (36 - 51psi)
	GTI Suction	1.4, 1.6 or 1.8	GTI-213-14-K, GTI-214-16-K or GTI-214-16-K	GTI-413-K or GTI-420-K	GTI-407-110	70 - 130ml/min	2.0 - 3.0 bar (29 - 44psi)
321 HS Undercoat	JGA Suction	1.6 - 2.0	AV-645-FW, EX, D	JGA-421-FF, DEX	AV-4239-43, or 30	250 - 300ml/min	2.0 - 3.0 bar (29 - 44 psi)
	GTI Suction	1.6 - 2.0	GTI-214-16-K/GTI-214-20-K	GTI-420K	GTI-407-110	250 - 300ml/min	2.0 - 3.0 bar (29 - 44 psi)

DEVILBISS SPRAY GUN SET-UPS – PRESSURE POT

Product	Spray Gun	Fluid Nozzle Size	Fluid Nozzle Part No.	Fluid Needle Part No.	Air Cap No.	Handle Air Input Pressure	Approx. Fluid Flow	Pot Pressure (see notes)
545 Epoxy Primer - Small Areas	JGA Suction	1.1	AV-645-FX	JGA-421-FX	AV-4239-43 or 765	2.5 - 3.5 bar (36 - 51psi)	170 - 270ml/min	0.7 - 1.0 bar (10 - 15psi)
	GTI Suction	1.2	GTI-213-12-K	GTI-449-12-K	GTI-407-110 or 122	2.0 - 3.0 bar (29 - 44psi)	180 - 280ml/min	0.7 - 1.0 bar (10 - 15psi)
545 Epoxy Primer - Large Areas	JGA Suction	1.4	AV-645-FF	JGA-421-FF	AV-4239-30 or 765	2.5 - 3.5 bar (36 - 51psi)	200 - 300ml/min	0.7 - 1.0 bar (10 - 15psi)
	GTI Suction	1.4	GTI-213-14-K	GTI-449-14-K	GTI-407-110 or 122	2.0 - 3.0 bar (29 - 44psi)	200 - 300ml/min	0.7 - 1.0 bar (10 - 15psi)
Awlquik Epoxy Primer/Surfacer	JGA Suction	1.4	AV-645-FF	JGA-421-FF	AV-4239-30 or 765	2.5 - 3.5 bar (36 - 51psi)	180 - 280ml/min	0.7 - 1.0 bar (10 - 15psi)
	GTI Suction	1.4	GTI-213-14-K	GTI-449-14-K	GTI-407-110 or 122	2.0 - 3.0 bar (29 - 44psi)	180 - 280ml/min	0.7 - 1.0 bar (10 - 15psi)
Epoxy Sprayable Fairing Compound - Small Areas	JGA Suction	1.8	AV-645-EX	JGA-421-DEX	AV-4239-765 or MB-4039-880	2.5 - 3.5 bar (36 - 51psi)	170 - 270ml/min	1.0 - 2.0 bar (15 - 29psi)
	GTI Suction	1.8	GTI-214-18-K	GTI-420-K	GTI-407-122	2.0 - 3.0 bar (29 - 44psi)	170 - 270ml/min	1.0 - 2.0 bar (15 - 29psi)
Epoxy Sprayable Fairing Compound - Large Areas	JGA Suction	2.2	AV-645-D	JGA-421-DEX	MB-4039-88	2.5 - 3.5 bar (36 - 51psi)	210 - 310ml/min	1.0 - 2.0 bar (15 - 29psi)
	GTI Suction	2.2	GTI-214-22-K	GTI-420-K	GTI-407-122	2.5 - 3.5 bar (36 - 51psi)	210 - 310ml/min	1.0 - 2.0 bar (15 - 29psi)
Ultra Build Epoxy Primer High Build Epoxy Primer - Small Areas	JGA Suction	1.4	AV-645-FF	JGA-421-FF	AV-4239-30 or 765	2.5 - 3.5 bar (36 - 51psi)	170 - 270ml/min	0.7 - 1.0 bar (10 - 15psi)
	GTI Suction	1.4	GTI-213-14-K	GTI-449-14-K	GTI-407-110 or 122	2.0 - 3.0 bar (29 - 44psi)	170 - 270ml/min	0.7 - 1.0 bar (10 - 15psi)
Ultra Build Epoxy Primer High Build Epoxy Primer - Large Areas	JGA Suction	1.8	AV-645-EX	JGA-421-DEX	AV-4239-765 or MB-4039-880	2.5 - 3.5 bar (36 - 51psi)	210 - 310ml/min	0.7 - 1.0 bar (10 - 15psi)
	GTI Suction	1.8	GTI-214-18-K	GTI-420-K	GTI-407-122	2.0 - 3.0 bar (29 - 44psi)	210 - 310ml/min	0.7 - 1.0 bar (10 - 15psi)
Hullgard Primer	JGA Suction	1.8, 2.0 or 2.2	AV-645-EX, D or DE	JGA-421-DEX	AV-4239-765 or MB-4039-880	2.5 - 3.5 bar (36 - 51psi)	210 - 350ml/min	0.7 - 1.0 bar (10 - 15psi)
	GTI Suction	1.8, 2.0 or 2.2	GTI-214-18, 20 or 22-K	GTI-420-K	GTI-407-122	2.0 - 3.0 bar (29 - 44psi)	210 - 350ml/min	0.7 - 1.0 bar (10 - 15psi)
Awlstar Gold Label Antifouling	JGA Suction	1.8, 2.0 or 2.2	AV-645-EX, D or DE	JGA-421-DEX	AV-4239-765 or MB-4039-880	2.5 - 3.5 bar (36 - 51psi)	210 - 350ml/min	0.7 - 1.0 bar (10 - 15psi)
	GTI Suction	1.8, 2.0 or 2.2	GTI-214-18, 20 or 22-K	GTI-420-K	GTI-407-122	2.0 - 3.0 bar (29 - 44psi)	210 - 350ml/min	0.7 - 1.0 bar (10 - 15psi)
Topcoats F/G/H Line	JGA Suction	1.1	AV-645-FX	JGA-421-FX	AV-4239-43 or 765	2.5 - 3.5 bar (36 - 51psi)	170 - 270ml/min	0.7 - 1.0 bar (10 - 15psi)
	GTI Suction	1.2	GTI-213-12-K	GTI-449-12-K	GTI-407-110 or 122	2.0 - 3.0 bar (29 - 44psi)	180 - 280ml/min	0.7 - 1.0 bar (10 - 15psi)
Max Cor CF	JGA Suction	1.4, 1.6 or 1.8	AV-645-FF, FW or EX	JGA-421-FF or DEX	AV-4239-765 or 797	2.5 - 3.5 bar (36 - 51psi)	90 - 230ml/min	1.0 - 2.0 bar (15 - 29psi)
	GTI Suction	1.4, 1.6 or 1.8	GTI-213-14-K, GTI-214-16-K or GTI-214-16-K	GTI-449-14-K or GTI-420-K	GTI-407-110 or 122	2.0 - 3.0 bar (29 - 44psi)	90 - 230ml/min	1.0 - 2.0 bar (15 - 29psi)
321 HS Undercoat	JGA Suction	1.6 - 1.8	AV-645-FW, EX	JGA-421-FF, DEX	AV-4239-43, or 30	1.8 - 2.5 bar (26 - 36 psi)	250 - 300ml/min	1.0 - 2.0 bar (15 - 29psi)
	GTI Suction	1.6 - 1.8	GTI-214-16-K/GTI-214-20-K	GTI-420K	GTI-407-110	1.8 - 2.5 bar (26 - 36 psi)	250 - 300ml/min	1.0 - 2.0 bar (15 - 29psi)

Notes:

APPLICATION EQUIPMENT
BRUSHES AND ROLLERS

Use brushes and rollers which are specified for use with urethanes and epoxies. Household types will 'melt' because of their lack of solvent resistance. The listed products from Corona Brushes and Redtree Industries have proven to perform satisfactorily with our products. Equivalent products from other manufacturers may be satisfactory as well.

BRUSHES:

Corona: Heritage® or Urethaner® brushes are recommended for most work; or a Europa® if a thinner brush is needed for fine detail work.

Redtree: The Badger®, Onyx®, and Chinese Ox® are recommended for fine finish work. The Fooler® is recommended for epoxy coatings and maintenance grade work.

It is sometimes helpful to use at least two brushes. Keep one soaking in T0031 while using the other. Switch brushes periodically to keep material from building up in the heel.

TIP:
Remove excess reducer thoroughly from the brush that was soaking before using again. Spin brushes with a brush spinner for best results.

ROLLER COVERS:

Corona: The Glasskoter® R101F (1/8" nap), and R201F (3/8" nap) are conventional mohair type roller covers. The Foam Slicker® F780–012F is a foam cover.

Redtree: The Deluxe Mohair® R–11PH (3/16" nap) is recommended for topside enamels and varnishes. The Foam Roller® (1/8" nap) is designed for all urethanes and epoxies. The Dynex® R–22PH (3/8" nap) is recommended for bottom paints, epoxies and resins.

A brush should be used for tipping off the paint to remove any bubbles or stipples left by even the shortest nap rollers. Use fresh T0002 and/or T0031 to clean or soak equipment. Always keep extra equipment handy on the job.

WARNING:
1. Never soak brushes in conditioners, oils or turpentine.
2. Foam brushes become soft and 'melt' into the coatings. They are only suitable for tipping roller stipple on small projects.

PAINTING ENVIRONMENT

Awlgrip Urethane Topcoats require three cure cycles.

First Cure Cycle: This cycle requires 12–24 hours at the standard conditions of 77˚F (25˚C), 50% R.H. When this stage is complete the painted surface can be handled; masking tape can be applied for striping and the finish appears to be dry. The coating can now be exposed to weather.

Second Cure Cycle: The second cure requires 72–96 hours at 77˚F (25˚C), 50% R.H. During this stage the film becomes much harder. Abrasion and chemical resistance develop. After the second cure cycle is complete the boat can be safely returned to limited service.

Third Cure Cycle: This third cycle requires 14–21 days at 77˚F (25˚C), 50% R.H. During this time the coating develops all its physical properties. The casual observer may not be able to determine a significant difference between Cycle 2 and Cycle 3. However, the cure is not complete during Cycle 2 and severe service conditions should be avoided.

These cure calculations are based on exposure at standard conditions (77˚F (25˚C), 50% R.H.) and with coatings applied at the recommended film thickness.

CAUTION:
Cure rates are subject to many variables. These include, but are not limited to: ambient temperature, substrate temperature, relative humidity, applied film thickness, reducer selection, use of accelerators, retarders and air flow. Temperatures warmer than the standard conditions of 77˚F (25˚C), 50% R.H. will speed dry and cure times. Cooler temperatures will create slower dry and cure times.

Moisture Complications

Moisture on the surface can be disastrous. Problems are noticable when moisture comes in contact with the **Awlgrip** or **Awlcraft 2000 Topcoats** before they complete the first stage of curing.

Results can be:
- overall loss of gloss and image
- flat spots
- a rough or grainy surface
- blistering

These problems can also occur as a result of overcoating a primed surface that has not adequately cured or applying the topcoat to a surface that is contaminated with moisture.

Avoid applying topcoats in situations where rain, dew, fog or other condensation can contact the paint surface before the coating has completed the first stage of cure. Whenever feasible, erect some kind of cover or shade over the work area. This cover will help keep dew from the curing finish.

Condensation occurs when the air becomes completely saturated with moisture and the temperature drops below the dew point. At standard conditions (77˚F (25˚C), 50% R.H.), avoid applying topcoats when the temperature could drop below the dew point within 6–8 hours after the application.

ABOVE WATERLINE SYSTEMS
SURFACE PREPARATION

There are many situations where repainting is needed but removing all the old paint is impractical. However, the cost of labor and materials for a sand and repaint is significant and there is no gain in painting over a system that is severely deteriorated or chemically incompatible with the Awlgrip Systems.

When considering such a project, carefully evaluate the surface and the condition of the current topcoat and the coatings under it all the way down to the substrate. Old paint that is peeling extensively, heavily chalked, blistered or cracked should be completely removed.

Metal substrates should be thoroughly examined for corrosion. This includes obvious corrosion damage and slight blistering which may indicate corrosion just ready to break the surface. Large blisters or soft spots in the film may indicate old fairing work that is failing. On fiberglass substrates these conditions may be indicative of voids in the glass system or osmotic blistering. These conditions must be repaired before applying new coatings.

After initial evaluation perform the following three tests, in the order listed, to determine the adhesion of the old system and its chemical compatibility with the Awlgrip Systems.

Performing these tests on more than one area will add validity to the results. Make notes, collect chips and take photos for the job file. If any of the following compatibility tests fail, the old coatings must be removed down to a sound coating layer or to the substrate.

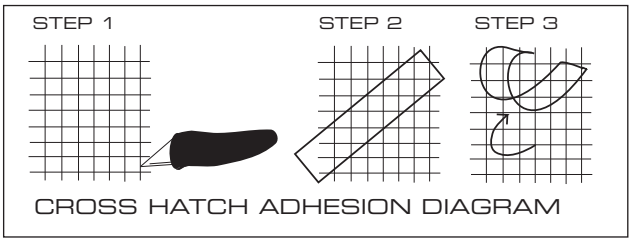
Please take this testing seriously as new epoxy-urethane systems have failed because of unstable underlying coatings and fillers. While the tests are not fool-proof, if strictly followed, they can be very accurate. Diligence in performing the tests can save hours of costly labor downtime and wasted materials.

Assuming the existing paint system passes the adhesion and compatibility tests, repainting would include the following:

- Inspection of the surface
- Removal of coatings which fail the adhesion and compatibility tests
- Repair of defects
- Priming the entire surface
- Application of an **Awlgrip** or **Awlcraft 2000 Topcoat** (above water)

Conditions and remedies should be discussed with the owner, possibly using a condition report or making notes in the painting contract. Areas that were not repaired because of time or budget must be noted on the final invoice.

SURFACE PREPARATION
COATINGS COMPATIBILITY & ADHESION TESTS (ABOVE WATER ONLY)



CROSS HATCH ADHESION DIAGRAM

Test One: Cross Hatch Adhesion (See diagram above)

1. Select test area(s) on the surface to be painted. Thoroughly clean, de-wax and degrease this area.
2. With a sharp blade, cut 6 lines vertically and 6 lines horizontally to give a box of 25 squares. The cuts must be deep enough to reach the substrate. On thick fairing systems this test may have to be done to several different layers.
3. Apply 3M #610, #895 or #898 3M Scotch Brand Filament Tape (or similar type of packaging tape) over the scribed area, making certain that the tape is tightly adhered to the test surface. **Do not use masking tape.**
4. With an abrupt yank, pull the tape back parallel to the surface. Pulling the tape straight up will give no test at all.
5. Examine the test surface. If any square of old coating in the scribed area is removed, the adhesion has failed. All the failed layers must be removed.

Test Two: Solvent Resistance

1. Saturate a cotton ball or small wad of cloth with one of the **Awlgrip Topcoat** or **Primer Reducers** (**T0003 or T0006**).
2. Tape the reducer-saturated ball to the scribed area surface for 30 minutes.
3. After 30 minutes remove the cotton ball. If the reducer has dissolved or severely softened the old coating, the coating is incompatible and must be removed. If the scribed area has remained intact, allow a 15 minute recovery period and repeat all steps in Test One again.
4. If any square areas are removed, all the failed layers must be removed.

Test Three: Coating Compatibility

If the old coating is still intact after Tests One and Two, perform Test Three.

1. Lightly sand a small test area with 220 grit paper. Clean the sanded areas thoroughly with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** ; EU: **Surface Cleaner T0340**) and using clean cloths.
2. Paint a small patch of the surface with **Awlgrip Topcoat.** Do not use masking tape on the edges of the test application as the paint edges created by the tape will ‘print through’ and be visible in the finish.

SURFACE PREPARATION
COATINGS COMPATIBILITY & ADHESION TESTS (ABOVE WATER ONLY)
continued...

3. Allow the coated area to cure for 24 hours, at temperatures above 77˚F (25˚C).
4. After the area has been allowed to cure, check for intercoat adhesion with Test One — Cross Hatch Adhesion Test.
5. If there is no lifting, wrinkling or loss of adhesion caused by this cross hatch test, the Awlgrip Systems are compatible and surface preparation can begin.

If this test fails all coatings must be removed down to a sound, well adhered, compatible coating or to the original substrate.

SURFACE PREPARATION
PREVIOUSLY PAINTED SURFACES

Surfaces that are sound and chemically compatible with Awlgrip Systems and no heavy filling or fairing is required.

1. Thoroughly clean the surface, scrubbing with powdered household scouring cleanser. Wipe with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170**; EU: **Surface Cleaner T0340**), using the Two Cloth Method. These procedures are outlined on ***page 3***.
2. Inspect the surface for imperfections. Mark the imperfections with a pencil. Do not use felt tip marker or ink pen.
3. Sand the imperfections with 80 grit paper creating both a feathered edge and a proper surface profile over which primers and fillers can be applied.

CAUTION:
If polyester putties are used they should be kept to an absolute minimum. Only use polyester putties for pinholes and very slight scratches. Polyester putties shrink and distort rapidly. Epoxy fillers are much more stable products. Do not apply polyester putties over or under **Awlfair LW.**

4. Prime these filled and sanded areas with **545 Epoxy Primer** (Spray). Allow to cure 12 hours or overnight.

NOTE: For large filled areas use of **545 Epoxy Primer** is not recommended directly to the filler. Prime these areas with **High Build**.

Priming options: 321 HS Undercoat can be used in place of **545 Epoxy Primer** in areas with VOC restrictions. For brush/roll & tip applications **Awlquik** may be preferred in place of **545 Epoxy Primer**. Contact your local Technical Representative for alternative schemes.

After sanding the entire surface is now ready for priming, ***see page 36***.

SURFACE PREPARATION
PREVIOUSLY PAINTED SURFACES
continued...

Surfaces that are rough and require additional surfacing/filling.

1. Thoroughly clean the surface, scrubbing with powdered household scouring cleanser. Wipe with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170**; EU: **Surface Cleaner T0340**), using the Two Cloth Method. These procedures are outlined on ***page 3***.
2. Inspect the surface for imperfections. Mark the imperfections with a pencil. Do not use felt tip marker or ink pen.
3. Sand the imperfections with 80 grit paper creating both a feathered edge and a proper surface profile over which primers and fillers can be applied.

NOTE: On metal boats any bare metal exposed by sanding must be primed with **Hullgard Extra** or **Max Cor CF** before applying other primers or fillers as necessary.

CAUTION:
Do not use a roller to apply the primer as the sharp metal will snag fibers from the roller. These fibers can act as wicks for moisture or other contamination to enter the paint film. This can lead to premature failure of the Awlgrip Coating System.

For further information contact your Technical Service Representative. Also see aluminum, steel or blister repair sections for details on bare metal surface preparation and priming.

CAUTION:
If polyester putties are used they should be kept to an absolute minimum. Only use polyester putties for pinholes and very slight scratches or dents. Polyester putties shrink and distort rapidly. Epoxy fillers are much more stable products. Do not apply polyester putties over or under **Awlfair LW.**

4. Sand the entire surface smooth with 80–120 grit paper. Remove all gloss from the previous finish.
5. Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue. Wipe surface with (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170;** EU: **Surface Cleaner T0340**) using the Two Cloth Method.
6. Prime the entire surface with **High Build**. Two coats may be needed. Allow to cure 12 hours or overnight.

Other alternatives schemes, such as replacing **High Build** with **Ultra Build**, are available. Contact your local Technical Service Representative for more information.

After sanding, the surface is now ready for fairing and surfacing if necessary. (See Fairing and Surfacing section for detailed information **– *see page 46***).

SURFACE PREPARATION
GELCOAT & FIBERGLASS

Gelcoat/fiberglass surfaces are found in four basic forms:

1. New gelcoat and aged gelcoat which is sound; basically free of any crazing, damage or delamination.
2. Aged gelcoat with minor crazing and oxidation but no major cracking, crazing, damage or delamination.
3. Heavily crazed, cracked, broken and delaminated surfaces.
4. Raw fiberglass, laminating resin with no gelcoat.

Most projects involving molded fiberglass/gelcoat usually fall into categories 1 or 2 and require very little filling or fairing. Refinishing these surfaces can be accomplished with relatively simple systems of:

- Cleaning and de–waxing the surface
- Sanding the surface
- Applying **545 Epoxy Primer**
- Topcoat application

Surface conditions described in categories 3 or 4 require more extensive attention to abrading the surface and the use of fairing and surfacing products.

Heavily crazed and damaged surfaces require thorough inspection and removal of all damaged or deteriorated materials. Cracking and crazing caused by excessive flexing of the surface may require structural reinforcement to reduce the flexing. Deep crazing and cracking must be ground out before filling to change the dynamics of the working surfaces. Just filling and painting over cracking and crazing usually results in the defect quickly 'printing through' in the new finish.

Raw laminating resin is very hard and slick compared to pigmented gelcoats and fairing compounds.

Both polyester and epoxy resins must be washed with household cleanser and water before sanding or grinding. Washing removes mold release materials, un-reacted styrene on polyester surfaces and amine residue on epoxy resins.

Raw fiberglass resin must be ground with 36–60 grit paper until 100% of the surface is dull, with a 36–60 grit surface profile. Allowing even small spots of un-sanded resin in the weave of the fiber strands can lead to adhesion failures.

Fiberglass repairs often have an extra layer of laminating resin applied to give the repair a smoother finish. This allows easy sanding without exposing the fiberglass itself.

Even though these areas may appear fair and true it is important to give them the full 36–60 grit grind to ensure good adhesion of the coating system.

SURFACE PREPARATION
GELCOAT & FIBERGLASS

New and Sound Aged Gelcoat Preparation

Removal of all surface contamination (waxes, mold release products, dirt, grease, oil and mildew) is imperative to ensure adhesion of the new Awlgrip Systems.

NOTE: Always clean the surface before sanding. Sanding the surface with sandpaper does not remove wax or other contamination. Sanding spreads the contamination from one area to another. Sanding often melts greases and oils into the surface making it impossible to obtain a clean surface.

1. Thoroughly clean and degrease the surface. Use commercial detergents, steam cleaners or pressure washers. Be sure all detergent residue is rinsed from the surface. Use **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) as a final wipe down of the surface.
2. To remove surface contaminants such as grease, mold releases and flushing oils use a commercial detergent. Scrub with a sponge, soft brush, or Scotch-Brite® pad as necessary or alternatively use pressure washers/steam cleaners. Rinse surface thoroughly to remove all soap residue. Repeat process until rinse water 'sheets out' over the entire surface with no breaks or holes in the water film. Allow to dry. Use **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115** ; EU: **Surface Cleaner T0340**) as a final wipe down of the surface.
3. Inspect the surface for pinholes and small scratches. Mark the imperfections with a pencil. Do not use a felt tip marker.
4. Sand out and feather any scratches or dents with 80 grit paper. Sand any raw resin until completely dull.

CAUTION:
Do not sand excessively. This will create porosity in the surface that will have to be filled.

5. Blow off the surface with clean, dry, compressed air while dry wiping to remove sanding dust and residue. Then wipe with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170**; EU: **Surface Cleaner T0340**) using the Two Cloth Method.
6. Brush or roll sanded areas with **Hullgard Extra**.
7. If necessary, fill scratches, gouges and dents with **Awlfair LW**. Allow to cure 12+ hours.

CAUTION:
If polyester putties are used they should be kept to an absolute minimum. Only use polyester putties for pinholes and very slight scratches or dents. Polyester putties shrink and distort rapidly. Epoxy fillers are much more stable.

8. Sand the whole surface smooth with 80–120 grit paper. Remove all gloss from the gelcoat, oxidized gelcoat and lightly crazed areas. Feather any dents or scratches. Do not sand excessively. This will create porosity in the surface that will have to be filled.

SURFACE PREPARATION
GELCOAT & FIBERGLASS continued...

9. Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue. Wipe surface with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170**; EU: **Surface Cleaner T0340**) using the Two Cloth Method.

After sanding the surface is now ready for priming, ***see page 36***.

Surfaces with heavily crazed, cracked, broken, delaminated gelcoat and raw laminating resin

1. Remove surface contaminants using a commercial detergent or a powdered household cleanser. Scrub with a sponge, soft brush or Scotch-Brite® pad as necessary. Alternatively use pressure washers/steam cleaners. Rinse surface thoroughly to remove all soap residue. Repeat process until rinse water 'sheets out' over the entire surface with no breaks or holes in the water film. Allow to dry.
2. Inspect heavily crazed areas or damaged areas for excessive flexing or structural damage. Make structural reinforcements and fiberglass repairs as needed.
3. Remove heavily crazed, broken and delaminated gelcoat or fiberglass laminate.
4. Thoroughly grind out damaged areas with a 36–60 grit paper. Heavy crazing must be completely removed. Grind raw resin areas with 36–60 grit paper.
5. Areas that have been thoroughly ground out need to be primed with **Hullgard Extra**. Two or three coats may be needed. Allow to dry 12+ hours.

Depending upon the conditions it may be possible to proceed to filling and surfacing without the need for sanding (See Fairing and Surfacing section for detailed information – ***see page 46***).

Please consult product datasheet for further details.

SURFACE PREPARATION
ALUMINUM

This section contains preparation methods for two types of aluminum surfaces:

1. Non-anodized parts

- Grinding
- Blasting
- Blister Repair

2. Anodized parts

These systems are designed to provide maximum performance of the coating system with allowances and adjustments for facility and engineering limitations. In these situations blasting or grinding the aluminum to remove the oxidization, creating clean, bright, shiny aluminum with an appropriate profile will provide excellent performance. The key here is priming the surface immediately after completing the blast or grind before the aluminum can re-oxidize. The system for blister repairs on previously painted surfaces specifically takes into account difficulties in obtaining perfect surface preparation in these situations.

NON-ANODIZED PARTS

Grinding

1. Thoroughly clean and degrease the surface. Use commercial detergents, steam cleaners or pressure washers. Be sure all detergent residue is rinsed from the surface. Use **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) as a final wipe down of the surface.

IMPORTANT:
Plan your work schedule carefully! Any area which is ground or blasted must be primed during the same work shift. Preferably within 4 hours.

2. Grind with 36 grit disc to bright, clean aluminum. The metal must be bright silver and completely free of gray oxidation. The surface profile must be a 2–3 mils profile (50–75 microns).
3. Blow off the surface thoroughly with clean, dry compressed air or vacuum to remove all grind/sanding residue and any dust or dirt. Use a brush or broom if necessary.

CAUTION:
Do not use rags to clean this surface. The sharp metal will snag fibers from the rags. These fibers can act as wicks for moisture or other contamination to enter the paint film. This can lead to premature failure of the Awlgrip Coating System.

To hold your surface preparation and prevent the need to repeat this work, the substrate should now be primed as detailed below.

IMPORTANT:
Products in Step 5 must be applied within maximum 72 hours of the completion of Step 4 (preferably within the same work shift).

SURFACE PREPARATION

ALUMINUM, NON-ANODIZED PARTS – GRINDING continued...

4. Prime the prepared aluminum with **Max Cor CF**. Spray apply 1 coat of **Max Cor CF** in one full wet coat to approximately 0.8–1.4 mils (20–34 microns) wet film thickness to achieve 0.6–1.0 mil (15–25 microns) dry film thickness.

IMPORTANT:
Allow to cure for a minimum of 17 hours.

CAUTION:
Do not use a roller to apply the primer in Step 4. See previous caution regarding wicks.

5. Apply **Hullgard Extra** by roller or spray. For spray application apply 9 mils (220 microns) wet film thickness to achieve 4 mils (100 microns) dry film thickness. Allow a minimum drying time of 3 hours at 68°F (20ºC) before proceeding.

Roller application will require at least two coats to achieve 4 mils (100 microns) dry film thickness. Allow a drying time of 3 hours at 68°F (20ºC) between coats.

Depending upon the conditions it may be possible to proceed to filling and surfacing without the need for sanding (See Fairing and Surfacing section for detailed information – ***see page 46***). Please consult product datasheet for further details.

Hotworks on the aluminum will damage the **Hullgard Extra** primer, please check with your local Technical Sales Representative for the appropriate repair guidelines.

Blasting

1. Thoroughly clean and degrease the surface. Use commercial detergents, steam cleaners or pressure washers. Be sure all detergent residue is rinsed from the surface. Use **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) as a final wipe down of the surface.

IMPORTANT:
Plan your work schedule carefully! Any area which is ground or blasted must be primed during the same work shift. Preferably within 4 hours.

2. Grit blast to bright, clean aluminum with a 2–3 mils (50–75 microns) profile. If profile is particularly jagged, grind to remove 'spikes', providing a more uniform surface.

SURFACE PREPARATION

ALUMINUM, NON-ANODIZED PARTS – BLASTING continued...

3. Blow off the surface thoroughly with clean, dry compressed air or vacuum to remove all blast/grind/sanding residue and any dust or dirt. Use a brush or broom if necessary.

CAUTION:
Do not use rags to clean this surface. The sharp metal will snag fibers from the rags. These fibers can act as wicks for moisture or other contamination to enter the paint film. This can lead to premature failure of the Awlgrip Coating System.

To hold your surface preparation and prevent the need to repeat this work, the substrate should now be primed as detailed below.

IMPORTANT:
Products in Step 5 must be applied within 72 hours of the completion of Step 4 or the surface will have to be sanded and Step 4 repeated.

4. Prime the prepared aluminum with **Max Cor CF**. Spray apply **Max Cor CF** in one full wet coat to approximately 0.8–1.4 mils (20–34 microns) wet film thickness to achieve 0.6–1.0 mils (15–25 microns) dry film thickness.

IMPORTANT:
Allow to cure for a minimum of 17 hours.

CAUTION:
Do not use a roller to apply the primer in Step 4. See previous caution regarding wicks.

5. Apply **Hullgard Extra** by roller or spray. For spray application apply 9 mils (220 microns) wet film thickness to achieve 4 mils (100 microns) dry film thickness. Allow a minimum drying time of 3 hours at 68°F (20ºC) before proceeding.

Roller application will require at least two coats to achieve 4 mils (100 microns) dry film thickness. Allow a drying time of 3 hours at 68°F (20ºC) between coats.

Depending upon the conditions it may be possible to proceed to filling and surfacing without the need for sanding (See Fairing and Surfacing section for detailed information – ***see page 46***.)

Please consult product datasheet for further details.

SURFACE PREPARATION

ALUMINUM, NON-ANODIZED PARTS – continued...

ALTERNATIVE ALUMINUM SYSTEMS

In some circumstances a full anti-corrosive/fairing system may not be required (e.g. window frames, parts etc). In such instances there are two alternative options for coating the suitably prepared aluminum— A **Fast Drying Topcoat System** or a **Build System**. Below details the surface preparation for both systems.

Fast Drying Topcoat System

1. Thoroughly clean and degrease the surface. Use commercial detergents, steam cleaners or pressure washers. Be sure all detergent residue is rinsed from the surface. Use **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) as a final wipe down of the surface.
2. Sand with 180–220 grit paper
3. Blow off the surface thoroughly with clean, dry compressed air or vacuum to remove all blast/grind/sanding residue and any dust or dirt. Use a brush or broom if necessary.
4. Apply by air atomized spray 1 coat of **Wash Primer CF** at 2 mils (50 microns) wet film thickness giving a dry film thickness of 0.25 mils (6 microns). Several passes are required with the spray gun for a good surface. The first pass should be relatively slow (5–10cm / 2–4 inches per second). This pass is to obtain basic coverage.

Following sanding, if necessary, surface is now ready for topcoat application, ***see page 48***.

Build System

1. Grind the substrate as per steps 1–3, ***page 23*** or blast the substrate as per steps 1–3, ***page 24***.
2. Apply by air atomized spray 1 coat of **Wash Primer CF** at 2 mils (50 microns) wet film thickness giving a dry film thickness of 0.25 mils (6 microns). Several passes are required with the spray gun for a good surface. The first pass should be relatively slow (5–10cm / 2–4 inches per second). This pass is to obtain basic coverage.

Following sanding, if necessary, surface is now ready for final prime and topcoat application, ***see page 48***.

IMPORTANT

While the build system will be touch dry at 24 hours at 77°F (25°C) following topcoat application, it's important for the 'controlled fusion' to fully activate and through dry. No assembly, stacking or drilling should take place prior to 2 weeks at 77°F (25°C), or 3 weeks at 55°F (13°C).

Blister Repair

This section is for repairing corrosion–related blistering on both heavily faired surfaces and surfaces with little or no fairing where obtaining ideal surface preparation and profile is not feasible.

SURFACE PREPARATION

ALUMINUM, NON-ANODIZED PARTS – BLISTER REPAIR continued...

The intact coatings around the repair area must be tested for adhesion and compatibility with the Awlgrip Systems. See Previously Painted Surfaces, – ***see page 18*** for details of these tests.

On heavily faired surfaces this system should be limited to repairs 1sq ft. (30cm^2) or less of bare metal. Repairs exposing more than 1sq ft. (30cm^2) of bare metal are indicators of serious problems in the paint system. Full repair would require removal of large areas of the coating system and preparation as per full system application.

After completion of the repairs the blistered areas and surrounding sound surfaces would be prepared and primed as per Previously Painted Surfaces – ***see page 18***.

NOTE: Corrosion, and the resultant blistering, is often caused by construction features such as stitch welded attachment of rails and brackets, contact of dissimilar metals at hardware attachments and improperly grounded electrical systems.

Repairs which only address the blister, and not the root cause of the blister, usually result in reoccurrence of the blister in the same area.

A detailed condition report should be written for those responsible for the yacht's maintenance. With the report, the owner, or owner's representative, can make an informed decision on how extensive the repair process should be.

1. Thoroughly clean and degrease the surface. Use commercial detergents, steam cleaners, or pressure washers. Be sure all detergent residue is rinsed from the surface. Use **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) for a final wipe down of the surface.

2. Grind with a 36–60 grit disk to remove blistered materials. Grind until all loose materials are removed and you reach a hard, tightly bound edge to the paint system. Then bevel/feather the edge of the repair at a 6:1 ratio. The slope of the repair must be at least 6 times the depth.

If more than 1sq ft. (30cm^2) of bare metal is exposed, re-grind the areas with a 36 grit disk until a hard, tightly bound edge is obtained.

3a. On areas where fairing will be needed: Grind bare metal with a 36–60 grit disk until bright, silver metal is obtained. After grinding, remove corrosion from the pits by spot blasting.

3b. On smooth, unfilled areas, clean the metal bright using 120–180 grit paper. Spot sand blasting may be necessary to remove corrosion from pits.

4. Blow off the surface thoroughly with clean, dry compressed air or vacuum to remove all blast/grind/sanding residue and any dust or dirt. Use a brush or broom if necessary.

SURFACE PREPARATION

ALUMINUM, NON-ANODIZED PARTS – BLISTER REPAIR continued...

To hold your surface preparation and prevent the need to repeat this work, the substrate should now be primed as detailed below.

TIP:
For the ultimate anti–corrosive scheme first prime the prepared aluminum with **Max Cor CF**.

NOTE: This must be within 4 hours of final surface preparation. Spray apply **Max Cor CF** in one full wet coat to approximately 0.8–1.4 mils (20–34 microns) wet film thickness to achieve 0.6–1.0 mils (15–25 microns) dry film thickness.

IMPORTANT:
Allow to cure for a minimum of 17 hours.

IMPORTANT:
Following removal of the blistered material and the aluminum being suitably prepared, the first coat of primer must be applied within 8 hours, ideally within 4 hours. Products in Step 5 must be applied within 72 hours of the completion of **Max Cor CF** application.

CAUTION:
Do not use a roller to apply **Max Cor CF**.
See previous caution regarding wicks.

5. Apply **Hullgard Extra** by roller or spray.
   NOTE: Only apply **Hullgard Extra** by roller if applying over **Max Cor CF** due to risk of snagging roller fibers. For spray application apply 9 mils (220 microns) wet film thickness to achieve 4 mils (100 microns) dry film thickness. Allow a minimum drying time of 3 hours at 68°F (20ºC) before proceeding.

Roller application will require at least two coats to achieve 4 mils (100 microns) dry film thickness. Allow a drying time of 3 hours at 68°F (20ºC) between coats.

Depending upon the conditions it may be possible to proceed to filling and surfacing without the need for sanding (See Fairing and Surfacing section for detailed information – **see *page 46***). Please consult product datasheet for further details.

For thin film, no fairing systems (with **Max Cor CF** applied to the repaired areas) e.g. masts, window frames and other smooth, cast or extruded parts proceed to 4b, ***see page 44***.

SURFACE PREPARATION

ANODIZED PARTS

This is designed for the coating of smooth parts which require no fairing or filling. Unlike non-anodized aluminum, anodized aluminum requires a pre-primer. This general system is for anodized mast, spars, equipment and accessories that are above deck and require no filling or fairing.

1. Thoroughly clean and degrease the surface. Use commercial detergents, steam cleaners, or pressure washers. Be sure all detergent residue is rinsed form the surface. Use **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) for a final wipe down of the surface.
2. Anodized parts should be sanded with 80–120 grit paper to 'break' the anodized surface to ensure adhesion of the pre-primer.
3. For architectural grades of anodized aluminum, the surface must be thoroughly sanded with 40–80 grit paper until a surface profile is present. The surface must then be thoroughly cleaned and degreased with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**).
4. Apply **Wash Primer CF** by spray. Apply one full wet coat to approximately 2–4 mils (50-100 microns) wet film thickness to achieve 0.25–0.50 mils (7-13 microns) dry film thickness. Allow to cure 1 hour.

After sanding the surface is now ready for priming, ***see page 44***.

TIP:
If substrate only requires pre-priming and topcoating the following **Fast Drying Topcoat System** can be applied.
Prepare the substrate as per steps 1–3 (***see page 26***). Sand with 180-220 grit sand paper. Apply by air atomized spray 1 coat of Wash Primer CF at 2 mils (50 microns) wet film thickness giving a dry film thickness of 0.25 mils (6 microns). (Several passes are required with the spray gun for a good surface. The first pass should be relatively slow (5–10 cm/ 2–4 inches per second). This pass is to obtain basic coverage). Following sanding, if necessary, surface is now ready for topcoat application, ***see page 48***.

TIP:
Alternatively, if the anodizing is removed through sanding, **Max Cor CF** can be used in place of **Wash Primer CF**. For details on the preparation and application of **Max Cor CF**, following removal of the anodized layer, please refer to the section on surface preparation and priming of non–anodized aluminum in this guide (***see page 24***).

SURFACE PREPARATION
WOOD

PAINTED SYSTEMS

Wooden boats seldom require any extensive filling or fairing. The following surface preparation system is recommended for all but the most severe cases of deterioration on a wooden boat. Contact your local Technical Sales Representative to confirm the suitability of an Awlgrip System for your wooden boat.

The Awlgrip Topcoat may crack over working seams and miters. If the paint on the boat is cracking, the seam will crack when painted with Awlgrip. The Awlgrip Topcoat may crack when previous coatings did not.

Awlgrip does not consider cracking over seams or miters a failure.

TIP:
Use of a marine teak cleaner or wood bleach is advised on new wood to remove excess oils, promote color uniformity and adhesion. Follow the manufacturer's instructions for use and thoroughly remove all cleaner and neutralizer residue before proceeding. Oily Timbers: Wash down with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170**; EU: **Surface Cleaner T0340)** and allow to dry before sanding.

1. The wood should be clean, dry, smooth and well seasoned. Moisture content must be below 15%. Never paint wet or green lumber. Painted wet or green lumber will blister.
2. Sand the surface smooth with 80–120 grit paper.
3. Blow off the surface with clean, dry compressed air while wiping with clean rags to remove sanding and dust residue. Wipe the surface with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170**; EU: **Surface Cleaner T0340**) using the Two Cloth Method.
4. Apply a light coat of **545 Epoxy Primer** to seams before applying a seam sealer. Allow **545 Epoxy Primer** to cure 4–6 hours.
5. Fill seams with high quality marine seam sealer such as polyurethane or polysulfide. Follow the manufacturer's recommendations for application and cure of the seam sealer. Allow the seam sealer to cure fully before proceeding. Do not use silicone based products.
6. Seal the wood with a light coat of **545 Epoxy Primer** (spray) reduced 40% with **T0006**. Allow to cure 12–16 hours.

If cured more than 24 hours the seal coat must be lightly sanded with 180–220 grit paper before proceeding.

Alternatively you can also use **Awlquik** (Brush & Roll) reduced 50–70% with T0031 in place of **545 Epoxy Primer**.

Surface is now ready for final priming and topcoating – ***see page 48***.

TRADITIONAL BRIGHTWORK SYSTEMS

The following surface preparation system is recommended if the final system to be applied is a traditional Brightwork system using Awlspar and/or Awlbrite. If the final system to be applied is the Awlwood Exterior Clearcoat system please use the surface preparation detailed on ***page 31.***

SURFACE PREPARATION
WOOD continued...

1. The wood should be clean, dry, smooth and well seasoned. Moisture content must be below 15%. Never paint wet or green lumber. Painted wet or green lumber will blister.

TIP:
Use of a marine teak cleaner or wood bleach is advised on new wood to remove excess oils, promote color uniformity, and adhesion. Follow the manufacturer's instructions for use and thoroughly remove all cleaner and neutralizer residue before proceeding. Oily Timbers: Wash down with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170**; EU: **Surface Cleaner T0340**) and allow to dry before sanding.

2. Rough sawn lumber must receive heavy sanding to level the grain. Sand with 3M Production (Brown) sandpaper. The 3M Gold or Tri-M-ite® type sandpapers may leave a white stain. Work through the grits to effectively level the grain 60/80 to 100/150 to 220, and so on. When the grain is level, smooth sand the surface with 320 grit paper.
3. Blow off the surface with clean, dry, compressed air while wiping with clean rags to remove sanding and dust residue. Wipe the surface with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170**; EU: **Surface Cleaner T0340**) using the Two Cloth Method.

Surface is now ready for application of the brightwork system – ***see page 51***.

AWLWOOD EXTERIOR CLEARCOAT SYSTEMS

1. Any cracks in the timber should be epoxy filled or splined with timber prior to sanding. Radius all edges to ensure that no sharp corners remain.

CAUTION:
Never use teak cleaners – Oxalic acid residues impede proper curing of both primers and topcoats.

2. If timber is badly weathered, scrub with the grain using a stiff bristled wire brush and running water to remove all grey timber from the surface before sanding.
3. Remove all previous coating systems and contaminants. The surface of the timber should be mechanically removed until coloration is even and the original timber tone has been exposed.
4. All substrates must be sanded using no finer than P120 grit (sanding with the grain for the final sand).
5. If bare timber has been saturated with salt water at any stage, scrub well with fresh water to remove salt deposits from the timber before commencing sanding.
6. If the timber gets wet after the final sand water spots may appear. Re-sand these areas with P120 grit paper before priming.

Applying to Resinous Timber

1. Remove any sanding dust from the grain of the timber using clean compressed air, vacuum or brush.

SURFACE PREPARATION
WOOD continued...

2. Working in sections, apply Acetone by brush, scrubbing in well, then remove immediately using paper towels or rags which are changed frequently. Failure to follow this method can result in a greater concentration of resin on the surface of the timber.
3. Ensure the surface is completely dry before applying the **Awlwood MA Primer**. Apply the primer within an hour of degreasing.
   NOTE: Occasionally some timber extracts can retard the cure of the primer. Test on small areas if unsure.

Filling Defects/Fixing Holes

1. For all defects, where possible, and especially for screw holes, the best solution for filling is to use wooden plugs of the same wood. Care should be taken to line the grain up if inserting plugs and should be fixed into place using an epoxy resin based glue. Any excess glue should be removed by sanding the cured epoxy before priming to prevent irregular spots in the varnished finish.
   If this method is not feasible or possible then the use of an epoxy resin mixed with dust/shavings (preferably from the same wood as that being coated). Once cured these filled areas should be sanded prior to application of the primer. Any excess glue should be removed by sanding the cured epoxy before priming to prevent irregular spots in the varnished finish.
   NOTE: This method may result in these areas appearing slightly darker than surrounding wood due to the absorbencies of epoxy compared to the wood. Use of a colored primer will help minimize color differences. Alternatively addition of colored primer, as noted elsewhere in TDS, to the topcoats will have the same effect. Always test on a small non-visible area first.

Surface is now ready for application of the Awlwood Clearcoat system – ***see page 56***.

EPOXY PRIMER OR FIBERGLASS/CARBON FIBER

1. Machine or hand sand to remove defects finishing with P180 grit paper. Ensure that no epoxy blush is present. Test in a small non-visible area to confirm adhesion if unsure.

These substrates do not require use of **Awlwood MA Primer**. **Awlwood MA Finish** can be directly applied to the properly prepared substrate – ***see page 58***.

SURFACE PREPARATION
STEEL – HOT & COLD ROLLED

Blasting

1. Thoroughly clean and degrease the surface. Use commercial detergents, steam cleaners or pressure washers. Be sure all detergent residues are rinsed from the surface. Use **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) as a final wipe down of the surface.

IMPORTANT:
Plan your work schedule carefully! Any area which is ground or blasted must be primed during the same work shift, preferably within 4 hours.

2. Grit blast to white metal in accordance with SSPC-SP10 (Sa2½) to a 2–3 mils (50–75 microns) profile. If profile is particularly jagged, grind to remove 'spikes', providing a more uniform surface.
3. Blow off the surface thoroughly with clean, dry compressed air or vacuum to remove all blast/grind/sanding residue and any dust or dirt. Use a brush or broom if necessary.

CAUTION:
Do not use rags to clean this surface. The sharp metal will snag fibers from the rags. These fibers can act as wicks for moisture or other contamination to enter the paint film. This can lead to premature failure of the Awlgrip Coating System.

To hold your surface preparation and prevent the need to repeat this work, the substrate should now be primed as detailed below.

TIP:
For the ultimate anti–corrosive scheme first prime the prepared steel with **Max Cor CF.**
NOTE: This must be during the same work shift, preferably within 4 hours after the final surface preparation. Spray apply **Max Cor CF** in one full wet coat to approximately 0.8–1.4 mils (20–34 microns) wet film thickness to achieve 0.6–1.0 mils (15–25 microns) dry film thickness.

IMPORTANT:
Allow to cure for a minimum of 17 hours.

4. Apply **Hullgard Extra** by roller or spray.
   NOTE: Only apply **Hullgard Extra** by roller if applying over **Max Cor CF** due to risk of snagging roller fibers. For spray application apply 9 mils (220 microns) wet film thickness to achieve 4 mils (100 microns) dry film thickness. Allow a minimum drying time of 3 hours at 68°F (20ºC) before proceeding.

Roller application will require at least two coats to achieve 4 mils (100 microns) dry film thickness. Allow a drying time of 3 hours at 68°F (20ºC) between coats.

SURFACE PREPARATION
STEEL – HOT & COLD ROLLED continued...

Depending upon the conditions it may be possible to proceed to filling and surfacing without the need for sanding the substrate primer. (See Fairing and Surfacing section for detailed information— ***see page 46***).

Please consult product datasheet for further details.

Grinding

1. Thoroughly clean and degrease the surface. Use commercial detergents, steam cleaners or pressure washers. Be sure all detergent residue is rinsed from the surface. Use **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115** ; EU: **Surface Cleaner T0340**) as a final wipe down of the surface.

IMPORTANT:
Plan your work schedule carefully! Any area which is ground or blasted must be primed during the same work shift. Preferably within 4 hours.

2. Grind with 36 grit disc to bright, clean steel.The metal must be bright silver, completely free of gray oxidation. The surface profile must be a 2–3 mils profile (50–75 microns).
3. Blow off the surface thoroughly with clean, dry compressed air or vacuum to remove all grind/sanding residue and any dust or dirt. Use a brush or broom if necessary.

CAUTION:
Do not use rags to clean this surface. The sharp metal will snag fibers from the rags. These fibers can act as wicks for moisture or other contamination to enter the paint film. This can lead to premature failure of the Awlgrip Coating System. **To hold your surface preparation and prevent the need to repeat this work, the substrate should now be primed as detailed below.**

4. Apply **Hullgard Extra** by roller or spray.
   NOTE: This must be during the same work shift, preferably within 4 hours after the final surface preparation.
   NOTE: Only apply **Hullgard Extra** by roller if applying over **Max Cor CF** due to risk of snagging roller fibers. For spray application apply 9 mils (220 microns) wet film thickness to achieve 4 mils (100 microns) dry film thickness. Allow a minimum drying time of 3 hours at 68°F (20ºC) before proceeding.

Roller application will require at least two coats to achieve 4 mils (100 microns) dry film thickness. Allow a drying time of 3 hours at 68°F (20ºC) between coats.

Depending upon the conditions it may be possible to proceed to filling and surfacing without the need for sanding (See Fairing and Surfacing section for detailed information— ***see page 46***).

Please consult product datasheet for further details.

Hotworks on the steel will damage the **Hullgard Extra** primer, please check with your local Technical Sales Representative for the appropriate repair guidelines

SURFACE PREPARATION
STEEL – HOT & COLD ROLLED continued...

ALTERNATIVE STEEL SYSTEMS

In some circumstances a full anti-corrosive/fairing system may not be required (e.g. window frames, parts etc). In such instances there is an alternative option for coating the suitably prepared steel—a **Build System**. Below details the surface preparation for the system.

Build System

1. Grind the substrate as per steps 1–3, (***see page 34***) or blast the substrate as per steps 1–3, (***see page 33***).
2. Apply by air atomized spray 1 coat of **Wash Primer CF** at 2 mils (50 microns) wet film thickness giving a dry film thickness of 0.25 mils (6 microns). Several passes are required with the spray gun for a good surface. The first pass should be relatively slow (5–10cm / 2–4 inches per second). This pass is to obtain basic coverage.

Following sanding, if necessary, surface is now ready for final prime and topcoat application, ***see page 48***.

IMPORTANT
While the build system will be touch dry at 24 hours at 77°F (25°C) following topcoat application, it's important for the 'controlled fusion' to fully activate and through dry. No assembly, stacking or drilling should take place prior to 2 weeks at 77°F (25°C), or 3 weeks at 55°F (13°C).

APPLICATION
PREVIOUSLY PAINTED SURFACE PRIMING

Before any coating work, carefully prepare the surface of the substrate in accordance with the details outlined in the Surface Preparation section of the Application Guide and Product Datasheets.

Detailed information on surface preparation of previously painted surfaces and GRP substrates, prior to priming, can be found on ***page 18***.

Smooth sound condition

1. After cleaning sand the entire surface smooth with 120–180 grit paper. Remove all gloss from the previous finish.
2. Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue. Wipe surface with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008**; EU: **Surface Cleaner T0340**) using the Two Cloth Method.
3. Apply specified number of coats of **545 Epoxy Primer or 321 HS Undercoat** with the appropriate overcoating interval between coats.

TIP:
High Build is an excellent barrier coat over underlying paint systems and can be used in the step above in place of **545 Epoxy Primer**. However, if applying only **545 Epoxy Primer** (provided sufficient DFT is applied and the sanded finish is acceptably smooth) this coat can be seen as the final priming step as per **page 48** of this guide. Further application of **545 Epoxy Primer** prior to topcoating would not be necessary.

Finish Priming options: **321 HS Undercoat** can be used in place of **545 Epoxy Primer** in areas with VOC restrictions. For brush/roll & tip applications **Awlquik** may be preferred in place of **545 Epoxy Primer**. Contact your local Technical Sales Representative for alternative schemes.

Following sanding, if necessary, surface is now ready for final prime and topcoat. ***See page 48***.

Rough condition, additional surfacing/filling required

1. After cleaning sand the entire surface smooth with 120–180 grit paper.
2. Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue. Wipe surface with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008**; EU: **Surface Cleaner T0340**) using the Two Cloth Method. Fill or fair if necessary. (See Fairing and Surfacing section for detailed information— ***see page 46***).

If unnecessary proceed to step 3.

3. Apply specified number of coats of **545 Epoxy Primer or 321 HS Undercoat** with the appropriate overcoating interval between coats.

APPLICATION
PREVIOUSLY PAINTED SURFACE PRIMING
continued...

TIP:
High Build is an excellent barrier coat over underlying paint systems and can be used in the step above in place of **545 Epoxy Primer**. However, if applying only **545 Epoxy Primer** (provided sufficient DFT is applied and the sanded finish is acceptably smooth) this coat can be seen as the final priming step as per section, ***page* 48** of this guide. Further application of **545 Epoxy Primer** prior to topcoating would not be necessary.

Finish Priming options: **321 HS Undercoat** can be used in place of **545 Epoxy Primer** in areas with VOC restrictions. For brush/roll & tip applications **Awlquik** may be preferred in place of **545 Epoxy Primer**. Contact your local Technical Sales Representative for alternative schemes.

Following sanding, if necessary, surface is now ready for final prime and topcoat. ***See page 48***.

APPLICATION
GELCOAT PRIMING

New and sound aged gelcoat.

1. After cleaning sand the entire surface smooth with 120–180 grit paper.
2. Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue. Wipe surface with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008**; EU: **Surface Cleaner T0340**) using the Two Cloth Method.
3. Apply specified number of coats of **545 Epoxy Primer** with the appropriate overcoating interval between coats.

TIP:
The application of the **545 Epoxy Primer** in the step above, (provided sufficient DFT is applied and the sanded finish is acceptably smooth) can be seen as the final priming coat as per ***page 48*** of this guide. Further application of **545 Epoxy Primer** prior to topcoating would not be necessary.

Finish Priming options: 321 HS Undercoat can be used in place of **545 Epoxy Primer** in areas with VOC restrictions. For brush/roll & tip applications **Awlquik** may be preferred in place of **545 Epoxy Primer**. Contact your local Technical Sales Representative for alternative schemes.

Following sanding, if necessary, surface is now ready for final prime and topcoat. ***See page 48***.

Surfaces with heavily crazed, cracked, broken, delaminated gelcoat and raw laminating resin and epoxy coated/laminated wood.

1. Any areas that have been previously ground out need to be primed with **Hullgard Extra**. Two or three coats may be needed. Allow to dry 12+ hours.
2. Fill and fair as necessary with **Awlfair LW**. Allow to cure 12+ hours.

CAUTION:
If polyester putties are used they should be kept to an absolute minimum. Only use polyester putties for pinholes and very slight scratches or dents (1mm deep x 1mm wide maximum use). Polyester putties shrink and distort rapidly. Epoxy fillers are much more stable.

3. Sand the entire surface smooth with 80–120 grit paper. Remove all gloss from the gelcoat, oxidized gelcoat and lightly crazed areas. Feather any dents or scratches. Do not sand excessively. This will create porosity in the surface that will have to be filled.
4. Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue.
5. Prime the entire surface with **High Build**. Two coats may be needed. Allow to cure 12 hours or overnight.

Other alternatives schemes, such as replacing **High Build** with **Ultra Build**, are available. Contact your local Technical Sales Representative for more information.

APPLICATION
GELCOAT PRIMING continued...

6. Sand the entire surface smooth with 120–180 grit paper.
7. Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue. Wipe surface with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** ; EU: **Surface Cleaner T0340**) using the Two Cloth Method.
8. Apply specified number of coats of **545 Epoxy Primer** with the appropriate overcoating interval between coats.

TIP:
The application of the **545 Epoxy Primer** in the step above, (provided sufficient DFT is applied and the sanded finish is acceptably smooth) can be seen as the final priming coat as per ***page 48*** of this guide. Further application of **545 Epoxy Primer** prior to topcoating would not be necessary.

For brush/roll & tip applications **Awlquik** may be preferred in place of **545 Epoxy Primer**. Contact your local Technical Sales Representative for alternative schemes.

Following sanding, if necessary, surface is now ready for final prime and topcoat. ***See page 48***.

APPLICATION
ALUMINUM PRIMING

Detailed information on surface preparation of aluminum substrates and blister repairs, prior to priming, can be found on ***page 23***.

NON-ANODIZED ALUMINUM

1. Apply **Max Cor CF** to the prepared aluminum in areas with an increased corrosion risk for maximum protection. Spray apply **Max Cor CF** in one full wet coat to approximately 0.8–1.4 mils (20–34 microns) wet film thickness to achieve 0.6–1.0 mils (15–25 microns) dry film thickness.

IMPORTANT:
Allow to cure for a minimum 17 hours.

CAUTION:
Do not use a roller to apply the primer in Step 1. Products in Step 2 must be applied within 72 hours of the completion of Step 1 or the surface must be removed and Step 1 repeated.

2. Apply **Hullgard Extra** by roller or spray.
   NOTE: Only apply **Hullgard Extra** by roller if applying over **Max Cor CF** due to risk of snagging roller fibers. For spray application apply 9 mils (220 microns) wet film thickness to achieve 4 mils (100 microns) dry film thickness. Allow a minimum drying time of 3 hours at 68°F (20ºC) before proceeding.

Roller application will require at least two coats to achieve 4 mils (100 microns) dry film thickness. Allow a drying time of 3 hours at 68°F (20ºC) between coats.

3. Fill and fair as necessary with **Awlfair LW**. Allow to cure 12+ hours.
   NOTE: Apply **Awlfair LW** within 6 months of application of **Hullgard Extra**. Alternatively sand **Hullgard Extra** prior to application of **Awlfair LW** if more than 6 months has passed.

CAUTION:
If polyester putties are used they should be kept to an absolute minimum. Only use polyester putties for pinholes and very slight scratches or dents (1mm deep x 1mm wide maximum use). Polyester putties shrink and distort rapidly. Epoxy fillers are much more stable.

4. Block and machine sand with 36-80 grit paper. Remove air pockets and chamfer the edges prior to refilling as appropriate.
5. Remove sanding dust and residue before applying more **Awlfair LW**. Stop when the faired surface meets the fairing quality specified for the project.
6. Prime the entire surface with **High Build**. Allow to cure 12 hours or overnight.

Other alternatives schemes, such as replacing **High Build** with **Ultra Build**, are available. Contact your local Technical Service Representative for more information.

7. **High Build** must always be sanded with 120–220 grit paper before overcoating.

APPLICATION
ALUMINUM PRIMING continued...

8. Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue. Wipe surface with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008**; EU: **Surface Cleaner T0340**) using the Two Cloth Method.

9. Prime the entire surface with **545 Epoxy Primer** (Spray). Allow to dry 12+ hours.

Alternatively you can also use **Awlquik** (Brush & Roll) in place of **545 Epoxy Primer**.

TIP:
The application of the **545 Epoxy Primer** in the step above, (provided sufficient DFT is applied and the sanded finish is acceptably smooth) can be seen as the final priming coat as per ***page* 48** of this guide. Further application of **545 Epoxy Primer** prior to topcoating would not be necessary.

Following sanding, if necessary, surface is now ready for final prime and topcoat. ***See page 48*.**

ALUMINUM BLISTER REPAIR

IMPORTANT:
Following removal of the blistered material and the aluminum being suitably prepared, the first coat of primer must be applied within 8 hours, ideally within 4 hours. Products in Step 1 must be applied within 72 hours of the completion of **Max Cor CF** application or the surface must be removed and **Max Cor CF** re-applied.

TIP:
For the ultimate anti-corrosive scheme first prime the prepared aluminum with **Max Cor CF**.
NOTE: This must be during the same work shift, preferably within 4 hours after the final surface preparation. Spray apply **Max Cor CF** in one full wet coat to approximately 0.8–1.4 mils (20–34 microns) wet film thickness to achieve 0.6–1.0 mils (15–25 microns) dry film thickness.

IMPORTANT:
Allow to cure for a minimum 17 hours.

CAUTION:
Do not use a roller to apply **Max Cor CF**. See previous caution regarding wicks. Products in Step 1 must be applied within 72 hours of the completion of **Max Cor CF** application or the surface must be removed and **Max Cor CF** re-applied.

APPLICATION
ALUMINUM BLISTER REPAIR continued...

1. Apply **Hullgard Extra** by roller or spray.
   NOTE: Only apply **Hullgard Extra** by roller if applying over **Max Cor CF** due to risk of snagging roller fibers. For spray application apply 9 mils (220 microns) wet film thickness to achieve 4 mils (100 microns) dry film thickness. Allow a minimum drying time of 3 hours at 68°F (20ºC) before proceeding.

   Roller application will require at least two coats to achieve 4 mils (100 microns) dry film thickness. Allow a drying time of 3 hours at 68°F (20ºC) between coats.

2. Fill and fair as necessary with **Awlfair LW**. Allow to cure 12+ hours.

CAUTION:
If polyester putties are used they should be kept to an absolute minimum. Only use polyester putties for pinholes and very slight scratches or dents (1mm deep x 1mm wide maximum use). Polyester putties shrink and distort rapidly. Epoxy fillers are much more stable.

3. Block and machine sand with 36–80 grit paper. Remove air pockets and chamfer the edges prior to refilling as appropriate. Remove sanding dust and residue before applying more Awlfair LW. Stop when the faired surface meets the fairing quality specified for the project.

4a. **Faired Systems:**
Prime the entire surface with **High Build.** Allow to cure 12 hours or overnight.

> Other alternatives schemes, such as replacing **High Build** with **Ultra Build**, are available. Contact your local Technical Sales Representative for more information.

Sand the entire surface smooth with 120–220 grit paper.

Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue. Wipe surface with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008**; EU: **Surface Cleaner T0340**) using the Two Cloth Method.
Prime the entire surface with **545 Epoxy Primer** (Spray).
Allow to dry 12+ hours.

TIP:
The application of the **545 Epoxy Primer** in the step above, (provided sufficient DFT is applied and the sanded finish is acceptably smooth) can be seen as the final priming coat as per ***page* 48** of this guide. Further application of **545 Epoxy Primer** prior to topcoating would not be necessary.

Following sanding, if necessary, surface is now ready for final prime and topcoat. ***See page 48***.

APPLICATION
ALUMINUM BLISTER REPAIR continued...

4b. **Thin film unfaired systems:**
Max Cor CF must be primed with either **Hullgard Extra** or **High Build** before application of **545 Epoxy Primer** (spray). Allow 12+ hours.

> Alternatively you can also use **Awlquik** (Brush & Roll) in place of **545 Epoxy Primer**.

TIP:
Use care when applying this primer. If smoothly applied and all surfaces are adequately covered, it may be used as the final prime step.

Following sanding, if necessary, surface is now ready for final prime and topcoat. ***See page 48***.

ANODIZED ALUMINUM
(pre–treated with Wash Primer CF)

1. Prime the entire surface with **545 Epoxy Primer** (Spray). Allow to dry 12+ hours.

> Alternatively you can also use **Awlquik** (Brush & Roll) in place of **545 Epoxy Primer**.

TIP:
Use care when applying this primer. If smoothly applied and all surfaces are adequately covered, it may be used as the final prime step.

Following sanding, if necessary, surface is now ready for final prime and topcoat. ***See page 48***.

APPLICATION
STEEL PRIMING

Detailed information on surface preparation of steel substrates, prior to priming, can be found on ***page 33***.

TIP:
For the ultimate anti–corrosive scheme first prime the prepared steel with **Max Cor CF**.
NOTE: This must be during the same work shift, preferably within 4 hours after the final surface preparation. Spray apply **Max Cor CF** in one full wet coat to approximately 0.8–1.4 mils (20–34 microns) wet film thickness to achieve 0.6–1.0 mils (15–25 microns) dry film thickness.

IMPORTANT:
Allow to cure for a minimum 17 hours.

1. Apply **Hullgard Extra** by roller or spray.
   NOTE: Only apply **Hullgard Extra** by roller if applying over **Max Cor CF** due to risk of snagging roller fibers.
   For spray application apply 9 mils (220 microns) wet film thickness to achieve 4 mils (100 microns) dry film thickness. Allow a minimum drying time of 3 hours at 68°F (20ºC) before proceeding.

Roller application will require at least two coats to achieve 4 mils (100 microns) dry film thickness. Allow a drying time of 3 hours at 68°F (20ºC) between coats.

2. Fill and fair as necessary with **Awlfair LW**. Allow to cure 12+ hours.
   NOTE: Apply **Awlfair LW** within 6 months of application of **Hullgard Extra**. Alternatively sand **Hullgard Extra** prior to application of **Awlfair LW** if more than 6 months has passed.

CAUTION:
If polyester putties are used they should be kept to an absolute minimum. Only use polyester putties for pinholes and very slight scratches or dents (1mm deep x 1mm wide maximum use). Polyester putties shrink and distort rapidly. Epoxy fillers are much more stable.

3. Block and machine sand with 36–80 grit paper. Remove air pockets and chamfer the edges prior to refilling as appropriate.
4. Remove sanding dust and residue before applying more Awlfair LW. Stop when the faired surface meets the fairing quality specified for the project.
5. Prime the entire surface with **High Build**. Allow to cure 12 hours or overnight.

> Other alternatives schemes, such as replacing **High Build** with **Ultra Build**, are available. Contact your local Technical Sales Representative for more information.

6. Sand the entire surface smooth with 120–180 grit paper.

APPLICATION
STEEL PRIMING continued...

7. Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue. Wipe surface with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170** ; EU: **Surface Cleaner T0340**) using the Two Cloth Method.
8. Prime the entire surface with **545 Epoxy Primer** (Spray). Allow to dry 12+ hours.

> Alternatively you can also use **Awlquik** (Brush & Roll) in place of **545 Epoxy Primer**

TIP:
The application of the **545 Epoxy Primer** in the step above, (provided sufficient DFT is applied and the sanded finish is acceptably smooth) can be seen as the final priming coat as per ***page* 48** of this guide. Further application of **545 Epoxy Primer** prior to topcoating would not be necessary.

Following sanding, if necessary, surface is now ready for final prime and topcoat. ***See page 48***.

WOOD EPOXY PRIMING

Detailed information on surface preparation of a wooden substrate, prior to priming, can be found on ***page 30***.

1. Apply 2–3 coats **High Build**. Allow to cure 12+ hours.

> Alternatively you can use **545 Epoxy Primer** in place of **High Build**. Consult your local Technical Sales Representative for further information on alternative schemes.

Following sanding, if necessary, surface is now ready for final prime and topcoat. ***See page 48***.

APPLICATION
FAIRING & SURFACING

Fairing and surfacing are similar activities with subtle but specific differences. Often both procedures will be used on the same project or surface.

In general, fairing involves the use of trowel applied filler putties such as **Awlfair LW**, which can be applied to significant film thickness. Fairing often involves creating a new line or shape to the surface, not just filling low areas or dents and dings.

Surfacing is usually accomplished through the use of liquid coatings which are relatively thick (viscous) products which will fill and cover scratches, dings, pinholes, light crazing, mold defects and other relatively minor physical defects on a surface or part which otherwise has a true or fair line. Awlgrip products which fit this description include **High Build**, **Ultra Build**, **Epoxy Sprayable Fairing Compound** and **Awlquik**.

Above the waterline fairing and surfacing has four basic requirements:

- Properly prepare and prime the surface with the recommended primer before starting any filling or fairing*
- Start work with heavy fillers and proceed to lighter products. Make large depressions or low spots into smaller or shallower areas as your work progresses
- Always sand between applications of **Awlfair LW**
- Always seal the completed faired and surfaced system with **High Build** or **Ultra Build** followed by at least two full wet coats of **545 Epoxy Primer** before topcoating. **545 Epoxy Primer** seals the relatively porous, heavily filled surfacing materials. This sealing also provides uniform color holdout for the **Awlgrip/Awlcraft 2000 Topcoats**, thus a better looking job with uniform gloss, color, and appearance.

*__Hullgard Extra__ is the recommended epoxy primer suitable for all substrates. **High Build** is an alternative primer that has proven popular with many users. When this is to be applied over a metal substrate such as steel or aluminum, a pre-primer such as **Max Cor CF** should be used for maximum anticorrosion protection.

WARNING:
Do not use automotive body fillers, spot putties, lacquer glazing putties or similar water sensitive products in fairing projects. These products are not designed for marine applications and will not adhere to **Awlfair LW** or **Epoxy Sprayable Fairing Compound.**

FAIRING PROCEDURES

1. Properly prepare and prime the surface. See surface preparation sections for each substrate for this information.
2. Maintain the correct primer thickness between filler and substrate, multiple coats may be needed. **High Build** and **Ultra Build** primers cure to particularly hard films over time and are therefore suited to protecting underlying primer coats from sand-through.
3. Examine the surface for highs and lows. Mark low areas with a pencil. Do not use felt tip markers or ink pens.

APPLICATION
FAIRING & SURFACING continued...

Sanding Primers: If the overcoating interval for **Hullgard Extra** has been exceeded, sand areas where **Awlfair LW** is to be applied with 80 grit paper. For heavy fairing projects where the **Awlfair LW** will be applied to **High Build** or **Ultra Build** primers; sand with 60–80 grit paper.

4. Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue.
5. Fill all areas deeper than 20 mils (500 microns) with **Awlfair LW**. Thoroughly mix the material to a uniform pink color with no streaks or lumps.

WARNING:
Do not add reducers, solvents or thinners of any kind to **Awlfair LW**.

6. Apply **Awlfair LW** by trowel to an area you can work in 15–20 minutes. Start with thin coats of up to 6mm in low areas and build out to high areas. Allow to cure. Several applications may be necessary to fill large areas.
7. Block and machine sand with 36–80 grit paper. Remove air pockets and chafer the edges prior to refilling as appropriate.
8. Blow off sanding dust and residue before applying more **Awlfair LW**. Stop when the faired surface meets the fairing quality specified for the project.

Awlfair Surfacing Filler (EU only) can be screeded directly onto the surface of **Awlfair LW** to fill pinholes and sanding scratches to provide a smoother surface prior to the application of surfacing primers.

SURFACING PROCEDURES

Surfacing products in the Awlgrip line include **High Build**, **Awlquik Epoxy Primer**, **Ultra Build** and **Epoxy Sprayable Fairing Compound**. Each product has unique characteristics which can help to make the surfacing process easier.

- It is necessary to seal epoxy fillers with a surfacing primer. Some areas may need extra applications and additional block sanding to achieve specified quality (i.e. under dark hulls)
- It is required that all surfaces be properly prepared and sanded before applying the next product and no product be used beyond its recommended maximum dry film thickness
- It is necessary to apply a finish primer or undercoat by spray or brush application to seal the surfacing products
- **Epoxy Sprayable Fairing Compound** must be overcoated with either **Ultra Build** or **High Build** before **545 Epoxy Primer** or **Awlquik** can be applied as a final primer

APPLICATION
FINAL PRIMING & TOPCOATING

The application of the final finishing primer coat and application of the topcoat completes the coating system.

Primers and Sealers:
The finishing primer supplies a hard, tight film on which to apply the topcoat, sealing the more porous fairing or surfacing materials below it. This hard tight film supports the **Awlgrip, Awlcraft 2000** or **Awlcraft SE Topcoats** maximizing the gloss and distinction of image (DOI).

When painting fiberglass/gelcoat, wood, and smooth surfaced aluminum (masts, spars, etc.), there are many projects where no fairing or surfacing materials are used. In these cases the initial priming of the surface and the final priming can all be part of the same process. The only real distinction is which coat of primer is being applied.

Topcoats:
The **Awlgrip Premium Urethane Topcoat** is a polyester based polyurethane coating which can be applied by spray, brush, roller or the roller/brush combination. **Awlgrip** provides excellent chemical and abrasion resistance, along with outstanding color retention.

Awlcraft 2000 is an acrylic based polyurethane coating designed only for spray application. It is designed for the yard, applicator or owner who is willing to sacrifice a little durability to have a faster curing, more easily repaired finish.

Awlcraft SE is a revolutionary topcoat encompassing metallics, pearls and effect pigments and is fast drying with excellent opacity. **Awlcraft SE** is designed to work as one layer of a multi-part system where the **Awlcraft SE** imparts the color and effect and is then topcoated with **Awlcraft 2000 F3029 High Gloss Clear**. This combination forms a high performance, high gloss robust topcoat system.

- All Awlgrip topcoats provide a tough, chemical and abrasion resistant coating which has been proven to perform in the marine environment
- All topcoats require two coats minimum – regardless of application technique. Some applicators prefer to use three coats, which may be the easier way to go with some colors.

Do not clear coat over whites or pastels with **Awlgrip** or **Awlcraft 2000** systems. Each system has a clear available. For **Awlgrip** it is **G3005 High Gloss Clear**; for **Awlcraft 2000** and **Awlcraft SE** it is **F3029 High Gloss Clear**. However, these products should only be used over dark colors or **Awlcraft SE** basecoats.

APPLICATION
FINAL PRIMING & TOPCOATING continued...

Application of Finishing Primer:
1. Sand the surface smooth with 120–220 grit paper. Grit choice will be determined by condition and make up of the surface.
2. Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue.
3. Tack off the surface with **Deluxe Tack Rags #73009**.
4. To mix primers; ensure that base and converter are mixed to the correct mix ratio and leave for 15 minutes induction time. If indicated, reduce as necessary for application method.
5. Apply the required coats of the final primer smoothly and evenly. Thinning the product will reduce film thickness but results in a smoother surface that will require less sanding.

NOTE: Awlquik is easier to apply by brush/roll than **545 Epoxy Primer**. However, **545 Epoxy Primer** will provide a more durable system.

6. Sand the entire primed surface with 320–400 grit paper to a smooth, flat finish.
7. Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue.
8. Wipe with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008**; EU: **Surface Cleaner T0340)** using the Two Cloth Method. Repeat process as necessary until the surface is completely clean. Allow the surface to dry.
9. Tack off the surface with **Deluxe Tack Rags #73009.**

321 HS Undercoat is a low VOC alternative to **545 Epoxy Primer** which requires fewer coats for the same total DFT.

For application instructions for all Awlgrip products, refer to the respective Technical Datasheet.

Finish Coat Application:
Spray Application (Awlgrip and **Awlcraft 2000 Topcoats only)**
1. Mix topcoat base with selected spray converter **(G3010 or G3038)** at the correct ratio and reduce up to 25% with the appropriate reducers for spray application.
2. Using recommended spray equipment, apply a smooth, wet tack coat to the surface. Allow tack coat to flash off 30–45 minutes.
3. Then apply a full, wet coverage coat to achieve color coverage (i.e. hide) and film thickness requirements.
4. When using **G3010 Awlcat #2**, in most situations the application of three coats is normal (For **Awlcraft 2000** and **Awlgrip** topcoats). Allow the second coat to 'flash off' 30–45 minutes until only slightly tacky before applying third coat.
   If using **G3038** and VOC Exempt Reducers with **Awlcraft 2000** topcoat base it is generally possible to apply the necessary film thickness in two coats for most bases. Always check correct final film thickness is achieved, however.

APPLICATION

FINAL PRIMING & TOPCOATING continued...

Brush/Roll Application

1. Mix two parts by volume Awlgrip Color Base with one part **Awlcat #3** Brushing Converter. Reduce 10–33% with Brushing Reducer.
2. Brush or roller apply **Awlgrip Topcoat** in a minimum of two coats. Depending on film thickness applied and color choice one, or possibly two, additional coats may be needed.

WARNING:
Topcoating cannot be done in one coat.

Sanding between coats with 280–400 grit paper will provide a smoother finish. Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue.

Wipe with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008**; EU: **Surface Cleaner T0340**) using the Two Cloth Method. Repeat process as necessary until the surface is completely clean. Allow the surface to dry.

Tack off the surface with **Deluxe Tack Rags #73009**.

On large surfaces such as hull sides, transoms and house sides first roll the **Awlgrip Topcoat** and then smooth the roller stipple by lightly tipping the surface with a brush or pad.

This can be done with 2 painters working side by side (i.e. 1 rolling and 1 tipping), or with 1 painter rolling approximately 6 sq ft and then tipping that area before rolling any further.

TIP:
See back of this guide for maintenance advice on **Awlgrip** or **Awlcraft 2000** topcoats and repair advice for **Awlcraft SE**.

BRIGHTWORK

Awlgrip offers a range of products and systems for interior and exterior use, tailored to meet varying performance requirements for brightwork finishes.

Following the launch of **Awlwood** there are now three options for exteriors. These follow the simple "good, better, best" analogy with the recently launched **Awlwood** fulfilling the "best" category.

EXTERIORS

SYSTEM I.
EXTERIOR TRADITIONAL VARNISH SYSTEM—
Awlspar Classic Spar Varnish

Awlspar varnish is a traditional phenolic, tung oil varnish modified with state of the art UV inhibitors and absorbers. **Awlspar** is a fast-dry material. Two and sometimes three coats can be applied in a single day allowing you to quickly apply a full system thus reducing varnish down time.

Awlspar is the perfect product for the traditionalist who wants an easy to apply, easy to repair product, and doesn't object to regular maintenance coats.

SYSTEM II.
ULTIMATE EXTERIOR BRIGHTWORK SYSTEM—
Awlspar/Awlbrite Clear

This system combines the color highlights of the **Awlspar** Varnish to provide a traditional look, with the durability of the **Awlbrite Clear** in a fast recoat, relatively easy to repair combination of varnish and urethane coatings.

Awlbrite Clear has a unique blend of solvents that can be applied over **Awlspar**. This allows for the system to be sealed and protected by a tough, durable two–pack urethane that is easier to repair than other similar systems.

The rapid cure of **Awlspar** combined with the **Awlbrite Clear** eliminates the typical 30–60 day wait between varnish and urethane. The system can now be completed in little over a week.

This union of **Awlspar** and **Awlbrite Clear** allows you to have an easy application system, traditional appearance and long term durability allied with low maintenance.

SYSTEM III.
EXTERIOR CLEARCOAT SYSTEM—
Awlwood Primer/Finish

Awlwood MA is an exterior clear system that is made up of a Primer and Clear Finish. Containing **Flex-Link**™ technology, the primer locks onto the wood structure (even tropical hardwoods) resulting in superior flexibility and unrivalled damage resistance yet allows the natural color and grain of wood to shine through. This technology also creates the perfect base for the finish and, by combining the Primer and Clear

BRIGHTWORK
EXTERIORS continued...

together, there is a synergistic effect that results in an outstanding performing system that has extended performance and retains the same gloss, DOI and natural appearance as first application.

This system can be completed in less than a week.

Using one of the colored primers will result in a traditional appearance of a traditional varnish system yet the patented resin technology of the finish allows you to have an easy application system and long term durability allied with low maintenance.

INTERIORS

SYSTEM IV.
AWLBRITE INTERIOR SYSTEMS

A range of systems are possible using the **Awlbrite** System; these include a clear, bright, high gloss system as well as low sheen, satin system. It is even possible to combine **Awlbrite** with **Awlspar** to achieve a traditional finish with the wood protection of a two-pack polyurethane.

Filling the grain is the key to the following systems. There are several options for this but the recommended Awlgrip choice is use of **Clear Wood Sealer Fast** available from International®/Interlux®. This applies direct to the wood for a rapid build up of grain filling coats and can then be overcoated with Gloss or Semi-Gloss **Awlbrite Clear**, **Awlspar** or even finished off in full color with Awlgrip and **Awlcraft** Topcoats for a lacquer finish effect.

VARNISHING TIPS:

- Coating brightwork requires the same basic conditions as other paint work. Surfaces to be coated must be clean and dry
- Use good quality, natural bristle varnish brushes. Natural bristle badger hair brushes are best. Thoroughly 'wetting' the bristles before applying material helps prevent bubbles in the film
- Mix and use small quantities of **Awlspar** or **Awlbrite Clear** at a time. Keep the original containers covered when not in use
- Do not shake **Awlbrite Clear** or **Awlspar.** Shaking creates air bubbles in the material. When adding converter to **Awlbrite Clear** or reducer to **Awlspar,** hand stir only
- Apply **Awlbrite Clear** or **Awlspar** in shaded, well ventilated areas. Optimum application temperatures are between 70ºF (21°C) and 90ºF (32°C)
- Avoid applying **Awlbrite Clear** to hot surfaces or in direct sunlight

Excessive heat blisters the coating and makes it difficult to carry a wet edge. A surface that is warm to the touch, above 105ºF (38ºC), is generally too hot to paint.

- Do not apply these products if temperatures are below 65ºF (18°C)
- Do not move coated items into direct sunlight to dry. Direct sunlight will inhibit flow and may result in blisters

BRIGHTWORK
INTERIORS continued...

- Do not apply **Awlbrite Clear** or **Awlspar** when dew can form on the surface in the first 6 hours of cure. Be sure all surfaces are completely free of moisture before applying **Awlbrite Clear** or **Awlspar**
- Completely remove all sanding dust and residue. All surfaces should be cleaned with **Awlprep** before and after sanding
- Apply light, smooth coats. Heavier coats will not flow as well as light coats. Heavy coats are also more prone to solvent popping and blistering. When in doubt, put on a lighter coat
- When applying **Awlbrite Clear** or **Awlspar** Varnish, never use a brush that has been used to apply paint or primers

Awlbrite Clear and **Awlspar** should be compatible with most conventional, oil based, penetrating wood stains. Apply a test patch of **Awlbrite Clear** or **Awlspar** to the stained wood to check for compatibility before continuing a project of any size. Stains should be applied according to the manufacturer's recommendations.

APPLICATION

SYSTEM I.
EXTERIOR TRADITIONAL VARNISH SYSTEM—
Awlspar Classic Spar Varnish

Properly prepare the wood surface. See surface preparation for Brightwork Systems for this information — ***see page 30***.

NEW/BARE WOOD

1. Apply one light smooth coat of **Awlspar Classic Spar Varnish** mixed 1:1 by volume with **Awlspar Reducer T0016**.
2. Lightly sand the surface with 280–320 grit paper to remove wicks and nubs. Remove sanding dust and residue. Tack off with **Deluxe Tack Rags #73009**.
3. Apply light, smooth, even coats of **Awlspar Classic Spar Varnish** 2–4 hours apart. Above 75ºF (24°C), 2–3 coats may be applied per day.
4. Repeat this process until the grain is filled and covered, 6–8 coats may be needed. The exact number of coats will vary depending on applied film thickness and the amount of sanding.

Keep sanding to a minimum. The only reason to sand is to remove obvious defects, or if more than 24–36 hours elapse between applications. The goal is to fill and cover the grain with varnish.

A light rub with a Scotch-Brite® pad is often enough to break the glaze of the previous coat, providing sufficient adhesion for subsequent coats.

TIP:

To make it easier to see the wet edge, dull the surface with a white or green Scotch-Brite® pad between coats. Rub the surface just enough to noticeably lower the gloss. This minimizes coating removal and dust while making it easier to see holidays and locate your wet edge when applying a glossy clear to a glossy surface.

BRIGHTWORK
APPLICATION continued...

5. When the grain is completely filled and covered, lightly sand the surface smooth with 400–500 grit paper. Apply one final coat of varnish to restore gloss to the sanded surface.

SYSTEM II.
ULTIMATE EXTERIOR BRIGHTWORK SYSTEM—
Awlspar/Awlbrite Clear

This system primes and seals the wood with **Awlspar** varnish. The **Awlspar** bonds to the wood and supplies the traditional amber cast of fine varnish systems.

Then the **Awlspar** is sealed with a full system of **Awlbrite Clear Urethane.**

IMPORTANT:
A test application of **Awlbrite Clear** over **Awlspar** should be done (if possible on a separate piece of wood) before full application is done. This is to ensure the **Awlspar** is cured.

NOTE: Pay particular attention to the overcoating interval between **Awlspar** and **Awlbrite Clear**, otherwise the **Awlspar** will be lifted if it has not cured sufficiently. At a constant 75°F (24ºC), or higher, the **Awlspar** will need to cure approximately 72 hours before the **Awlbrite Clear** can be applied. At 64°F (18ºC) it may be 7–10 days before the **Awlbrite Clear** can be applied.

The key to performance of a varnish system is applying enough material. This is especially true with **Awlbrite Clear**. This system calls for more coats than is necessary to achieve initial cosmetic qualities. If you stop the system when it looks good, or sand excessively, you will not achieve the desired performance.

Properly prepare the wood surface. See surface preparation for Brightwork Systems for this information — ***see page 30***.

NEW/BARE WOOD

1. Apply one light smooth coat of **Awlspar** mixed 1:1 by volume with **Awlspar Reducer T0016**. Allow to dry 8–12 hours.
2. Lightly sand the surface with 320–400 grit paper to remove wicks and nubs. Remove sanding dust and residue. Tack off with **Deluxe Tack Rags #73009**.
3. Apply 2–3 smooth coats of **Awlspar**. Use the **Awlspar** full-bodied or with as little reducer as possible.

Allow to cure a minimum of 72 hours at constant, around the clock temperature of 75°F (24ºC), or above, before proceeding. At lower temperatures, 7–10 days may be needed.

*Test Application of **Awlbrite Clear.***

BRIGHTWORK
APPLICATION continued...

4. Lightly sand the **Awlspar** with 320–400 grit paper. The **Awlspar** should powder sand, if it is still gummy or clogs the paper, stop and allow the **Awlspar** to cure longer. Re-check every 24–48 hours until the surface will powder sand.

After sanding, remove sanding dust and residue, and tack off approximately two sq ft.

Mix enough **Awlbrite Clear** to coat this area. Apply two light smooth coats about 3–4 hours apart. If during the application of either coat you experience:

- Excessive brush drag
- Bubbling
- Blistering
- Crazing or cracking

Then allow to cure for a further 24 hours and re-test.

5. Inspect the test application area. The coating should be smooth and glossy with no blisters, bubbles, crazing, cracking, solvent pop or pin holes.

If the test area is not satisfactory, repeat the test application on another area until satisfactory results are obtained.

If the coating appears satisfactory, lightly sand the test area and the rest of the **Awlspar** with 320–400 grit paper.

6. Remove the sanding dust and residue. Tack off with **Deluxe Tack Rags #73009.**
7. Apply light, even coats of **Awlbrite Clear**. Allow a minimum of 3–4 hours between coats. Above 80°F (27ºC) apply as many as 3 coats per day. Allow to cure 8–12 hours.
8. Repeat this process until the grain is filled and covered, 8–10 coats may be needed. Keep sanding to a minimum. The only reason to sand is to remove obvious defects, or more than 36 hours have elapsed between applications. The goal is to fill and cover the grain. When the grain is filled and covered allow to cure for 8–12 hours. Total DFT must be 10–12 mils (250–300 microns).

A light rub with a Scotch-Brite® pad is often enough to break the glaze of the previous coat, providing sufficient adhesion for subsequent coats. If you sand, use 400 grit, or finer, paper.

TIP:
To make it easier to see the wet edge, dull the surface with a white or green Scotch-Brite® pad between coats. Rub the surface just enough to noticeably lower the gloss. This minimizes coating removal and dust while making it easier to see holidays and locate your wet edge when applying a glossy clear to a glossy surface.

9. Lightly sand the surface with 400–500 grit paper. Remove sanding dust and residue. Tack off with **Deluxe Tack Rags #73009**.
10. Apply two light finish coats of **Awlbrite Clear**. The coating will be ready for light service in 12 hours.

BRIGHTWORK
APPLICATION continued...

For the finest smoothness and gloss, or to remove imbedded dust particles in the final coat, dry and hard **Awlbrite Clear** can be buffed with a fine grade of polishing compound. When buffing or polishing, use care not to remove excessive amounts of film. Use less effort near sharp edges and miters, the coating is generally thinnest in these areas.

SYSTEM III.
EXTERIOR CLEARCOAT SYSTEM—
Awlwood MA

Awlwood MA is an exterior clear system, made up of a Primer and Clear Finish, containing a unique patented resin technology that results in a system that has outstanding performance for many years. This resin technology ensures that the Awlwood system retains the same gloss, DOI and natural appearance as first application.

Incorporating **Flex-Link**™ technology, the Primer locks directly onto the wood structure (even tropical hardwoods) resulting in superior flexibility and unrivalled damage resistance yet allows the natural color and grain of wood to shine through. This technology also ensures that the Primer is the perfect base for the finish to give a superior system in comparison to traditional varnishes.

IMPORTANT:
Suitable application conditions: 4º–30ºC,
Relative humidity 30%–95%.

NOTE: Awlwood MA Primers cure by the mechanism of moisture in the air (humidity); very low moisture content in the air will lead to longer cure times. Do not use this product in an air-conditioned environment. If the product is to be applied in an environment where it is suspected that low humidity may inhibit the cure of the product, apply to a test area first. Decant sufficient product for 30 minutes use into a roller tray or working pot. Seal the original container immediately to prevent moisture exposure. Screw the cap on fully. A deep working pot is preferable to one that is broad and shallow to minimize moisture exposure and maximize pot life. Do not tip unused product back into the can.

Properly prepare the wood surface. See surface preparation for **Awlwood MA** for this information - ***see page 31.***

NEW/BARE WOOD PRIMER APPLICATION

Awlwood MA Primer Clear

1. Apply by brush or roller until timber is saturated. Do not attempt to build a film. On very deep grained timbers such as Iroko and Wenge, do not flood-coat the grain. This will need to be filled using successive coats of **Awlwood MA Clear Gloss**.

BRIGHTWORK
APPLICATION continued...

Awlwood MA Primer Red & Yellow

Application Method 1 – Applying using a rag:

1. Apply with a rag or staining cloth as per a rubbing stain. Make sure that the primer is applied to timber saturation but do not attempt to build a film. “Sticky” Primer can be overcoated with fresh material for 15 minutes or so after application. This application method tends to create less mess than the following if brush splatter (on decks etc) is an issue.

Application Method 2 – Applying using a brush or roller:

1. Work in sections applying the Primer to achieve timber saturation.
2. Remove excess material by rubbing with the grain using paper towels or rags which are frequently changed. Do not attempt to build a film.

Apply Primer to an area approximately 1.0m wide to prevent excess primer becoming tacky and non-removable. Wiping off excess primer right down to the timber surface is key to achieving a natural appearance. If excess Primer does become tacky apply fresh material up to 15 minutes after application to re-dissolve. The product will remain workable for ~5 minutes depending upon application conditions. Do not let wet edges dry for longer than 3 minutes before applying and overlapping the next section of primer.

TIPS:

Primer Bleed: Hardwoods with a deep capillary structure may “bleed” Primer as it cures leaving a spotted or bubbled effect. The clear primer can be tipped with a brush if wet, however the colored primers should be wiped with a rag prior to the primer curing. If necessary, the rag can be moistened with **Awlwood MA Brushing** or **Spray Reducer**.

Masking tape: It advisable to use plastic making tape around timber areas bordered by paintwork if using the **Awlwood MA** Yellow or Red Primer. Drips splatter or bleed under making tape can be cleaned up with MEK, Acetone or Xylene on a rag providing the primer is uncured but may still stain.

More even coloration: On extremely absorbent timbers such as Spruce, the use of colored primers can give a mottled appearance. In this situation, using the clear primer and adding no more than 10% colored Primer to the topcoat will give more even coloration.

Mixing colored Primers: All of the primers are intermixable. On soft absorbent timbers such as Cedar and Oregon, the colored primer tint strengths can give an overly dark appearance. On these timbers, the colored primers are generally mixed 50/50 by volume with the clear primer to reduce the tint strength.

Darker timber tone: This can be achieved by applying multiple coats of **Awlwood MA Gloss** with no more than 10% colored primer added. Sealing timber with the intention of topcoating at a later time: It is best to apply one or two coats of **Awlwood MA Gloss** over Primers if the job sequence is to be broken. Sand well before continuing. The ideal time to apply the first coat of **Awlwood MA Gloss** over the Primer is 24 hours for chemical adhesion.

BRIGHTWORK
APPLICATION continued...

FINISH APPLICATION

NOTE: Awlwood MA Clear Gloss is typically applied by applying a specific volume instead of wet film thickness.

Whilst it is not necessary to sand between primer and finish application if necessary (due to grain lift or defect) or desired then ensure the primer is sufficiently cured before sanding. Refer to TDS for specific information on sanding times at various temperatures.

Applying over Awlwood MA Red or Yellow Primer

1. If sanding is required, hand sand lightly with the timber grain using P400 grit paper or ScotchPad#7447 taking care to avoid sanding through the primer - this will cause uneven coloration.
2. If a greasy timber has been primed or a contaminated substrate is suspected, solvent wipe with Acetone on a rag (wiping off with clean rags) before applying the topcoat. Contaminants from the substrate that float to the surface of the primer can compromise intercoat adhesion.

Applying over Awlwood MA Clear Primer

1. If sanding is required, lightly hand or machine sand using P280–320 grit paper taking care to avoid sanding through the primer. If this occurs spot prime the area and sand carefully when primer has cured. Ensure any glossy areas are well sanded.
2. If a greasy timber has been primed or a contaminated substrate is suspected, sand first, then solvent wipe with Acetone on a rag (wiping off with clean rags) before applying the topcoat. Contaminants from the substrate that float to the surface of the primer can compromise intercoat adhesion.

NOTE: If in cold temperatures and/or very dry conditions, the **Awlwood MA Clear Primer** feels sticky to the touch or cannot be sanded without clogging the paper after an overnight cure, allow more time before proceeding. Ideally aim to apply the first coat of **Awlwood MA Clear Gloss** within 24 hours of primer application to attain an optimum chemical bond.

TOPCOAT APPLICATION

Suitable application conditions: 4º–30ºC, Relative humidity 30–95%.
NOTE: Awlwood MA Clear Gloss cures by the mechanism of moisture in the air (humidity); very low moisture content in the air will lead to longer cure times. Do not use this product in an air-conditioned environment. If the product is to be applied in an environment where it is suspected that low humidity may inhibit the cure of the product, apply to a test area first.

Sanding is not necessary between coats if overcoating on the same day unless extreme drying conditions are present (full sun or high temperatures) in which case rubbing down with P280 grit paper will ensure good intercoat adhesion. For general indoor applications, sanding is needed if more than 24 hours elapse between coats. After sanding, remove sanding dust by vacuuming then warm water wash only using lint free cloths until surface is completely clean.

BRIGHTWORK
APPLICATION continued...

Tack cloths are not recommended. If contamination is suspected solvent wash the surface using only **Awlwood MA Brush Reducer** or **Awlwood MA Spray Reducer** before and after sanding well. Sanding of the penultimate coat, however, should always be carried out to give best results.

Brushing/Rollering

To obtain full grain fill, especially on Hardwoods with a deep grain structure, and to maximize finish, follow the below recommendations:

1. Apply the first two coats of **Awlwood MA Gloss** at one day intervals, by brush or roller at 12/14m^2/lt to ensure full grain penetration and fill.
2. Sand each coat with P220–P280 grit paper to flatten the grain texture without sanding through to the primer. This will fill the grain more effectively, reduces solvent entrapment in the pits of the grain and minimizes air bubbles forming in the topcoat before the grain is fully sealed. If any bubbles do occur from wet product displacing air in the timber grain, gently tipping these with a dry brush before the product cures is easier than sanding later and will, in many cases, seal the pinhole. Take care to not over-sand edges. Machine sanders can be used on build coats after an overnight cure.
3. Apply a further 6 coats of **Awlwood MA Finish** within recommended overcoating intervals. As a general indicator, when one coat can be pressed with a finger without leaving an indented fingerprint, another coat can be applied. If the brush or roller binds with, or re-dissolves the previous coat, more drying time is needed. Alternatively if the cured film can be gently sanded with P220 grit paper without binding it can be overcoated. Applying multiple coats in a single day will reduce flow and levelling necessitating more sanding the following day however, multicoating is a useful means of attaining rapid film build. Good practice is to gently sand/scuff the surface at the start of each day to remove any texture, especially on vertical surfaces, and then multi-coat as above.
4. Allow to cure for 24 hrs (18hrs at 30°C).
5. Hand sand working up to P600 grit paper, working with the grain. Remove all sanding dust.
6. Reduce the final coat of **Awlwood MA** 10% by volume with **Awlwood MA Brush Reducer**.
7. Apply the final coat removing any heavy sags or runs but do not overwork the product. Once a non-running film is achieved allow **Awlwood MA** to cure and flow on its own – **DO NOT CONTINUE TO BRUSH** to remove brush marks etc.

TIP:
In hot and/or windy conditions, **Awlwood MA Gloss** will tack up rapidly. To extend the wet edge and increase workability in these conditions thinning up to 10% with **Awlwood MA Brush Reducer** will assist.

TIP:
If brushes are binding up with curing product during use, they can be quickly freed up by washing with Acetone, **Awlwood MA Brushing Retarder** or **Awlwood MA Spray Reducer**.

BRIGHTWORK
APPLICATION continued...

Spraying
Reduce **Awlwood MA Clear Gloss** up to 10% with **Awlwood MA Spray Reducer** if necessary or safely warm the can – do not use universal thinners. Apply by conventional spray.

To obtain full grain fill, especially on Hardwoods with a deep grain structure, and to maximize finish, follow the below recommendations:

1. Apply the first two coats of **Awlwood MA Gloss** at one day intervals, by brush or roller at 12–14m^2/lt to ensure full grain penetration and fill. If these initial coats are sprayed they may not flow in and fill the grain since there are no shear forces to force product into the grain. Spray application of these first two coats can also result in air bubbles breaking and forming near invisible pin holes which may show up as cissing on the next application of finish coat.
2. Sand each coat with P220–P280 grit paper to flatten the grain texture without sanding through to the primer. This will fill the grain more effectively, reduces solvent entrapment in the pits of the grain and minimizes air bubbles forming in the topcoat before the grain is fully sealed. If any bubbles do occur from wet product displacing air in the timber grain, gently tipping these with a dry brush before the product cures is easier than sanding later and will, in many cases, seal the pinhole. Take care to not over-sand edges. Machine sanders can be used on build coats after an overnight cure.
3. Apply a further 6 coats of **Awlwood MA Finish** within recommended overcoating intervals. As a general indicator, when one coat can be pressed with a finger without leaving an indented fingerprint, another coat can be applied. Applying multiple coats in a single day will reduce flow and levelling necessitating more sanding the following day however, multicoating is a useful means of attaining rapid film build. Good practice is to gently sand/scuff the surface at the start of each day to remove any texture, especially on vertical surfaces, and then multi-coat as above.
4. Allow to cure for 24 hrs (18hrs at 30°C).
5. Hand sand working up to P600 grit paper, working with the grain. Remove all sanding dust.
6. Reduce the final coat of **Awlwood MA** 10% by volume with **Awlwood MA Spray Reducer**.
7. Apply the final coat ensuring no heavy sags or runs but do not overwork the product. Once a non-running film is achieved allow **Awlwood MA** to cure and flow on its own – **DO NOT CONTINUE TO APPLY**.

NOTE: Do not leave **Awlwood MA Gloss** in spray pots between coating applications.

TIP:
Coloring Topcoats: For a richer more traditional appearance, up 10% of the **Awlwood MA** colored primers can be added to the **Awlwood MA Gloss**. This should be done in the first few coats then overcoated with clear topcoat to attain the full coating thickness.

BRIGHTWORK
APPLICATION continued...

SYSTEM IV.
AWLBRITE INTERIOR SYSTEMS

NEW/BARE WOOD
The key to performance of any varnish system is applying enough material. This is especially true with **Awlbrite Clear** Urethane.

This system calls for more coats than is necessary to achieve initial cosmetic qualities. If you stop the system when it looks good, or sand excessively, you will not achieve the desired performance.

Properly prepare the wood surface. See surface preparation for Brightwork Systems for this information - ***see page 30***, steps 1–3.

1. Mix by volume 1 part of J3901 base with 1 part of J3902 converter until a smooth, homogenous mixture is obtained. If brushing add 1⁄4 part of T0031 for the first coat. A suggested mix is 4 oz. **Awlbrite Clear** Base + 4 oz. **Awlbrite Converter**.
2. Apply by conventional spray or brush. The first coat is best applied by brush as this offers the best penetration and grain filling. Allow to cure minimum 3 hours.
3. For optimum results lightly sand the surface with 320–400 grit paper. Remove sanding dust and residue. Tack off with **Deluxe Tack Rags #73009**
4. Apply light, even coats of **Awlbrite Quik-Fil** at 3.0–3.5 mils WFT (80–90 microns) yielding 1.0–1.5 mils DFT (30–40 microns). Allow a minimum of 3 hours between coats.
5. For open grain 1–2 coats should be applied. For flush filled surface apply 4–5 coats (number of coats will depend on type and condition of the bare wood). For optimum result in obtaining a smooth and even finish sand between coats**.**
6. Re-coat with **Awlspar**, **Awlbrite Clear**, **Awlbrite Semi-Gloss**, **Awlgrip** or **Awlcraft 2000**.

For **Awlbrite Gloss** or **Semi-Gloss** application proceed as below:

1. Mix by volume 2 parts **Awlbrite Clear** Base with 1 part **Awlbrite Converter** and 0.5 part **Activator A0031**. A suggested mix is 4 oz. **Awlbrite Clear** Base + 2 oz. **Awlbrite Converter** + 1 oz. **Activator A0031**= 7 oz. total.

Additional Activator A0031 can be added to help maintain a wet edge in warmer weather, but the standard mix of 2:1:0.5 is required for proper cure. Mix only enough for one sealer coat. Apply one thin coat. Allow to cure 8–12 hours.

2. Lightly sand the surface with 320–400 grit paper. Remove sanding dust and residue. Tack off with **Deluxe Tack Rags #73009**.
3. Apply light, even coats of **Awlbrite Clear**. Allow a minimum of 3–4 hours between coats. Above 80°F (27ºC) apply as many as 3 coats per day. Allow to cure 8 to 12 hours.

BRIGHTWORK
APPLICATION continued...

4. Repeat this process until the grain is filled and covered, 8–10 coats may be needed. Keep sanding to a minimum. The only reason to sand is to remove obvious defects, or more than 36 hours have elapsed between applications. The goal is to fill and cover the grain. When the grain is filled and covered allow to cure for 8–12 hours. Total DFT must be 10–12 mils (250–300 microns).

A light rub with a Scotch-Brite® pad is often enough to break the glaze of the previous coat, providing sufficient adhesion for subsequent coats. If you sand, use 400 grit, or finer, paper.

TIP:
To make it easier to see the wet edge, dull the surface with a white or green Scotch-Brite® pad between coats. Rub the surface just enough to noticeably lower the gloss. This minimizes coating removal and dust while making it easier to see holidays and locate your wet edge when applying a glossy clear to a glossy surface.

5. Lightly sand the surface with 400–500 grit paper. Remove sanding dust and residue. Tack off with **Deluxe Tack Rags #73009**.

For a full gloss finish proceed to 6a. For a semi–gloss (satin) finish proceed to 6b.

6a. Apply two light finish coats of **Awlbrite Clear**. The coating will be ready for light service in 12 hours.

For the finest smoothness and gloss, or to remove imbedded dust particles in the final coat, dry and hard **Awlbrite Clear** can be buffed with a fine grade of polishing compound. When buffing or polishing, use care not to remove excessive amounts of film. Use less effort near sharp edges and miters, the coating is generally thinnest in these areas.

6b. Apply two light finish coats of **Awlbrite Semi-Gloss**. The coating will be ready for light service in 12 hours.

For the finest smoothness and gloss, or to remove imbedded dust particles in the final coat, dry and hard **Awlbrite Semi-Gloss** can be buffed with a fine grade of polishing compound. When buffing or polishing, use care not to remove excessive amounts of film. Use less effort near sharp edges and miters, the coating is generally thinnest in these areas.

BELOW WATERLINE SYSTEMS
APPLICATION
ANTIFOULING SYSTEMS

Awlstar Gold Label (EU only) is a tin-free ablative co-polymer type antifouling designed to provide multi-season protection from fouling when applied according to specification. An ablative antifouling performs by the movement of the hull through the water, gradually wearing away the coating. As a result a fresh, fully potent layer of antifouling is always exposed to the water.

Awlstar Gold Label is a very versatile product. It performs in both warm and cold water, on sail and power craft. It is hard enough to stay on high speed power boats but burnishes easily for racing sailboats. Truly static boats may be better off with a hard, leaching type antifouling.

Awlstar Gold Label is:
- Available in four bright colors
- Recommended on fiberglass, steel and wood
- Recommended for extended dry-docking. Take the boat out of the water as often as you like for as long as you like.

NOTE: Awlstar Gold Label must not be used on aluminum

Awlstar Gold Label is designed to be applied over **Hullgard Epoxy Primer (EU only)**. The full system protects the hull from attack from water while providing an ideal surface on which to apply the **Awlstar Gold Label**. A key element of any **Awlstar Gold Label** system is applying the first coat of **Awlstar Gold Label** when the last coat of **Hullgard Epoxy Primer** is barely tack free. This procedure ensures bonding of the two coatings, providing the basis for multi–season performance.

The full **Hullgard/Awlstar** system is suitable for fiberglass, steel and wood. Many owners of wooden boats prefer to apply an antifoulant directly to the wood. This is not practical as **Awlstar Gold Label** will not bond to wood.

Each system provides a minimum of 14 mils (350 microns) of **Hullgard** primer overcoated with a minimum of 8 mils (200 microns) of **Awlstar Gold Label** antifouling.

All substrates (except aluminum)

NOTE: Regardless of whichever system is chosen below, the final priming coat must always be **Hullgard Epoxy Primer**.

Following suitable surface preparation as per ***pages 17–35***, the below method is suitable for all substrates:

1a. Apply multiple coats of **Hullgard Extra** to achieve 4 mils (100 microns) DFT. If applied by airless spray, 1–2 coats will be required. The additional reduction required for air atomized or roller application may require 1–2 additional coats to achieve 4 mils (100 microns) DFT.

APPLICATION
ANTIFOULING SYSTEMS continued...

Allow 2 hours between coats at 77°F (25ºC), 50% R.H. **Hullgard Extra** allows recoating with itself at any time up to 6 months without requiring sanding. The aged **Hullgard Extra** must be thoroughly cleaned and free of all foreign material before recoating with additional coats.

1b. Apply multiple coats of **Hullgard Epoxy** to achieve 4 mils (100 microns) DFT. If applied by airless spray, 1–2 coats will be required. The additional reduction required for air atomized or roller application may require 1–2 additional coats to achieve 4mils (100 microns) DFT.

Allow 2 hours between coats at 77°F (25ºC), 50% R.H. **Hullgard Epoxy** allows recoating with itself at any time up to 6 months without requiring sanding. The aged **Hullgard Epoxy** must be thoroughly cleaned and free of all foreign material before recoating with additional coats.

2. Apply multiple coats of **Hullgard Epoxy** to achieve 10 mils (250 microns) DFT. If applied by airless spray, 2–3 coats will be required. The additional reduction required for air atomized or roller application may require 1–2 additional coats to achieve 10 mils (250 microns) DFT.
3. Apply **Awlstar Gold Label** as soon as the last coat of **Hullgard Epoxy** is barely tack free, about 2 hours at 77°F (25ºC), 50% R.H.

Awlstar Gold Label can be applied by airless spray, brush or rollers. For maximum antifouling performance and protection, apply sufficient coats for 27 mils (675 microns) total wet film thickness to give a total of 12 mils (300 microns) dry paint film.

To provide a built-in indicator of when it is time to renew your **Awlstar Gold Label**, apply the first coat in a different color from the remaining coats. When you can see the first color showing through, it is time to renew.

Extra protection and more uniform wear properties result when 1 or 2 extra coats are applied to high wear areas, such as the bow, rudder, leading edge of the keel, stabilizers, cavitation plates, propeller cavitation areas and trim tabs.

Allow a minimum of 5 hours at 77°F (25ºC), 50% R.H. after the application of the last coat of **Awlstar Gold Label** before launching. Allowing 24 hours before launching is preferred.

Cooler temperatures will require longer cure times between coats and before launching.

DO NOT apply or attempt to cure **Awlstar Gold Label** or **Hullgard** products at temperatures below 55°F (13ºC).

RENEWING AWLSTAR GOLD LABEL

Awlstar Gold Label that is wearing thin can be easily renewed. Wash down the hull, using a high pressure, clean water wash, as soon as possible after hauling. The surface must be clean, dry and free of oil, grease, salt, dirt, corrosion or other surface contamination.

APPLICATION
ANTIFOULING SYSTEMS continued...

Wet sanding with 80 grit paper is advised under any of the following conditions:

- If the hull was not power washed while it was still wet from hauling
- Anytime the cleanliness of the surface is in doubt
- Faster, high use boats where the **Awlstar Gold Label** has ablated to a slick surface
- Sail boats recently burnished

PAINTING OVER OTHER ANTIFOULANTS

Although **Awlstar Gold Label** will work over some existing antifoulings, Awlgrip cannot endorse this practice. We have no control over other antifouling manufacturer's quality control or formulation. **Awlstar Gold Label** will not perform over any of the tincopolymer / organotin antifoulings, soft conventional types or vinyls.

Awlstar Gold Label will perform adequately over hard conventional type antifoulings and tin-free ablative copolymer antifoulings that contain copper. The most common problem encountered with these applications is mudcracking. A test application should be made before recoating an entire hull unless all other antifoulant is removed.

Do not apply primers over old antifouling paints. If the test application indicates a compatible situation, sand the surface with 80 grit then apply 3 coats of **Awlstar Gold Label**.

RUNNING GEAR AND HARDWARE – SURFACE PREPARATION, PRIMING & APPLICATION

Below waterline hardware can be difficult to coat for a variety of reasons. Two primary problems are:

- The difficulty in obtaining good surface preparation
- The specific metal alloys used for below waterline hardware

Brass, bronze and stainless steel do not hold paint very well.

Please note that it is critical the metal is primed immediately after grinding or sand blasting and great care should be used on rotating parts, such as shafts and propellers. Uneven grinding could take a shaft or propeller out of balance.

Remember **Awlstar Gold Label** is an ablative coating which wears away in use. It will perform satisfactorily on a rotating shaft, but would wear away very rapidly on a propeller.

NOTE: This system must not be used on aluminum hardware of any kind.

APPLICATION

ANTIFOULING SYSTEMS continued...

1. Thoroughly clean and degrease the surface. Use commercial detergents, steam cleaners, or pressure washers. Be sure all detergent residue is rinsed from the surface. Use **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) as a final wipe down of the surface.
2. Power grind with a 60 grit disk to obtain profile. If the profile is particularly jagged, grind to remove 'spikes' providing a more uniform surface.

Blow off the surface thoroughly with clean, dry, compressed air to remove all blast / grind residue and any dust or dirt. Use a brush or broom if necessary.

CAUTION:
Do not use rags to clean this surface. The sharp metal will snag fibers from the rags. These fibers can act as wicks for moisture or other contamination to enter the paint film. This can lead to premature failure of the Awlgrip System. **This surface must be primed within 4 hours**.

3. Apply minimum 2 coats of **Hullgard Epoxy** to achieve 8–10 mils (200–250 microns) DFT. If the schedule allows, 3 full coats at 14 mils (350 microns) DFT would be preferred.

Allow 2 hours between coats at 77°F (25ºC), 50% R.H. **Hullgard Epoxy** has an extended recoat capability which allows recoating with itself at any time up to 6 months without requiring sanding. The aged **Hullgard Epoxy** must be thoroughly cleaned and free of all foreign material before recoating with additional **Hullgard Epoxy**.

4. Apply **Awlstar Gold Label** antifouling as soon as the last coat of **Hullgard Epoxy** is barely tack free, about 2 hours at 77°F (25ºC), 50% R.H. Apply a minimum of two coats of **Awlstar Gold Label** antifouling. If the schedule allows, three coats are preferred.

TROUBLESHOOTING

Most application problems are a direct result of poor or improper procedures, marginal housekeeping conditions, inadequate equipment, or a combination of these factors.

Following a few rules and checking regularly that the rules are being followed can prevent many problems before they occur.

1. When using compressed air, a clean, oil-free, dry air supply is a must. This is just as important for tool operation (e.g. grinders, sanders, etc.) as it is when spraying paint. General air quality, filters and dryers should be checked regularly. ***See page 5*** for more information about compressed air.
2. Make certain the products and procedures used in or near the paint areas are compatible with Awlgrip products and general paint procedures. Sealers, cleaners, lubricants and hand cleaners/sanitizers containing silicone should not be used in or around the paint shop.
3. Machinery exhaust frequently is oil bearing and should not be allowed in the paint area.
4. Keep quantities of clean **Deluxe Tack Rags** available to tack off surfaces.
5. Wear clean gloves during all stages of surface preparation and application to prevent contaminating the paint surface with skin oils.

ORANGE PEEL AND DRY SPRAY

Textured, uneven surface like the skin of an orange.

A smooth, texture-free surface is the happy medium between surface preparation, component mix/reduction, spray gun adjustment and application technique. The most common cause is under atomization of the paint as a result of some combination of improper reduction, poor gun adjustment and poor spray technique. However, there are a number of factors which can contribute to, or cause, orange peel.

Causes:

- Hot surface
- Improper gun adjustment or spray techniques
- Improper pressure adjustment
- Orange peel in primer is printing in the topcoat
- Temperature is too low or too high
- Viscosity is too high
- Wrong choice of reducer
- Improper spraying sequence
- Improper recoat time

Solutions:

- Smooth sand the surface. Clean with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008 or Awlprep 400 T0170;** EU: **Surface Cleaner T0340**). Re–paint using more appropriate reducer, correct air pressure or correct spray technique and sequence
- Select proper reducer, allow sufficient dry time between coats
- Reduce to recommended application viscosity
- Use correct spray technique and sequence
- Do not paint hot surfaces. A surface too hot to comfortably hold your hand on is too hot to paint!

TROUBLESHOOTING continued...

PIN HOLING

Tiny holes in the finish caused by surface porosity or other imperfections in the substrate. Pin holing is sometimes confused with, or inaccurately described as, solvent popping.

Causes:

- Imperfections in the substrate
- Substrate surface porosity
- Insufficient amount of reducer

Solution:

1. Clean surface with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170**; EU: **Surface Cleaner T0340**)
2. Sand down to smooth surface, re-clean with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170**; EU: **Surface Cleaner T0340**), and tack off the surface
3. Squeegee or knife apply **Awlquik** Sanding Surfacer into the pinholes
4. Smooth sand the surface, clean with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170**; EU: **Surface Cleaner T0340**) and tack off surface. Seal with **545 Epoxy Primer** and re–apply topcoat

Prevention:

Inspect the surface and correct porosity or surface imperfections in the substrate before applying the topcoat.

SOLVENT POPPING

Tiny open blisters that appear in the paint film very shortly after application. Usually occurs when too thick a film is applied to a horizontal surface in hot weather. Reducer choice and excessive air flow can also be factors.

Causes:

- Wrong reducer selection
- Too thick or too heavy an application
- Premature surface skinning of the paint film before all the underlying solvent can evaporate
- Porous surfaces

Solutions:

- If possible, wash off the still wet coating with the appropriate reducer. If the coating is allowed to cure, smooth sand until all blisters are removed
- Clean with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170**; EU: **Surface Cleaner T0340**) using the Two Cloth Method
- Tack off surface, and re–coat using proper reducer while applying thin coats

At very high temperatures of 90–105°F (32–41°C), increase the amount of reducer to 35% and apply an additional coat to ensure proper film thickness. The extra reducer will improve flow while helping to keep the film open to avoid solvent popping.

TROUBLESHOOTING continued...

CRATERS and FISH EYES

Small, crater-like openings in the finish caused by contamination on the surface being painted.

Causes:

- Improper surface cleaning
- Contaminated equipment
- Wax on the surface
- Effects of previous repair
- Wrong reducer
- Water or oil in the air lines
- Workers using a silicone containing hand lotion or cream
- Old finish containing excessive fish eye preventer
- Wrong spray technique/improper dry times

Solutions:

- If the coating is still wet, wash off with the recommended reducer and properly clean and prepare the surface before proceeding with any further painting
- If the coating has cured, wipe down with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) using the Two Cloth Method

Awlgrip Wipe-Down solvent (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) will clean most surfaces thoroughly. In some cases, especially on fiberglass, extreme surface contamination such as mold release wax, silicone polish wax, diesel fuel or oil is present. In these situations, you must scrub the surface with a powdered household cleanser and a Scotch-Brite® pad until rinse water applied to the surface 'sheets out' over the entire area with no breaks or holes in the water film.

Blow dry the surface and thoroughly wipe the surface to remove any cleanser residue and help remove moisture on the gelcoat.

- Smooth sand, then re-clean with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**)
- Tack off surface and re-coat

Prevention

- Clean surface thoroughly with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) or **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170**; EU: **Surface Cleaner T0340)** before and after sanding

Only use **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) to remove wax. Other de- waxer solvents will melt wax into the pores of the gelcoat substrate.

- Solvent wipe the entire surface with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) or **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep 400 T0170;** EU: **Surface Cleaner T0340)** using the Two Cloth Method.
- Drain and clean equipment
- Use proper spray technique, select proper reducer
- Allow sufficient dry time between coats

PRODUCT DATA SHEETS

AWLPREP WIPE DOWN SOLVENTS: T0008/T0115/T0170

Features & Uses

There are different **Awlprep** wipe down solvents to fit a variety of cleaning needs from wax and grease removal to mild surface cleaning. Surface cleaners are generally used to remove light contaminants such as hand oils from finish primers and topcoats. Substrate cleaners are generally used to remove wax, grease, or other harsh contaminants from the substrates. Read each product description and choose which **Awlprep** product is right for you.

T0008 Awlprep Surface Cleaner

Use to wipe down finish primers and topcoats. A fast evaporating surface cleaner used to wipe down final primed or topcoated surfaces before and after sanding. **Awlprep T0008** is a mild surface cleaner that will remove hand oils, light grease and other light surface contaminants. Using the Two Cloth Method wipe down with **Awlprep T0008** before and after sanding of primers, fillers and topcoats. **Awlprep T0008** has a 'drying' effect which removes the latent moisture from the surface. Latent moisture on the surface can cause a good gloss finish to come out flat. **Awlprep T0008** is non-photochemically reactive.

T0115 Awlprep Plus Wax & Grease Remover

Use to remove wax residue and grease from substrates. A medium fast evaporating, strong, solvent designed to remove waxes, oils and greases commonly found on painted surfaces, new or aged gelcoat, aluminum or steel. Use before and after sanding the substrate prior to sanding. Always de-wax before sanding. Use the Two Cloth Method to apply and remove T0115. Do not use T0115 on freshly applied primers or topcoats. T0115 is photochemically reactive.

T0170 Awlprep 400 Slow Evaporating Wipe Down Solvent

Use to wipe down finish primers and topcoats. General purpose surface cleaner which evaporates five times slower than T0008. Use to wipe down final primed or topcoated surfaces before and after sanding. T0170 will remove hand oils, light grease and other light surface contaminants. Use the Two Cloth Method to apply and remove the T0170. The slower evaporation rate of T0170 allows for larger areas to be cleaned in hot weather using the two cloth method without creating wipe marks. T0170 is also excellent for removing tape residue. T0170 is non-photochemically reactive. T0170 is recommended for use in warm weather.

Specification Data

Type: **Awlprep (T0008)** – Surface cleaner for finish primers and topcoats
Awlprep Plus (T0115) – Wax & Grease Remover
Awlprep 400 (T0170) – Slow Evaporating Wipe Down Solvent for cleaning finish primers and topcoats

Packaging: Available in 1 Gallon containers.

VOC

T0008: 809 g/lt or 6.8 lbs/gallon
T0115: 817 g/lt or 6.8 lbs/gallon
T0170: 769 g/lt or 6.4 lbs/gallon

AWLPREP WIPE DOWN SOLVENTS: T0008/T0115/T0170

continued...

Product Components, Reducers, Additives and Auxiliary Components

None applicable.

Application Equipment

Clean, oil free, dry cotton cloths or prepackaged surface cleaning lint free towels designed for solvent wiping.

Surface Preparation

A clean, dry surface is essential to the success of any coatings application. Remember – Clean before sanding. Sanding often melts greases and oils into the surface making it difficult to obtain a clean surface.

Care should be used when wiping primed or painted surfaces which are not fully cured. **Awlprep** wipe down products can attack an epoxy or urethane coating as well as some polyester fillers which are not fully cured. Usually an epoxy or urethane surface which can be sanded is cured enough to be wiped down with **Awlprep** surface cleaning solvents, but not de-waxing or degreasing solvents. Polyester fillers are often sensitive to the types of solvents in the **Awlprep** product line. Always check a small area before beginning the Two Cloth Method on a primed or topcoated surface.

Detergent Scrubbing

Many applicators scrub the surface they are going to paint with a powdered household cleanser and a 3M Scotch-Brite® Pad before any other prep work is performed. This is an excellent practice as careful observation of the rinse water will tell you when you have a clean surface. Breaks, holes or beading of the rinse water indicate areas which need additional cleaning.

Mixing & Reduction

None required.

Application Instructions

Two Cloth Cleaning Method**:**

1. The surface should be cleaned thoroughly of all dust. Use a vacuum to remove dust or use clean, dry compressed air to blow while wiping with clean, oil free, dry cotton cloths. The majority of dust and dirt should be removed before wiping down with an **Awlprep** wipe down solvent.
2. Soak one cloth in the **Awlprep** solvent of choice. Use this cloth to wet the surface.
3. Use a dry second cloth to wipe the surface dry and lift the contamination off the surface.

- Work small areas (4 sq. ft / 0.4 m^2 or less) to keep the surface cleaner from drying before the second rag wipes the surface clean and dry
- Repeat steps 2 and 3, changing rags frequently, until the surface is residue-free

AWLPREP WIPE DOWN SOLVENTS: T0008/T0115/T0170

Application instructions continued...

WARNING:
Wiping the surface with one wet cloth only smears contamination around. Be sure the cloth used does not have any contaminates; clean cotton works the best. The surface must be dry before using tack rags.

MAX COR CF HIGH SOLIDS ANTI-CORROSIVE PRIMER: R4330/R3330

Features & Uses

Max Cor CF is a high solids two component anti-corrosive, chromate-free epoxy primer for aluminum and steel with excellent chemical and solvent resistance. Max Cor CF is based on 'Controlled Fusion' (CF) technology, a unique chemical system that allows extended re-coat times, removes the need for sanding prior to applying the next coat and also gives excellent substrate adhesion. This technology eliminates the requirement for high hazard chemicals and ensures a tightly fused intercoat layer between the CF-based coating and the next applied coat.

Specification Data

Type: Epoxy Polyamine

Color: Green

Packaging: Base available in a 1 Gallon pack, converter in a ½ Gallon pack

Theoretical Coverage:

*1138 sq ft/gallon (28.45 m^2/lt) at 0.8 mil (20 microns) dry;
*910–1518 sq. ft/gallon (22.76–38.0 m^2/lt) at recommended dry film thickness.

Calculated for mixed base and converter.

Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.

Recommended Wet Film Thickness: 0.8–1.4 mils (20–34 microns)

Recommended Dry Film Thickness: 0.6–1.0 mils (15–25 microns)

Number of coats: 1

Overcoating

Overcoating by	15°C/59°F		25°C/77°F		35°C/95°F	
	MIN	MAX	MIN	MAX	MIN	MAX
Hullgard Extra Epoxy Primer	17 hours	72 hours	17 hours	72 hours	7 hours	72 hours
High Build Epoxy Primer	17 hours	72 hours	17 hours	72 hours	7 hours	72 hours

(MIN – Minimum recoatability MAX – Maximum recoatability)

NOTE: If maximum overcoating interval is exceeded **Max Cor CF** will need to be fully removed and re-applied. If maximum overcoating interval is likely to be exceeded apply Hullgard Extra to give up to 6 months overcoating without the need for sanding.

VOC

(mixed : R4330 : R3330)
– 3.15 lbs / gallon (378 g/lt)

Product Components, Reducers, Additives and Auxiliary Components

Green Base R4330
Converter. R3330
Reducer . . . . . .DO NOT THIN/REDUCE
Equipment Cleaning . . . . . .T0006 or T0002 Reducers or M.E.K.

MAX COR CF HIGH SOLIDS ANTI-CORROSIVE PRIMER: R4330/R3330
continued...

Application Equipment
See equipment recommendations ***pages 8–14.***

Surface Preparation
The surface must be clean and dry, free of all dirt, grease and oil. Use **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008** or **Awlprep Plus T0115** ; EU: **Surface Cleaner T0340**).

Aluminum: Sandblast / Grind to 100% clean silver color. A surface profile of 2–3mils (50–75 microns) is recommended.
Steel: Sandblast/Grind SSPC-SP10 or Sa2½ . A surface profile of 2–3mils (50–75 microns) is recommended.

Mixing & Reduction
Mix by volume 2 parts R4330 with 1 part R3330.
Ensure R4330 is uniformly dispersed before addition of R3330. Mix until a smooth homogenous mixture is obtained.
Induction Time after Mixing: N/A
Anticipated Pot Life at 77°F (25°C) @ 50% R.H: 2 hours

Application Instructions
Spray only. Apply one smooth wet coat. Substrate may be visible through the dry film. Do not exceed maximum recommended dry film thickness.

WARNING:
Do not apply paint materials to surfaces warmer than 105°F (40°C) or colder than 59°F (15°C). Do not attempt to cure products at temperatures below 59°F (15°C).

MAX COR CF AEROSOL ANTI-CORROSIVE PRIMER: S4010

Features & Uses
Max Cor CF is a high solids two component anti-corrosive, chromate-free epoxy primer for aluminum and steel with excellent chemical and solvent resistance. **Max Cor CF** is based on 'Controlled Fusion (CF) technology, a unique chemical system that not only ensures excellent substrate adhesion, without the need for high hazard chemicals, but also gives a tightly fused intercoat layer between **Max Cor CF** and the next applied coat. Innovative technology has allowed the two-component **Max Cor CF** paint to be dispersed in an aerosol, while greatly exceeding standard spray paint cans in terms of performance and quality.

The **Max Cor CF** aerosol is ideal for repairs and hard to reach areas where a fast and effective solution is required.

Specification Data
Type: Epoxy Polyamine
Color: Green
Packaging: A 2-part 250ml aerosol available in all regions
Theoretical Coverage:
*492 sq. ft / gallon (12 m^2/lt) at 0.8 mil (20 microns) dry;
*779–1312 sq. ft / gallon (19–32 m^2/lt) at recommended dry film thickness

Calculated for mixed base, converter and propellants.

Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.
Recommended Wet Film Thickness: 1.3–2.0 mils (33–55 microns) per coat
Recommended Dry Film Thickness: 0.3–0.5 mils (7.5–12.5 microns) per coat
Number of coats: 2 (smooth wet coats, 15 minutes apart)

Overcoating

Overcoating by	15°C/59°F		25°C/77°F		35°C/95°F	
	MIN	MAX	MIN	MAX	MIN	MAX
Hullgard Extra Epoxy Primer	17 hours	72 hours	17 hours	72 hours	7 hours	72 hours
High Build Epoxy Primer	17 hours	72 hours	17 hours	72 hours	7 hours	72 hours

(MIN – Minimum recoatability MAX – Maximum recoatability)

VOC
(mixed : R4330 : R3330)
– 5.48 lbs /gallon (656g/lt)

NOTE: If maximum overcoating interval is exceeded **Max Cor CF** will need to be fully removed and re-applied. If maximum overcoating interval is likely to be exceeded apply Hullgard Extra to give up to 6 months overcoating without the need for sanding.

MAX COR CF AEROSOL ANTI-CORROSIVE PRIMER: S4010

continued...

Product Components, Reducers, Additives and Auxiliary Components

2-part Aerosol S4010
Reducer. . . . . .DO NOT THIN/REDUCE

Application Equipment - Operation of aerosol

1. Shake aerosol can vigorously. When mixing ball is heard, shake can for a further two minutes minimum.
2. Remove the red push button from the cap and place on the bottom of the aerosol. Place the aerosol on a stable, horizontal surface with the cap pointing downwards.
3. Activate the aerosol by applying even, vertical pressure. Listen for the clicking noise. Press just once.
4. Write the date and time of activation on the label. The pot life specified on this datasheet applies to an ambient temperature of **77°F (25°C)**.

The pot life will vary depending on the ambient temperature. Lower temperatures will extend the pot life, while higher temperatures will reduce it.

5. Thoroughly shake the aerosol for two minutes to properly mix all the components together.
6. Perform a trial spray.
7. When you are finished working you must empty the valve with the spray head pointing downwards. Spray until only propellant leaves the muzzle.

Surface Preparation

The surface must be clean and dry, free of all dirt, grease and oil. Use **T340 Surface Cleaner (EU only)**, **T0008 Surface Cleaner** or **T0115 Wax and Grease remover**.

Aluminum: Sandblast / Grind to 100% clean silver color.
Steel: Sandblast/Grind SSPC-SP10 or Sa 2 ½ .

Induction Time after Mixing: N/A
Anticipated Pot Life at 77°F (25°C) @ 50% R.H: 2 hours

Application Instructions

Apply two smooth wet coats 15 minutes apart. Substrate may be visible through the dry film. Do not exceed maximum recommended dry film thickness.

WARNING:

Do not apply paint materials to surfaces warmer than 105°F (40°C) or colder than 59°F (15°C). Do not attempt to cure products at temperatures below 59°F (15°C).

Disposal: Ensure aerosol can is completely empty prior to disposal.

WASH PRIMER CF CHROMATE-FREE ETCH PRIMER: D6600/3300

Features & Uses

Wash Primer CF is a chromate-free etch primer, based on 'Controlled Fusion' (CF) technology. CF technology is a unique chemical system that allows extended re-coat times, removes the need for sanding prior to applying the next coat and also gives excellent substrate adhesion. This technology eliminates the requirement for high hazard chemicals and ensures a tightly fused intercoat layer between the CF-based coating and the next applied coat.

Specification Data

Type: Two component Etch Primer
Color: Yellow
Packaging: Available in Europe and North America in 1 Quart base (0.946lts fill volume) and 1 Quart converter (0.946lts fill volume)

Theoretical Coverage:

408 sq. ft / gallon (10m²/lt) at 0.5 mil (13 microns) DFT. Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.

Anticipated Drying Time at 77°F (25°C) @ 50% R.H: 30 minutes dust-free; 1 hour touch dry; 2 hours hard dry. 3 days to light service, 1 week for full cure.

Recommended Wet Film Thickness: 2–4 mils (50–100 microns) per coat by conventional spray.

Recommended Dry Film Thickness: 0.25–0.5 mil (7–13 microns) per coat by conventional spray.

Number of coats: 1 (at 0.25–0.5 mils / 7–13 microns DFT). Wash Primer CF can be overcoated with 545 Epoxy Primer and Awlgrip Topcoats. It is not suitable for use under Awlgrip Fairing Compounds.

Overcoatability: (At 77°F/25°C, 50% RH): With topcoat / primers is 1 hour (minimum). Maximum recoat time, without sanding, is 6 months. Inspection for cleanliness is recommended.

IMPORTANT:

The Controlled-Fusion process will mean that the Wash Primer CF will soften when overcoated by solvent-based materials. Full hardness and adhesion develops 1 week after Topcoat application. Topcoated parts should be left a minimum of 7 days before wrapping to allow controlled fusion process to complete.

VOC

Base (D6600) – 675g/lt or 5.4 lbs/gallon
Converter (D3300) – 908g/lt or 7.6 lbs/gallon
Mixed components, unreduced (as supplied) VOC is 780 g/lt or 6.5 lbs/gallon.

WASH PRIMER CF CHROMATE-FREE ETCH PRIMER: D6600/3300 continued...

Product Components, Reducers, Additives and Auxiliary Components
Base – Yellow Base D6600
Converter – Etch. D3300
Reducer . . . . . .DO NOT THIN/REDUCE
Equipment Cleaning . . . . . .T0006, T0002 or M.E.K

Application Equipment
Apply **Wash Primer CF** by spray, brush or roller. If overcoating metal directly only apply by spray due to risk of snagging roller fibers. Conventional spray is the most efficient way to apply this product, ***see pages 8–12***

Spray Set Up
Gravity Fed Conventional gun: 1.1–1.4 size tip.
3–4 bar at source (depending on line length)

Surface Preparation
Wash Primer CF may be directly applied to aluminum, anodized aluminum and stainless steel. Not suitable for wooden or plastic surfaces.

1. Thoroughly clean and degrease the surface. Use commercial detergents, steam cleaners or pressure washers. Be sure all detergent residue is rinsed from the surface. Use **Awlgrip Wipe Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) for a final wipe down of the surface.
2. For maximum adhesion, it is recommended that anodized and stainless steel parts are sanded with 80–120 grit paper which will 'break' the surface to ensure adhesion to the substrate.
3. For architectural grades of anodized aluminum, the surface must be thoroughly sanded with 40–80 grade paper until a surface profile is present. The surface must then be thoroughly cleaned and degreased with **Awlgrip Wipe Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**).

In some circumstances a full anti-corrosive/fairing system may not be required (e.g. window frames, parts etc). In such instances there are two alternative options for coating suitably prepared steel or aluminum - refer to surface preparation section, **page 23** onwards for the correct surface preparation prior to applying the **Fast Drying Topcoat System** or **Build System**.

Mixing & Reduction
Thoroughly mix the base until a consistent homogenous blend is obtained. Power mixers or shakers are preferred. If not available thorough hand mixing is acceptable. Add converter and thoroughly mix again. Mix ratio by volume is 1 part D6600 to 1 part D3300. Reduction is not required as material is supplied at maximum allowable VOC.

Induction Time after Mixing: N/A
Anticipated Pot Life at 77°F (25°C) @ 50% R.H: 8 hours

WASH PRIMER CF CHROMATE-FREE ETCH PRIMER: D6600/3300 continued...

Application Instructions

General Topside Systems
Apply by air atomized spray. Apply 1 coat at 2–4 mils (50–100 microns) giving a dry film thickness between 0.25–0.5 mils (7–13 microns). Several passes are required with the spray gun for a good surface. The first pass should be relatively slow (5–10cm / 2–4 inches per second). This pass is to obtain basic coverage.

Film build should then be achieved with multiple quick passes (30–40cm / 12–16 inches per second) building to 2–4 mil (50–100 microns). Multiple passes are required in order to achieve a good finish. Additional coats are not required once the coating is hard dry. Obtaining the recommended film build is essential for a flat surface.

Fast Drying Topcoat System
Apply by air atomized spray. Apply 1 coat of **Wash Primer CF** at 2 mils (50 microns) wet film thickness giving a dry film thickness of 0.25 mils (7 microns). Several passes are required with the spray gun for a good surface. The first pass should be relatively slow (5–10cm / 2–4 inches per second). This pass is to obtain basic coverage.

Following the recommended overcoating interval apply 2–3 coats of **Awlgrip** or **Awlcraft 2000** topcoat at the correct wet film thickness – check relevant datasheet for more information on topcoat application.

Build System (for increased thickness and hiding imperfections)
Apply by air atomized spray. Apply 1 coat of **Wash Primer CF** at 2 mils (50 microns) wet film thickness giving a dry film thickness of 0.25 mils (7 microns). Several passes are required with the spray gun for a good surface. The first pass should be relatively slow (5–10cm / 2–4 inches per second). This pass is to obtain basic coverage.

Following the recommended overcoating interval apply 1 coat of **545 Epoxy Primer** (or **321 HS Undercoat**) at the correct wet film thickness — check relevant datasheet for more information on undercoat application). Once cured for the recommended interval then apply 2–3 coats of **Awlgrip**, **Awlcraft 2000** or **Awlcraft SE** topcoat at the correct wet film thickness — check relevant datasheet for more information on topcoat application.

WASH PRIMER CF CHROMATE-FREE ETCH PRIMER: D6600/3300 continued...

IMPORTANT:
While the build system will be touch dry at 24 hours at 77°F (25°C) following topcoat application, it's important for the 'controlled fusion' to fully activate and through dry. No assembly, stacking or drilling should take place prior to 2 weeks at 77°F (25°C), or 3 weeks at 55°F (13°C).

WARNING:
Do not apply paint materials to surfaces less than 5°F (3°C) above dew point, or to surfaces warmer than 105°F (41°C). Ambient temperature should be minimum 55°F (13°C) and maximum 105°F (41°C).

IMPORTANT:
The Controlled-Fusion process will mean that the **Wash Primer CF** will soften when overcoated by solvent-based materials. Full hardness and adhesion develops 1 week after Topcoat application. Topcoated parts should be left a minimum of 7 days before wrapping to allow controlled fusion process to complete.

HULLGARD EXTRA EPOXY PRIMER D6120/D3730

Features & Uses
Hullgard Extra Epoxy Primer is a two component epoxy substrate primer with excellent anticorrosive properties. It offers excellent aged recoatability and provides a perfect base for subsequent fairing with Awlfair fairing compound(s).
For use above and below the waterline.

Specification Data
Type: Two component epoxy
Color: White
Packaging: All countries: Available in 1 Gallon base (0.87GL fill volume) and 1 Quart converter (16.7 fl.oz. fill volume). Mixed volume is 1 Gallon.
EU only: Available in 5 Gallon base (16.45lt fill volume) and 84fl.oz. converter (2.46lt fill volume). Mixed volume is 5 Gallon. Also available in 1 Quart Kit pack where mixed volume is 1 Quart.
Theoretical Coverage:
185 sq. ft / gallon = 4.6m²/lt at 4 mils/100 microns DFT. Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.
Recommended Wet Film Thickness: Wet Film Thickness: 9 mils (225 microns) per coat by airless spray, 5 mils (125 microns) per coat by brush/roller.
Recommended Dry Film Thickness: Dry Film Thickness: 4 mils (100 microns) per coat by airless spray, 2.5 mils (60 microns) per coat by brush/roller.
Number of coats: 1 by airless spray (at 4 mils/100 microns DFT), minimum 2 by roller.
Anticipated Drying Time at 77˚F (25˚C), 50% R.H: 30 minutes dust–free, 6 hours touch dry; 10 hours hard dry.
Recoatability (At 77˚F (25˚C), 50% RH):
With Itself or Primers/surfacers — 2 hours (minimum). Maximum recoat time, without sanding 6 months (in shed). Inspection for cleanliness is recommended. Do not wipe with solvents.
With Fillers — 16 hours (minimum). Maximum recoat time, without sanding 6 months (in shed). Inspection for cleanliness is recommended. Do not wipe with solvents.

VOC
Base (D6120): 482 g/lt or 4.0 lbs/gallon
Converter (D3730): 376 g/lt or 3.1 lbs/gallon
Mixed components, unreduced (as supplied) VOC is 468 g/lt or 3.9 lbs/gallon

Product Components, Reducers, Additives and Auxiliary Components
White Base D6120
Converter. D3730
Reducer T0006
Equipment Cleaning . . . . . .T0006 , T0002 or M.E.K.

Application Equipment
Apply by airless spray, air atomized spray, brush or roller.
Airless spray is the most efficient way to apply this product.
See pages 8–12.

HULLGARD EXTRA EPOXY PRIMER D6120/D3730 continued...

Surface Preparation

Hullgard Extra may be directly applied to grit blasted steel. Gritblast to Sa2½ / SSPC-SP10 – near white metal surface. A surface profile of 2–3 mils (50–75 microns) is recommended. If gritblasting is not possible, grind the metal surface with 24–36 grit abrasive discs to a uniform, clean, bright metal surface 2–3 mils (50–75 microns) anchor pattern. May also be applied to abraded aluminum (grit 36) and fiberglass (degrease and abrade using 180 grit paper). For the ultimate anti-corrosive system first apply a coat of **Max Cor CF** to the suitably prepared steel or aluminum substrate (refer to **Max Cor CF** datasheet for further information on surface preparation and overcoating times). Wood should be clean and sanded with 80–180 grit paper.

NOTE: For underwater applications do not apply antifouling direct to **Hullgard Extra**; Apply a coat of **Hullgard Epoxy Primer (EU only)** prior to antifouling application.

Mixing and Reduction

Check for settling, then thoroughly mix the base until a consistent homogenous blend is obtained. Power mixers or shakers are preferred. If not available thorough hand mixing is acceptable. Add converter and again mix thoroughly. Mix ratio by volume is 10 parts D6120 to 1.5 parts D3730. Reduction is not normally required but at lower temperatures small amounts (5%) of T0006 can be added. Do not reduce more than 15%.

Induction time: 10 minutes.

Anticipated Pot Life at 77˚F (25˚C), 50% RH: 8 hours.

Application Instructions

Apply by airless spray, air atomized spray, brush or roller.

NOTE: Only apply **Hullgard Extra** by roller if applying over **Max Cor CF** due to risk of snagging roller fibers. Apply 9 mils (225 microns) WFT yielding 4 mils (100 microns) DFT per coat. Multiple coats may be required when using roller or brush.

WARNING:

Do not apply paint materials to surfaces less than 5°F (3°C) above dew point, or to surfaces warmer than 105°F (41°C). Ambient temperature should be minimum 55°F (13°C) and maximum 105°F (41°C).

HULLGARD EPOXY PRIMER (EU ONLY) D6070/D3707

Features & Uses

Hullgard Epoxy Primer is a two component epoxy primer that combines excellent anti-corrosive and water barrier properties with antifouling tie-coat functionality. It offers a long overcoating interval without sanding to reduce work time for underwater systems. For use below the waterline only.

Specification Data

Type: Two component epoxy

Color: Buff

Packaging: Available in a 5 Gallon container (base, filled to 3¾ GL) and 1 Gallon (converter, filled to 1GL). Mixed volume 1 US Gallon.

Theoretical Coverage: 140 Sq. ft/gallon = 3.5 m^2/lt at 5.5 mils/135 microns DFT or 360 Sq. ft/ gallon (9m^2/lt) at 2 mils/ 50 microns DFT. Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.

Recommended Wet Film Thickness — 12 mils (300 microns) per coat by spray, 4 mils (110 microns) per coat by brush/roller.

Recommended Dry Film Thickness — 5.5 mils (138 microns) per coat by spray, 2 mils (50 microns) per coat by brush/roller.

Number of coats: See application instructions.

Anticipated drying time at 77°F/25°C: 2 hours touch dry; 7 hours hard dry.

Recoatability (At 77°F/25°C, 50% RH):

With Itself — 2 hours (minimum)

Maximum recoat time without sanding 6 months. Inspection for cleanliness recommended prior to subsequent application. Ensure dust is removed and remove any dirt pick-up with T0006. If recoatability time is exceeded abrade using 180–220 grit paper.

With Antifouling — Minimum 2 hours by brush/roller or 6 hours by spray at recommended film thickness. Maximum recoat time 7 hours by brush/roller or 16 hours by spray at recommended film thickness.

VOC

Base (D6070 / D1021) – 391g/lt or 3.26 lbs/gallon

Converter (D3707) – 634 g/lt or 5.29 lbs/gallon

Mixed (unreduced) – 452g/lt or 3.77 lbs/gallon.

Mixed with 5% T0006 : 470g/lt or 3.92 lbs/gallon.

Product Components, Reducers, Additives and Auxiliary Components

Base – Buff Color D6070

Converter D3707

Reducer T0006

Equipment Cleaning . . . . . .T0006 , T0002 or M.E.K.

Application Equipment

Apply by airless spray, air atomized spray, brush or roller.

Airless spray is the most efficient way to apply this product.

See pages 8–12.

HULLGARD EPOXY PRIMER (EU ONLY) D6070/D3707

continued...

Surface Preparation

Hullgard Epoxy Primer may be directly applied to grit blasted steel. Gritblast to Sa 2½ / SSPC-SP10 – near white metal surface. A surface profile of 2–3 mils (50–75 microns) is recommended. If gritblasting is not possible, grind the metal surface with 24–36 grit abrasive discs to a uniform, clean, bright metal surface 2–3 mils (50–75 microns) anchor pattern. Fiberglass should be degreased with powered household detergent followed by a solvent wipe. The surface should then be sanded with 180 grit paper. May also be applied to clean, dry wood. Abrade the wood using 80–180 grit paper. Any previous antifouling paint should be removed prior to application of **Hullgard Epoxy Primer**.

Mixing and Reduction

Check for settling, then thoroughly mix the base until a consistent homogenous blend is obtained. Power mixers or shakers are preferred. If not available thorough hand mixing is acceptable. Add converter and again mix thoroughly. Mix ratio by volume is 3 parts D6070 to 1 part D3707. Reduction is not normally required but at lower temperatures small amounts (5%) of T0006 can be added. Do not reduce more than 15% per gallon kit.

Induction time after mixing: 10 minutes.

Anticipated Pot Life at 25°C/ 77°F, 50% RH: 3 hours.

Application Instructions

Apply by airless spray, air atomized spray, brush or roller.

NOTE: Only apply Hullgard Epoxy by roller if applying over **Max Cor CF** due to risk of snagging roller fibers.

Apply 12 mils (300 microns) WFT yielding 5.5 mils (135 microns) DFT per coat. Three coats at the recommended film thickness are needed for the Standard Recoat System.

WARNING:

Do not apply paint materials to surfaces less than 5°F (3°C) above dew point, or to surfaces warmer than 105°F (41°C). Ambient temperature should be minimum 55°F (13°C) and maximum 105°F (41°C).

AWLFAIR LW FAIRING COMPOUND D8200 / D7200 (Standard)

Features & Uses

Fairing compounds are used to produce a smooth surface (and to reduce drag). **Awlfair LW** is designed for fairing, leveling or smoothing surface imperfections due to gouges, pitting, dents or weld seams. **Awlfair LW** can be used above and below the waterline. Although designed as a cosmetic material the design of the structure it is being applied to should not be ignored. Seek independent expert advice to ensure that the construction and design are suitable for the chosen system and will not cause the fairing material to crack or delaminate.

Specification Data

Type: Two component epoxy

Color: White base, Red converter. Pink — after mixing components

Packaging: Available in 1 Quart, 1 Gallon (US only), 2 Gallon, 5 Gallon, and 200lt (EU only).

Theoretical Coverage per coat (at recommended DFT):
6.8 ft^2/gal (.63 m^2/lt) at 240 mils (6000 microns, 6mm, 0.25 inch) DFT.*
Maximum DFT 10000 micron, 400 ml, 10mm, 0.4 inch. Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.
* A max DFT of 5–6 mm per application is recommended to minimize air entrapment. Thicker applications may lead to excessive air entrapment which in turn can lead to defects and a system failure.

Recommended Wet Film Thickness: 240 mils (6000 microns, 6mm, 0.25 inch) per coat.

Recommended Dry Film Thickness: 240 mils (6000 microns, 6mm, 0.25 inch)

Number of coats: As required

Anticipated Cure Time at 77°F (25°C), 50% RH: 8 hours touch dry; 24 hours resistance to foot/tread; 7 days full cure.

Mechanical Properties

Test	-4°F/-20°C	32°F/0°C	68°F/20°C
Compressive Strength (MPa)	66	60	47
Compressive Strain (%)	6	6	5
Tensile Strength (MPa)	19	23	20
Tensile Strain (%)	0.5	0.8	0.8
Tensile Modulus (MPa)	3541	3041	2527
Flexural Strength (MPa)	42	39	36
Flexural Strain (%)	1.6	1.5	1.6
Flexural Modulus (MPa)	2874	2596	2272
Thermal Expansion Coefficient (x10-5)	8	8	8

WARNING

The information set out above is provided for guidance only and is based on our own internal product testing under controlled conditions using hand-mixed product. Please note that there may be slight variations when the product is used in service conditions. Air pockets due to poor application will significantly affect the mechanical properties of the **Awlfair LW** and therefore must be eliminated as far as possible.

AWLFAIR LW FAIRING COMPOUND D8200 / D7200 (Standard)

continued...

We appreciate that it is very difficult to entirely eliminate air pockets in an industrial environment - you can however, minimize any risk by eliminating air pockets as far as possible and by ensuring that any air pockets are less than 4mm. The use of battens when fairing can result in excessive air pockets and should be discussed with an **Awlgrip** Technical Representative. If in doubt, test the product for the intended use on a suitable mock-up representative of the vessel area to be faired in order to fully take into account any specific design, temperature, fabrication, substrate, application and product thickness/scheme considerations. Seek independent expert advice to ensure that the construction and design are suitable for the chosen system and will not cause the fairing material to crack or delaminate. We have taken reasonable care in preparing the information contained in the table above and in collecting and preparing material for inclusion in it but do not represent or warrant that it is free from error or that the information content is complete or accurate. To the extent permitted by law, International Paint Limited, trading as **Awlgrip**, accepts no responsibility whatsoever for any loss, damage or other liability arising from any use of information contained in the table above or reliance upon the information which it contains.

Recoatability

Awlfair LW must be sanded before recoating with itself, surfacing filler or any other high build primer. It must be overcoated with an approved high build primer to reduce the risk of print through of the fairing compound profile. **Awlfair LW** is sandable after 48 hrs at 55˚F (13˚C), 17hrs at 77˚F (25˚C) & 6.5 hrs at 95˚F (35˚C). Block and machine sand with 36–80 grit paper

Overcoating by	60˚F/15˚C		77˚F/25˚C		95˚F/35˚C	
	MIN	MAX	MIN	MAX	MIN	MAX
High Build Epoxy Sprayable Fairing Compound Hullgard Epoxy Ultra Build	42 hours	Unlimited*	17 hours	Unlimited*	6.5 hours	Unlimited*

WARNING

Some areas may need extra applications and additional block sanding to achieve specified quality (i.e. under dark hulls).

* Fairing compound must be sanded prior to application and application of primer should take place as soon as possible after sanding.

Drying Times: NOTE - While the fairing compound may appear hard dry, curing will continue for several days. This does not prevent overcoating.

Drying Time	60˚F/15˚C	77˚F/25˚C	95˚F/35˚C
Hardness Development (Shore D)	>60 after 48 hours	>60 after 24 hours	>60 after 16 hours

AWLFAIR LW FAIRING COMPOUND D8200 / D7200 (Standard)

continued...

VOC

Base (D8200) – 0 lbs/gallon or 0 g/lt or 0g/kg or 0lb/lb
Converter (D7200) – 0.70 lbs/gallon or 84 g/lt or 120g/kg or 0.12lb/lb
Mixed (1:1 by volume) – 0.35 lbs/gallon or 42g/lt or 46g/kg or 0.05lb/lb
Specific Gravity – 0.91

Product Components, Reducers, Additives and Auxiliary Components

Base – Awlfair LW Base White D8200
Converter – Awlfair LW Conv. Red D7200
Equipment Cleaning . . . . . .T0006 or T0002

Application Equipment

Trowels, Spatulas, Longboard, or Putty Knives.

Surface Preparation

The surface preparation advice provided, and equipment suggestions, can be used as a guide. Preparation techniques and results will vary according to individual conditions, equipment age and other factors. Testing on a non-critical area should be carried out prior to full-scale preparation. Only apply over properly applied and prepared **Awlgrip** primers. **Hullgard Extra** Epoxy Primer and **High Build** (GRP only) are recommended substrate primers. **Awlfair LW** may be applied direct to **Hullgard Extra** without the need for sanding. **High Build** must be sanded prior to application of **Awlfair LW**. See the relevant primer product datasheet for details.

Mixing & Reduction

Mixing and reduction requirements will vary according to individual conditions, climate, equipment age and other factors. Mixing and application of a small sample before full scale application is recommended. **Awlfair LW** can be mixed using a suitable automatic mixing machine. The use of a mixing machine will generally increase the density of the product and will change the mechanical properties of the fairing compound. At the same time, automatic mixing equipment can provide productivity and health and safety benefits. Please consult your local technical representative for further advice regarding the use of automatic mixing equipment.

Mix 1:1 by volume (as supplied).
Mix ratio by weight: 1.59 :1 D8200 : D7200

Anticipated Pot Life at 50% RH: 60˚F (15˚C) : 2½–3 hours
77˚F (25˚C) : 1½–2 hours
95˚F (35˚C) : 45 mins–1 hr

Mix the two components thoroughly to a uniform pink color with no streaks or lumps. Pot life and working time is dependent upon temperature. Warmer climates will decrease pot life.

AWLFAIR LW FAIRING COMPOUND D8200 / D7200 (Standard)

continued...

WARNING:
Do not add reducers, solvents or thinners of any kind to **Awlfair LW**.

Application Instructions

Application equipment and parameters are given as a guide. Please ensure a risk assessment is carried out to assess the level of PPE required for the particular task undertaken when using this product.

Apply **Awlfair LW** by trowel to an area you can work in 15–20 minutes. Start with thin coats of up to 6mm in low areas and build out to high areas. Allow to cure. Several applications may be necessary to fill large areas. Block and machine sand with 36–80 grit paper. Remove air pockets and chamfer the edges prior to refilling as appropriate. Remove sanding dust and residue before applying more **Awlfair LW**. Stop when the faired surface meets the fairing quality specified for the project.

IMPORTANT:
Awlfair LW must be sealed with **Hullgard Epoxy Primer** (EU only) (D6070/D3707) when used below the waterline.

IMPORTANT:
Awlfair LW must be sealed with an Awlgrip epoxy primer such as **High Build** when used above the waterline. This will maximize gloss and color holdout in the Awlgrip topcoat system.The Awlgrip Surfacing Filler may be used on top of the **Awlfair LW** to cover pinholes and sand marks prior to priming.

WARNING:
Do not use below 55°F (13°C) or warmer than 104°F (40°C). Proper application and/or cure results may be more difficult to achieve when conditions are outside this range. Do not thin. Do not wipe down cured filler with reducers. Avoid conditions of low temperature with high humidity as this can result in the formation of a surface by-product that must be removed by either detergent wash followed by fresh water wash or by sanding.

AWLFAIR LW FAST CURE EPOXY TROWELABLE FAIRING COMPOUND D8200/D7222 (Fast)

Features & Uses

Awlfair LW is a premium, epoxy trowelable fairing compound used for fairing, levelling and smoothing surface imperfections, caused by gouges, pitting, dents or weld seams. For use above and below the waterline.

Specification Data

Type: Two component epoxy
Color: White base, Red converter. Pink — after mixing components
Packaging: Available in 1 quart containers, 1 gallon containers (NA only), 2 Gallon containers and 5 Gallon containers (NA only)
Theoretical Coverage:
Sq. ft / Gallon: 1,463 sq. ft (136m²) at one mil dry (25 microns) DFT. 5.9 sq. ft (0.54m²); 1/4 inch; 250 mils (6,350 microns) DFT. Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.
Recommended Wet Film Thickness: 250 mils (6350 microns) per coat. Maximum 400 mils (1cm) per coat.
Number of coats: As required
Anticipated Cure Time at 77°F (25°C), 50% R.H: 7 hours resistance to foot/tread; 7 days full cure.
Recoatability: Awlfair LW must be sanded before recoating with itself, surfacing filler or any other high build primer. It must be overcoated with an approved high build primer, such as **High Build**, **Epoxy Sprayable Fairing Compound**, **Hullgard**, **Ultra Build** or **Awlfair Surfacing Filler** (EU only) before applying the finishing system to reduce the risk of print through of the fairing compound profile. **Awlfair LW** is sandable after 17 hrs at 55°F (13°C), 6 hrs at 77°F (25°C) and 90 mins at 95°F (35°C)
Shore D hardness development after 7 days: >60 at 77°F/25°C.

VOC
White Base (D8200) – 0 g/lt or 0 lbs/gallon
Fast Converter (D7222) – 185 g/lt or 1.54 lbs/gallon
Mixed (1:1 by volume) – 93 g/lt or 0.77 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

White Base D8200
Fast Red Converter. D7222
Equipment Cleaning . . . . . .T0006, T0002 Reducers or M.E.K.

Application Equipment

Trowels, Spatulas, Longboard, or Putty Knives.

Surface Preparation

Only apply over properly applied and prepared **Awlgrip** Primers. **Hullgard Extra** Epoxy Primer, and **High Build** are recommended substrate primers. **Awlfair LW** may be applied direct to **Hullgard Extra** without the need for sanding.

See the relevant primer product datasheet for details. **High Build** must be sanded prior to application of **Awlfair LW**.

AWLFAIR LW FAST CURE EPOXY TROWELABLE FAIRING COMPOUND D8200/D7222 (Fast) continued...

Mixing and Reduction
Mix by volume 1:1 D8200:D7222.
Mix ratio by weight: 1.56:1 D8200:D7222

Induction Time after Mixing: None

Thoroughly mix material to a uniform pink color with no streaks or lumps in the mix. Do not add thinners or reducers to **Awlfair LW**.

Anticipated Pot Life at 50% RH: 55˚F (13˚C): 80 mins
75˚F (25˚C): 30–35 mins
95˚F (35˚C): 15–20 mins

Application Instructions

Properly prepare and prime the surface with the recommended primer before starting to fill or fair. Apply **Awlfair LW** by trowel to an area you can work in 5 to 10 minutes. Pot life and working time is dependant upon temperature. Warmer climates will decrease pot life. Start with thin coats in low areas and build out to high areas. Allow to cure. Several applications may be necessary to fill large areas. Block and/or machine sand with 36 to 60 grit paper. Remove sanding dust and residue before applying more **Awlfair LW**. Stop when the faired surface has a uniform surface which meets the fairing quality specified for the project.

TIP:
Awlfair LW must be sealed with **Hullgard** Epoxy Primer (EU only - D6070/D3707) when used below the waterline.

TIP:
Awlfair LW must be sealed with an Awlgrip epoxy primer such as **High Build** when used above the waterline. This will maximize gloss and color holdout in the Awlgrip topcoat system.

WARNING: Do not use unless mixed thoroughly with the curing agent at the specified ratio. Do not use below 55˚F (13˚C) or warmer than 104˚F (40˚C). Proper application and/or cure results may be more difficult to achieve when conditions are outside this range. Avoid conditions of low temperature with high humidity as this can result in the formation of a surface by-product that must be removed by either detergent wash followed by fresh water wash or by sanding. Do not thin or wipe down cured filler with reducers. Do not incorporate into this Awlgrip Coating System, any thinner, additive, modifier, converter, or related product produced by any manufacturer other than Awlgrip. Any such substitution can jeopardize the unique chemical characteristics provided by each of the Awlgrip Coating systems.

EPOXY SPRAYABLE FAIRING COMPOUND D6001/D3011

Features & Uses
Epoxy Sprayable Fairing Compound is an epoxy surfacer used on large fairing surfaces as a sanding layer before **High Build** or **Ultra Build**. Do not use for spot repairs. For above waterline use only.

Specification Data

Type: Epoxy Polyamide

Packaging: Available in 1 Gallon and 1 Quart containers

Theoretical Coverage:
Coverage: sq. ft/Gallon; 981 sq. ft (91m^2) at one mil dry (25 microns); 65 sq. ft (6m^2) at recommended dry film thickness. Calculated for mixed base and converter, reduced 15%. Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.

Recommended Wet Film Thickness: Up to 60 mils (Up to 1,500 microns) in 2 coats.

Recommended Dry Film Thickness: Up to 40 mils (Up to 1,000 microns).

Recoatability: May be recoated with itself, after 2 hours; with other products, minimum 24 hours. Multiple coat applications will usually need 2–3 days (48–72 hours) before overcoating with other products. Maximum without sanding: 24 Hours. **Epoxy Sprayable Fairing Compound** is very porous. It must be sealed with **High Build** or **Ultra Build** before applying a final primer or topcoat.

Base (D6001) – 256 g/lt or 2.1 lbs/gallon
Converter (D3011) – 246 g/lt or 2.1 lbs/gallon
Mixed (1:1 by volume) – 251 g/lt or 2.1 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

Base – Tan D6001
Converter. D3011
Reducer. T0006
Equipment Cleaning . . . . . .T0002 or T0006 Reducers or M.E.K.

Application Equipment
Conventional or airless spray. Pressure feed equipment required. *See pages 8–12*.

Surface Preparation

This product should only be applied over other properly prepared Awlgrip primers. See Surface Preparation section for each type of substrate.

EPOXY SPRAYABLE FAIRING COMPOUND D6001/D3011 continued...

Mixing and Reduction
Spray: Mix 1 part D6001 with 1 part D3011. When a smooth homogenous mixture is obtained, reduce 5–25% with T0006. Overall mix is 1:1:⅒ by volume.

Example: 8 oz. D6001, 8 oz. D3011, 1.6 oz. T0006.
Induction Time after Mixing: 15 Minutes.
Anticipated Pot Life at 77˚F (25˚C), 50% R.H: 16 Hours.

Application Instructions
Spray: Apply heavy coats, 30 mils WFT or more. Multiple coats may be needed. Do not apply more than three coats without allowing to cure hard.

Trowel/Knife: Mix D6001 and D3011 without reducer. Allow to induct 30 minutes, re-stir. This mixture can be used to trowel into very minor pinholes or scratches.

Epoxy Sprayable Fairing Compound is not intended for spot applications.

WARNING:
Epoxy Sprayable Fairing Compound can take 2–3 days to cure at 77˚F (25˚C). Plan for longer cure times at temperatures below 77˚F (25˚C). Do not apply paint materials to surfaces warmer than 105˚F (40˚C) or colder than 55˚F (13˚C). Do not attempt to cure products at temperatures below 55˚F (13˚C).

AWLFAIR SURFACING FILLER D6200/D3200 (EU only)

Features & Uses
Awlfair Surfacing Filler is a premium two-component epoxy product. It is a non-shrinking glazing filler applicable over **Awlfair LW Fairing Compound** where it is used to fill sand scratches, pinholes and surface imperfections. **Awlfair Surfacing Filler** gives an outstanding smooth finish prior to applying the sealing, high build or finish primer. Utilizing the same technology as **Awlfair LW**, **Awlfair Surfacing Filler** has outstanding solvent resistance coupled with an improved Health and Safety profile.

Specification Data
Type: Two-Component Epoxy
Packaging: Available in 1HG pack (fill volume 1.89lts) base and 1QT pack (fill volume 0.946lts).
Theoretical Coverage:
Coverage: sq. ft/Gallon; 360 sq. ft (8.8m^2) per coat at recommended dry film thickness. **Awlfair Surfacing Filler** is typically applied in several tight screeded layers up to a maximum total thickness of 20 mils / 500 microns. Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.
Recommended Wet Film Thickness: 4 mils (100 micron) per coat.
Recommended Dry Film Thickness: DFT 4 mils (100 micron) per coat.
Number of coats: 2
Recoatability at 77˚F (25˚C) /50% R.H:
Can be overcoated with itself and **High Build**, **Ultra Build**, **Hullgard Epoxy Primer** (EU only), **Hullgard Extra Epoxy Primer**, **Epoxy Sprayable Fairing Compound**, **545 Epoxy Primer**** and **Awlquik** after a minimum of 6 hours at 77˚F (25˚C) and unlimited* as a maximum time at 77˚F (25˚C). **Awlfair Surfacing Filler** is sandable after 24 hours at 60°F (15°C), 6 hours at 77°F (25°C) and 2 hours at 95°F (35°C). Sand using 100–120 grit sandpaper.

NOTE: In all cases, **Awlfair Surfacing Filler** must be sanded prior to recoating with itself or any other primer. Once sanded **Awlfair Surfacing Filler** must be overcoated within 24 hours. Do not spray topcoat direct to **Awlfair Surfacing Filler**.

Shore D hardness development: >60 at 12 hours at 77°F (25°C)
As **Awlfair Surfacing Filler** layers are thin, measurement of Shore D can be difficult.

* **Awlfair Surfacing Filler** must be sanded prior to overcoating
** To achieve the optimum aesthetic result, overcoat **Awlfair Surfacing Filler** with **High Build Epoxy Primer** before applying **545 Epoxy Primer**.

AWLFAIR SURFACING FILLER D6200/D3200 (EU only)

continued...

VOC

Base (D6200) – 9 g/lt or 0.08 lbs/gallon
Converter (D3200) – 337 g/lt or 2.81 lbs/gallon
Mixed (2:1 by volume) – 119 g/lt or 0.99 lbs/gallon
Volume Solids: – 88.36%
Specific Gravity – 1.642

Product Components, Reducers, Additives, and Auxiliary Components

Awlfair Surfacing Filler Base D6200
Awlfair Surfacing Filler Converter D3200
Equipment Cleaning . . . . . .T0002 or T0006 Reducers or M.E.K.

Application Equipment
Trowels, Spatulars, Putty Knives.

Surface Preparation
Awlfair LW Fairing Compound should be sanded prior to application of the **Awlfair Surfacing Filler**. See the relevant product datasheet for more details.

Mixing and Reduction
Mix 2:1. Do not thin
Mix the two components thoroughly to a uniform brown color with no streaks or lumps.

Anticipated Pot Life at 77˚F (25˚C), 50% R.H: 25 minutes.

Application Instructions
Awlfair Surfacing Filler is easily workable with a putty knife, trowel or spatula. Apply **Awlfair Surfacing Filler** by trowel to an area you can work within its pot life. The pot life and working time is dependent upon the temperature. Warmer climates will decrease pot life. Apply the **Awlfair Surfacing Filler** by screeding tightly across the surface to be covered. Once this coat is dry, a second tight screed is applied at 90 degrees to the first to remove any remaining small defects. This process can be repeated a third time if necessary to leave the ultimate smooth surface. Only apply over properly applied and prepared **Awlfair LW Fairing Compound** (any voids present in the fairing compound must be repaired with **Awlfair LW Fairing Compound** prior to application of the **Awlfair Surfacing Filler**). Do not apply the **Awlfair Surfacing Filler** direct to GRP

WARNING:
Do not add any thinners or reducers to **Awlfair Surfacing Filler**. Do not use unless mixed thoroughly with the converter at specified ratio. Do not thin. Do not wipe down cured filler with reducers. Do not use below 13°C/55°F or warmer than 40ºC/104°F. Proper application and/or cure results may be more difficult to achieve when conditions are outside this range. Avoid conditions of low temperature with high humidity as this can result in the formation of a surface byproduct that must be removed by either detergent wash followed by fresh water wash or by sanding. Check with local authorities to determine VOC restrictions in your area. Please ensure a risk assessment is carried out to assess the level of PPE required for the particular task undertaken when using this product.

AWLQUIK EPOXY PRIMER/SURFACER D8003/D9001

Features & Uses
Awlquik Epoxy Primer is a quick-drying epoxy primer surfacer. For above waterline use only.

Specification Data
Type: Epoxy Polyamide
Packaging: Available in 1 Gallon and 1 Quart containers
Theoretical Coverage:
Sq. ft / Gallon: 609 sq. ft (57m^2) at one mil dry (25 microns). 203–305 sq. ft (19–28m^2) at recommended dry film thickness. Calculated for mixed base and converter reduced 50%. Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.
Recommended Wet Film Thickness: 5 mils (125 microns).
Recommended Dry Film Thickness: 2–3 mils (50–75 microns).
Recoatability at 77˚F (25˚C) /50% R.H:
Spray – may be overcoated with itself, 4 hours; with **545 Epoxy Primer** or topcoat, 12 hours.
Brush/Roll – with itself, 12–14 hours, with other products 12–14 hrs.
Maximum without sanding – 24 Hours. May be overcoated with **Awlgrip/Awlcraft 2000** Topcoats and **545 Epoxy Primer**.

TIP:
Sealing **Awlquik** with **545 Epoxy Primer** before applying an **Awlgrip/Awlcraft 2000** topcoat will maximize gloss and D.O.I. of the topcoat.

VOC

Base (D8003) – 436 g/lt or 3.6 lbs/gallon
Converter (D9001) – 354 g/lt or 3 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

Off White Base D8003
Converter. D9001
Spray Reducer. T0006
Brushing Reducer T0031
Equipment Cleaning . . . . . .T0002 or T0006 Reducers or M.E.K.

Application Equipment
Conventional or airless spray, and brush/roller. ***See page 8–14***.

Surface Preparation
Best when used as a surfacer over other Awlgrip primers. May be applied by brush or roller directly to properly prepared wood or fiberglass. Best results are obtained when these surfaces are first sealed with **545 Epoxy Primer**.

AWLQUIK EPOXY PRIMER/SURFACER D8003/D9001 continued...

Mixing and Reduction

Spray: Mix by volume 1 part D8003 Base with 1 part D9001 until a smooth, homogenous mixture is obtained. Reduce as necessary up to 50% with Spray Reducer T0006.

Example: 8 oz. D8003, 8 oz. D9001, 8 oz. T0006.

Brush/Roll: Reduce mixed D8003/D9001 as needed up to 50% with T0031. For wood substrates reduce Awlquik 50–70% with T0031.

Induction Time after Mixing: 15 Minutes.

Anticipated Pot Life at 77˚F (25˚C), 50% R.H: 8 Hours.

Application Instructions

Spray: Apply **Awlquik** Sanding Surfacer in smooth coats of 4–6 mils (100–150 microns) WFT yielding 2–3 mils (50–75 microns) DFT. Allow 4 hours between coats at 77˚F (25˚C), 50% R.H.

Brush/Roller: Two coats will be required. Light sanding between coats will improve appearance. For large surfaces rolling, then tipping with a brush is preferred.

WARNING:

Do not apply paint materials to surfaces less than 5˚F (3˚C) above dew point, or to surfaces warmer than 105˚F (41˚C). Ambient temperature should be minimum 55˚F (13˚C) and maximum 105˚F (41˚C). Do not attempt to cure products at temperatures below 55°F (13°C).

ULTRA BUILD EPOXY PRIMER D8008/D3018

Features & Uses

Ultra Build Epoxy Primer is an epoxy primer sealer used where high build and filling is required. For above waterline use only.

Specification Data

Type: Epoxy Polyamide

Packaging: Available in 1 Gallon and 1 Quart containers

Theoretical Coverage:

Sq. ft / Gallon 946 sq. ft (88 m^2) at 1 mil dry (25 microns)

47–63 sq. ft (4–6 m^2) at recommended dry film thickness. Calculated for mixed base and converter reduced 10%.

Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.

Recommended Wet Film Thickness: 25–30 mils (625–750 microns).

Recommended Dry Film Thickness: 15–20 mils (375–500 microns).

Recoatability: May be overcoated with **545 Epoxy Primer**, **High Build**, **Epoxy Sprayable Fairing Compound**, **Awlfair LW** and **Awlquik**. Minimum with itself, 1 hour; other products, 12 hours. Maximum without sanding 24 hours. Sanding before overcoating with other products is recommended.

VOC

Base (D8008) – 392 g/lt or 3.3 lb/gal

Converter (D3018) – 89 g/lt or 1.6 lb/gal

Product Components, Reducers, Additives, and Auxiliary Components

White Base D8008

Converter. D3018

Reducer. T0073

Equipment Cleaning . . . . . .T0073, T0006, T0002 Reducers or M.E.K.

Application Equipment

Conventional or airless spray. Pressure feed equipment required. ***See pages 8–12***.

Surface Preparation

This product should only be applied over other properly prepared Awlgrip primers and fillers.

Mixing and Reduction

Mix by volume one part D8008 with one part D3018 to a smooth homogenous mixture. Reduce 5%-25% with T0073 for conventional spray. Airless spray application can be made with no reduction.

Example: 10 oz. D8008, 10 oz. D3018, 2 oz. T0073 (10% reduction).

Induction Time after Mixing: 15 Minutes.

Anticipated Pot Life at 77˚F (25˚C), 50% R.H: 8 Hours.

Application Instructions

Apply in smooth, even coats, allow one hour between coats at 77˚F (25˚C), 50% R.H.

ULTRA BUILD EPOXY PRIMER
D8008/D3018 continued...

TIP:
Do not apply more than 2 coats without allowing to cure hard; 12–24 hours.

WARNING:
Do not apply paint materials to surfaces less than 5°F (3°C) above dew point, or to surfaces warmer than 105°F (41°C). Ambient temperature should be minimum 55°F (13°C) and maximum 105°F (41°C). Do not attempt to cure products at temperatures below 55°F (13°C).

HIGH BUILD EPOXY PRIMER
D8002/D3002 or D9002/D3002

Features & Uses
High Build Epoxy Primer is a two component epoxy surfacer for use where high build and filling is required. For use above the waterline only.

In North America, D3002 is classed as a VOC Exempt Converter according to North American legislation. Using D3002 and T0176 the mixed ready to apply material has a VOC content of less than 2.8lbs/Gal or 340g/lt. Check with local authorities to determine VOC restrictions in your area.

Specification Data
Type: Epoxy Polyamide
Packaging: Available in 1 Gallon and 1 Quart containers
Theoretical Coverage:
Sq. ft / Gallon: 814 sq. ft (75.6m²) at one mil dry (25 microns). 111–157 sq. ft (10–15m²) at recommended dry film thickness with 2 coats. Calculated for mixed base and converter reduced 20%.
Recommended Wet Film Thickness: 8–10 mils (200–250 microns) per coat.
Recommended Dry Film Thickness: 4–5 mils (100–125 microns) per coat, 2–3 coats may be required.
Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and environment.
Recoatability: With itself, 2 hours; with other products, 12–24 hours. Maximum without sanding: 24 Hours. Sanding before overcoating is recommended. May be over coated with **545 Epoxy Primer**, **Ultra Build**, **Epoxy Sprayable Fairing Compound**, **Awlfair LW** and **Awlquik**.

VOC
White Base (D8002) – 347 g/lt or 2.9 lbs/gallon
Yellow Base (D9002) – 338 g/lt or 2.8 lbs/gallon
Converter (D3002) NA only – 331 g/lt or 2.8 lbs/gallon
Converter (D3002) EU only – 361 g/lt or 3 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

Yellow Base (NA Only) D9002
Off White Base. D8002
Converter. D3002
Standard Reducer for Epoxy Primers T0006
Medium Evaporating VOC Exempt Reducer (US only) T0176
Equipment Cleaning . . . . . .Acetone, T0006, T0176, T0002 Reducers or M.E.K.

HIGH BUILD EPOXY PRIMER D8002/D3002 or D9002/D3002 continued...

Application Equipment
Conventional or airless spray. Pressure feed equipment required. *See pages 8–12*.

Surface Preparation
Best when used as a surfacer over other Awlgrip primers and fairing compounds. May be applied directly to properly prepared wood or fiberglass; however, best results are obtained when these surfaces are first sealed with **545 Epoxy Primer**.
Gelcoat/Fiberglass: Sand with 100–150 grit paper.
Wood: Smooth sand with 80–100 grit paper.

Mixing and Reduction
Mix by volume one part Base with one part Converter to a smooth homogenous mixture.
Induction Time after Mixing: 15 Minutes.
Reduce: 10–20% with appropriate reducer.
Example 8 oz. Base: 8 oz. Base : 8 oz. D3002 : 3.2 oz. T0006 or T0176.
Anticipated Pot Life at 77˚F (25˚C), 50% R.H: 8 Hours.
Higher temperatures may shorten pot life.

Application Instructions
Spray: Apply **High Build** Epoxy Primer in even coats of 8–10 mils (200–250 microns) wet film thickness yielding 4–5 mils (100–125 microns) DFT. 2–3 coats may be required.

TIP:
Do not apply more than 2 coats without allowing to cure hard, 12–24 hours.

WARNING:
Do not apply paint materials to surfaces less than 5˚F (3˚C) above dew point, or to surfaces warmer than 105˚F (41˚C). Ambient temperature should be minimum 55˚F (13˚C) and maximum 105˚F (41˚C).

545 ANTI-CORROSIVE EPOXY PRIMER D8001/D3001, D1001/D3001 OR D3020/D3001

Features & Uses
545 Epoxy Primer is a two component epoxy primer with outstanding corrosion and adhesion properties for steel, aluminum, wood and fiberglass substrates. **545 Epoxy Primer** is used to seal surfacing primers before applying topcoats. It may be applied by spray, brush or roller and may be used above or below the waterline.

Specification Data
Type: Epoxy Polyamide
Packaging: Available in a 1 quart or 1 gallon container.
Theoretical Coverage: 497 sq. ft / gallon (46m^2) at 1 mil dry (25 microns); 165–248 sq. ft (15–23m^2) at recommended dry film thickness. Calculated for mixed base and converter, reduced up to 25%.Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.
Recommended Wet Film Thickness: 7–10 mils (175–250 microns) 2–3 coats.
Recommended Dry Film Thickness: 2–3 mils (50–75 microns).
Recoatability: At 77˚F (25˚C), 50% R.H.
Spray: minimum with itself 1 hour, with other products 12 hours.
Brush/Roll: With itself 12–14 hours, with other products 12–14 hours. Maximum without sanding 24 hours. Sanding is recommended to improve adhesion and appearance. Overcoat with **Awlgrip**/**Awlcraft 2000** Topcoats, **High Build**, **Awlquik** and **Ultra Build**.

VOC
White Base (D8001) – 435 g/lt or 3.6 lbs/gallon
Gray Base (D1001) – 426 g/lt or 3.6 lbs/gallon
Converter (D3001) – 616 g/lt or 5.1 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

White Base	D8001
Gray Base.	D1001
Converter.	D3001
Standard Reducer	T0006
Brushing Reducer	T0031
Cold-Cure Accelerator	M3066
Equipment Cleaning	T0002, T0006 Reducers or M.E.K.

Application Equipment
Conventional or airless spray and brush/roller. Pressure feed equipment required. ***See pages 8–14***.

545 ANTI-CORROSIVE EPOXY PRIMER D8001/D3001, D1001/D3001 OR D3020/D3001 continued...

Surface Preparation

Aluminum: Sand blast or grind to a 2–3 mil (50–75 micron) profile, clean silver color. Alternatively, on small parts/components, prime with **Wash Primer CF**.

Steel: Sandblast/Grind SSPC-SP10 or Sa2½.

Gelcoat/Fiberglass: Sand with 100–150 grit paper.

Wood: Smooth sand with 80–100 grit paper.

Mixing and Reduction

Spray: Mix by volume one part 545 Base with one part D3001 Converter to a smooth homogenous mixture. When applying by conventional spray, reduce up to 25% with T0006. Overall mix is 1:1:½ by volume.

Example: 8 oz. **545** Base, 8 oz. D3001, 4 oz. T0006. When applying by airless spray reduce up to 5% with T0006.

Brush/Roll: Mix by volume one part **545** Base with one part **D3001 Converter** to a smooth homogenous mixture; reduce 5–10% with **T0031**. Below 77°F (25°C) you may use **Cold-Cure Accelerator M3066** to maintain dry and cure times.

Induction Time after Mixing: 15 Minutes.

Anticipated Pot Life at 77˚F (25˚C), 50% R.H: 16 Hours.

NOTE: For wood substrates first seal the wood with a light coat of **545 Epoxy Primer** (spray) reduced 40% with T0006. Allow to cure 12–16 hours.

Application Instructions

Spray: Apply smooth, wet coats to fill and cover surface profile. 2–3 coats may be needed at 7.0–10 mils (175–250 microns) WFT yielding 2–3 mils (50–75 microns) DFT.

Brush/Roll: Apply 2 coats at 3–4 mils (75–100 microns) WFT yielding 1.0–1.5 (25–37 microns) DFT per coat. Allow 12–14 hours between coats. Light sanding between coats will improve appearance. For large surfaces rolling then tipping with a brush is preferred.

WARNING:

Do not apply paint materials to surfaces less than 5˚F (3˚C) above dew point, or to surfaces warmer than 105˚F (41˚C). Ambient temperature should be minimum 55˚F (13˚C) and maximum 105˚F (41˚C).

321 HS UNDERCOAT R1100/R3100 or R8100/R3100

Features & Uses

321 HS Undercoat is a low VOC, epoxy finish primer. Utilizing an advanced resin technology and optimized pigment package **321 HS Undercoat** can be applied with excellent flow and levelling properties previously unseen from high solids primers. With a VOC of just 340g/lt as applied and an easy-sand, long overcoating film **321 HS Undercoat** is the ideal primer for all Awlgrip topcoats. Can be applied by spray, brush or roller.

Specification Data

Type: Low VOC Epoxy/modified aliphatic amine

Packaging: Available in 1 gallon containers filled to 2.84lt (base), 1 quart container (converter), 1 quart kit (mixed 1 quart – White only)

Theoretical Coverage: 200 sq. ft/gallon (4.9m²/lt) at 5 mils (125 microns) dry film thickness. Calculated for mixed base and converter without reduction

Recommended Wet Film Thickness: 9 mils (234 microns) applied in 2 coats

Recommended Dry Film Thickness: 5 mils (125 microns) applied in 2 coats

Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and environment

Recoatability at 77°F (25°C):

Minimum without sanding: With itself: 1 hour. With topcoat: 24 hours

Maximum without sanding: With itself: 6 months*.

Maximum after sanding: With topcoat: 3 months*

Sanding is recommended before overcoating with topcoat. For optimal appearance, **321 HS Undercoat** should be left to dry for at least 72 hours before sanding and topcoating; the longer the curing time, the better the finish.

* Ensure surface is clean and dry prior to recoating.

VOC

White Base (R8100) – 232 g/lt or 1.9 lbs/gallon
Gray Base (R1100) – 232g/lt or 1.9 lbs/gallon
Converter (R3100) – 663g/lt or 5.5 lbs/gallon
Mixed components – 340g/lt, 2.8 lbs/gallon (as supplied)

Product Components, Reducers, Additives and Auxiliary Components

White Base R8100
Gray Base. R1100
Converter R3100
Reducer . . . . . .T0006, T0176 (NA Only)
Equipment Cleaning . . . . . .T0006, T0176, Acetone or M.E.K.

DO NOT add Cold Cure Accelerator (M3066) to 321 HS Undercoat

Application Equipment

Brushes and Rollers: Brushes must be recommended for use with solvent containing epoxy or urethane coatings. Natural bristle brushes work best. Do not use products recommended for water based

321 HS UNDERCOAT R1100/R3100 or R8100/R3100 continued...

coatings. Roller covers have similar requirements. They can be either foam or conventional mohair type, but must be solvent resistant. Corona Brushes (813-885-2525) and Redtree Industries (973-481-0200) are good sources for brushes and roller covers.The Corona Urethaner or Redtree Chinese Ox would do a good job with **321 HS Undercoat**. Brush/roller application is not recommended over large areas due to appearance reasons. Brush/roller application is suitable for stripe coating and small areas only.

Spray Equipment: Conventional or airless spray. Pressure feed equipment required. ***See pages 8–12***.

Surface Preparation

Gelcoat/Fiberglass: Sand with 100–150 grit paper.

Aluminum: Sandblast or grind to a 2–3mils (50–75µm) profile, 100% clean silver color. Alternatively, on small parts/components, prime with **Wash Primer CF**. Apply product within 8 hours of completion of surface preparation.

High Build/Ultra Build Substrates: Sand with 240 or finer grit paper.

Sanding: Can be sanded after 16 hours (77°F/25°C). Once fully cured, **321 HS Undercoat** should be sanded to a smooth surface using 320 or finer grit paper. The final film should be free of texture. Powdered guide coats can be used if required to ensure sanding is thoroughly completed.

Mixing and Reduction

Thoroughly stir base component before mixing with converter

Spray/Brush/Roll: Mix by volume three parts of base to one part of converter e.g. 3:1, R8100 or R1100 : R3100.

Induction Time after Mixing: This product should be used immediately after mixing. Mix base and converter thoroughly to achieve a smooth, homogenous mixture.

Reduction: Reduce with 15% of T0006 or T0176. When reduced, apply at no more than 6 mils (150 microns).

Anticipated Pot Life at 77˚F (25˚C), 50% R.H: Approx. 1.25 hours, 60°F (15°C)/50% RH: approx. 1.5 hours, 95°F (35°)/50% R.H approx. 0.75 hours. Higher temperatures may shorten pot life.

Application Instructions

Spray: Apply two coats of **321 HS Undercoat** at a total of 9 mils (234 microns) ensuring no more than 6 mils (150 microns) per coat wet film thickness yielding 5 mils (125 microns) DFT.

Brush/Roll: Apply 2 coats at 4 mils (100 microns) WFT yielding 2 mils (50 microns) DFT. Allow 8 hours between coats at 77°F (25°C). Light sanding between coats will improve appearance.

COLD-CURE ACCELERATOR M3066

Features & Uses

Cold-Cure Accelerator for **545 Epoxy Primer** reduces cure and recoat times for **545 Epoxy Primer** by as much as 50% Add up to 12.5% of catalyzed volume of 545 Primer, replacing that amount of standard reducer. Use between 50°F (10˚C) and 75°F (25˚C).

Specification Data

Type: Accelerator for **545 Epoxy Primer.**

Packaging: 1 Pint cans.

Anticipated Cure Time at 77˚F (25˚C), 50% R.H:

Spray: 3–4 hours. Brush Roll: 8–12 hours with maximum recommended amount of **Cold-Cure Accelerator** added.

VOC

761 g/lt or 6.3 lbs/gallon

Mixing and Reduction

Cold-Cure Accelerator can be added up to 12.5% of the mixed **545 Epoxy Primer** base and converter. **Example**: maximum 32 oz. (946ml) to a 2 gallon mix of D8001 / D3001

Application Instructions

Mix 1 part by volume 545 Primer base with 1 part D3001 converter. Thoroughly mix the primer and allow the mixture to induct for 15 minutes. Remix after induction. Add **Cold-Cure Accelerator** to a maximum quantity of 12.5% by volume. Total mix by volume is 1:1:¼. **Example:** 8 oz. (236ml) 545 Base, 8 oz. (236ml) D3001, 2 oz. (59ml) M3066.

Reduction for Spray Application: Use T0006 Reducer for additional reduction. **545 Epoxy Primer** is normally reduced 25% by volume. If the maximum quantity of **Cold-Cure Accelerator** is used, ¼ part of T0006 is added to reach 25% reduction. Total mix by volume is: 1 part **545 Epoxy Primer** Base: 1 part D3001: ¼ part M3066 : ¼ part T0006. **Example:** 8 oz. 545 Base : 8 oz. D3001 : 2 oz. M3066 : 2 oz. T0006

Reduction for Brush Application: Additional reduction may not be needed after the addition of **Cold-Cure Accelerator**. If additional reduction is needed, use T0031 Brushing Reducer. The combined total of the M3066 and T0031 should not exceed 20% of the mixed base and converter. **Example:** 8 oz. 545 Base : 8 oz. D3001 : 2 oz. M3066 : 1 oz. T0031

WARNING:

Cold-Cure Accelerator may considerably shorten the pot life of **545 Epoxy Primer**.

QUIK-GRIP FAST DRY WHITE URETHANE PRIMER D8016/D3040

Features & Uses
Quik-Grip is a fast drying, urethane primer ideal for spot repairs and small parts. For use above the waterline only.

Specification Data
Type: Vinyl/Moisture Cured Urethane**.**
Packaging: Available in 1 Gallon (3.785 Liters) containers**.**
Recommended Film Thickness: 1–3 mils dry (25–75 microns).
Theoretical Coverage: Sq. ft/Gallon: 101 sq. ft (9.4m^2) to 311 sq. ft (29m^2) at recommended film thickness. Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.
Recoatability at 77˚F (25˚C), 50% R.H: Minimum 1–2 hours with any Awlgrip urethane or epoxy coating.
Maximum without sanding: 24 hours.

Base (D8016) – 579 g/lt or 4.8lbs/gallon
Converter (D3040) – 607 g/lt or 5.1 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

White Base D8016
Converter. D3040
Reducers T0003, T0001
Equipment Cleaning . . . . . .T0002, T0003 Reducers or M.E.K.

Application Equipment
Conventional or airless spray. ***See pages 8–12***.

Surface Preparation
Steel – sandblast. Aluminum – Follow instructions for application of **Max Cor CF**. Fiberglass and Wood – sand with 100–150 grit sandpaper.

Mixing and Reduction
Mix one part base D8016 with one part converter D3040 and reduce 25% to 50% with T0003 or T0001.
Induction Time after Mixing: None**.**
Anticipated Pot Life: 4 hours at 77˚F (25˚C), 50% R.H, 1 hour at 100˚F (38˚C).
Do not use Pro-Cure Accelerators with this product.

Application Instructions
Spray apply only: Apply 2–3 smooth coats of 3–4 mils (75–100 microns) wet film thickness per coat, yielding 0.6–0.9 mils (15–22 microns) dry film thickness per coat.

DO NOT apply more than three coats without allowing the product to cure hard. After 24 hours, the surface must be lightly sanded before applying more material.

QUIK-GRIP FAST DRY WHITE URETHANE PRIMER D8016/D3040
Application Instructions continued...

WARNING:
Temperature Range: Optimal Surface/Ambient Temperature range is 60°F (18˚C) to 95˚F (35˚C). Proper application and/or cure results may be more difficult to achieve when conditions are outside this range. Do not apply paint materials to surfaces less than 5˚F (3˚C) above dew point. Do not apply paint materials to surfaces warmer than 105˚F (41˚C). Ambient temperature should be minimum 55˚F (13˚C) and maximum 105˚F (41˚C). Do not attempt to cure products at temperatures below 55°F (13°C).

AWLGRIP TOPCOATS G/H LINE

Features & Uses

A two component, polyester based, light-fast, linear aliphatic polyurethane coating with long lasting gloss and color retention and outstanding chemical resistance. Do not use below the waterline. A low maintenance coating. Do not wax, buff, compound or polish.

Specification Data

Type: Two Component Linear Aliphatic Polyester Polyurethane**.**

Color: See Color Card and/or your Awlmix distributor.

Packaging: Available in 1 Gallon and 1 Quart containers.

Theoretical Coverage:

Spray Application: 530 sq. ft (49m^2) at 1 mil (25 microns) dry film thickness; 210 sq. ft (19.5m^2) at recommended dry film thickness.

Recommended Wet Film Thickness: Thickness: 6–9 mils (150–225 microns), total of 3 or more coats.

Recommended Dry Film Thickness: 2–3 mils (50–75 microns), total of 3 or more coats. Coverage calculations are calculated for mixed base and converter, reduced 25% and are based on a theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.

Brush/Roller Application: 700–725 sq. ft (65–67m^2) at 1 mil (25 microns) dry; 285 sq. ft (26m^2) at recommended dry film thickness.

Recommended Wet Film Thickness: 4–5 mils (100–125 microns), total of 2 coats or more.

Recommended Dry Film Thickness: 2–2.5 mils (50–63 microns), total of 2 coats or more.

Anticipated Cure Time at 77˚F (25˚C), 50% R.H: 24 hours to tape free; 3 days to light service; 14 days for full cure.

Recoatability: Spray applications consist of 3 or more coats applied over 1–4 hours. Exact time will vary with temperature project size, and film thickness applied. Brush/Roller applications require at least 2 coats applied a minimum of 16 hours apart. **Awlgrip** topcoats which have been allowed to cure more than 24 hours must be sanded before recoating.

VOC

Base – 470 g/lt or 3.9 lbs/gallon
Spray Converter (G3010) – 591g/lt or 4.9 lbs/gallon
Brush Converter (H3002) – 276 g/lt or 2.3 lbs/gallon

Product Components, Reducers, Additives and Auxiliary Components

Awlgrip Gloss Topcoat Base . . . . . .(Number from the Color Card)
High Gloss Clear Base. G3005
Awlcat #2 Spray Converter G3010
Awlcat #3 Brushing Converter H3002
Standard Reducer Spray T0003
Fast Evaporating Reducer Spray. T0001
Very Fast Evaporating Reducer Spray T0002
Hot Weather Reducer Spray T0005
Brush/Roller Reducer T0031
Pro-Cure Accelerator X–98 73014
Pro-Cure Accelerator X–138 73015

AWLGRIP TOPCOATS G/H LINE

continued...

Product Components, Reducers, Additives and Auxiliary Components

Griptex Non-Skid Particles–Fine 73012
Griptex Non-Skid Particles–Coarse 73013
Griptex Non-Skid Particles–Extra Coarse 73237
Flattening Agent G3013
Crater-X M1017
Equipment Cleaning . . . . . .T0001, T0002, T0003 Reducers or M.E.K.

Application Equipment

Conventional air atomized spray, HVLP spray, brush or roller. ***See pages 8–14***.

Surface Preparation

For best results **Awlgrip** colors should be applied over properly prepared **545 Epoxy Primer**, **321 HS Undercoat** or in brush/roller applications, **Awlquik** Primer. Awlgrip colors may also be applied over recently applied topcoats/showcoats – consult your local Technical Sales Representative for advice. **Awlgrip High Gloss Clear G3005** can be applied over dark **Awlgrip** colors which have been sanded with 320–400 grit paper. Do not apply G3005 over white or pastel colors. Do not apply G3005 directly to bare wood.

Mixing and Reduction

Spray: Mix by volume one part **Awlgrip** Topcoat Base Component with one part **Awlcat #2**/G3010 Spray Converter to a smooth, homogenous mixture. Reducer addition level required to achieve 14 seconds viscosity (DIN4 or equivalent) varies color to color. For standard conventional spray application this can be attained by adding up to 25% reducer using the correct spray reducer(s) appropriate for conditions.

Example: (8 oz. Base, 8 oz. G3010, 4 oz. Reducer.) If a 25% reduction is used, overall mix is 1:1:½ by volume. Clear coats and painting in high temperature conditions may require additional reduction.

Brush/Roll: Mix by volume two parts **Awlgrip** Topcoat Base Component with one part **Awlcat #3**/H3002 Brushing Converter until one smooth, homogenous mixture is obtained. Reduce 10–33% with T0031. Overall mix is 2:1:½–1 by volume.

Example: 8 oz. Base, 4 oz. H3002, 1.3–4 oz. T0031.

Application Instructions

General: The primed surface must be clean and dry. Achieving maximum gloss and distinction of image requires the primer to be smooth sanded with 280–400 grit paper before topcoat application.

Using a contrasting mist coat of lacquer primer as a ‘guide coat’ is recommended. Smooth sanding until all of the ‘guide coat’ is removed indicates a texture free surface. Typically three coats are recommended for spray applications. Spray applying certain colors may require 4 or more coats to obtain full hide (opacity) or color coverage.

Brush/Roller applications require two coats.

AWLGRIP TOPCOATS G/H LINE
continued...

Spray application: Apply a light, smooth, slightly wet tack coat to the surface. Allow tack coat to 'flash off' 15–45 minutes. Then apply the second coat as an almost full wet coat. Allow the second coat to 'flash off' 30–45 minutes until only slightly tacky before applying a third coat. Coats two and three are not 'full, wet' coats. The third coat should be just heavy enough to obtain full hide (opacity) or color coverage.

Brush/Roller application: Apply **Awlgrip** Topcoat in at least two coats allowing 16 hours between each coat. Sanding between coats with 320–400 grit paper will provide a smoother finish.

On large surfaces such as hull sides, transoms and house sides, first roll the **Awlgrip** Topcoat and then smooth the roller stipple by lightly tipping the surface with a brush. This can be done with 2 painters working side by side (i.e. 1 rolling and 1 tipping), or with 1 painter rolling approximately 6 sq. ft and then tipping that area before rolling any further.

WARNING:
Do not apply paint materials to surfaces less than 5°F (3°C) above dew point, or to surfaces warmer than 105°F (41°C). Ambient temperature should be minimum 55°F (13°C) and maximum 105°F (41°C).

AWLGRIP FLAT BLACK TOPCOAT G2002

Features & Uses
A two component, polyester based, light-fast, linear aliphatic polyurethane coating in a flat finish, with outstanding chemical resistance and color retention. Not recommended for application to large expanses of surface as unequal gloss and appearance may result. Do not wax, buff, compound, or polish. For use above the waterline only.

Specification Data
Type: Two Component Linear Aliphatic Polyester Polyurethane.
Color: Black.
Packaging: Available in 1 Gallon and 1 Quart containers.
Theoretical Coverage:
Spray application: 415 sq. ft (39 m^2) at 1 mil (25 microns) dry film thickness; 180 sq. ft (17 m^2) at recommended dry film thickness.
Recommended Wet Film Thickness: 6–9* mils (150–225 microns), total of 3 or more coats.
Recommended Dry Film Thickness: 2–3 mils (50-75 microns), total of 3 or more coats.
** increasing wet film thicknesses on the final coat will increase the final gloss, conversely a lower film thickness will reduce the gloss.*

Coverage calculations are based on a theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.

Anticipated Cure Time at 77°F/25°C, 50% R.H: 24 hours to tape free; 3–4 days to light service; 14–21 days for full cure.
Recoatability (at 77°F (25°C), 50% RH): Spray applications consist of three coats applied over 1–4 hours. Exact time will vary with temperature, project size, and film thickness applied. **Awlgrip** topcoats which have been allowed to cure more than 24 hours must be sanded before recoating.

VOC
Base (G2002) – 557 g/lt or 4.6 lbs/gallon
Converter (G3010) – 591 g/lt or 4.9 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

Awlgrip Flat Black Base	G2002
Awlcat #2 Spray Converter	G3010
Spray Reducer	T0002
Pro-Cure Accelerator X-98	73014
Pro-Cure Accelerator X-138	73015
Griptex Non-Skid Particles-Fine	73012
Griptex Non-Skid Particles-Coarse	73013
Crater-X	M1017
Equipment Cleaning	T0002 or M.E.K.

AWLGRIP FLAT BLACK TOPCOAT G2002
continued...

Application Equipment
Conventional air atomized spray or HVLP spray. *See pages 8–12*. Not recommended for application by brush or roller.

Surface Preparation
Awlgrip G2002 Flat Black should be applied over properly prepared **545 Epoxy Primer** or **321 HS Undercoat**.

Mixing and Reduction
Spray: Mix by volume two parts **Awlgrip** G2002 Topcoat Base Component with one part **Awlcat #2/**G3010 Spray Converter to a smooth, homogenous mixture. Reduce 25–33% with T0002 spray reducer. At 33% reduction the overall mix is 2:1:1 by volume.
Example: 8 oz. G2002 Base, 4 oz. G3010, 4 oz. T0002 Reducer. 25% reduction is a standard mix.

Application Instructions
General: The primed surface must be clean and dry. The primer must be smooth sanded with 220–320 grit paper before topcoat application. Using a contrasting mist coat of lacquer primer as a 'guide coat' is recommended. Smooth sanding until all of the 'guide coat' is removed indicates a texture free surface. Three coats are recommended for spray applications.
Spray Application: Apply a light, smooth, slightly wet tack coat to the surface. Allow tack coat to 'flash off' 30–45 minutes. Then apply a full, wet coat to achieve color coverage (i.e. hide) and film thickness requirements. If preferred, three coats may be used. Allow the second coat to 'flash off' 30–45 minutes until only slightly tacky before applying third coat. In three coat applications, coats two and three are not 'full, wet' coats. The second coat is a slightly heavy tack coat with the third coat just wet enough to obtain full hide (opacity) or color coverage.

WARNING:
Temperature Range: Optimal Surface/Ambient Temperature range is 60–95°F (18–35°C). Proper application and/or cure results may be more difficult to achieve when conditions are outside this range. Do not apply paint materials to surfaces less than 5°F (3°C) above dew point. Do not apply paint materials to surfaces warmer than 105°F (41°C). Ambient temperature should be minimum 50°F (10°C) and maximum 105°F (41°C).

AWLCRAFT 2000 ACRYLIC URETHANE TOPCOAT F-LINE

Features & Uses
Awlcraft 2000 is a two component, fast drying acrylic urethane coating with long lasting gloss and color retention. Provides an easy to apply, buffable finish. Spray application only. For use above the waterline only. Awlcraft 2000 is also available in a range of metallic colors (refer to separate datasheet).

Specification Data
Type: Two Component Acrylic Urethane.
Color: See Color Card and/or your Awlmix distributor.
Packaging: Available in 1 Gallon and 1 Quart containers.
Theoretical Coverage:
Sq. ft./Gallon; 573 sq. ft (53m^2) at 1 mil dry (25 microns); 230 sq. ft (21m^2) at recommended dry film thickness. Calculated for mixed base and converter, reduced 25%. Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.
Recommended Wet Film Thickness: 6–9 mils (150–225 microns) total of 3 or more coats.
Recommended Dry Film Thickness: 2–3 mils (50–75 microns) total of 3 or more coats.
Anticipated Cure Time at 77°F (25°C), 50% R.H: 24 hours to tape free; 3 days to light service; 14 days for full cure.
Recoatability: Typical spray applications consist of 3 coats applied over 1–4 hours. Exact time will vary with temperature, project size and film thickness applied. **Awlcraft 2000** topcoats which have been allowed to cure more than 24 hours must be sanded before recoating.

VOC
Base – 472.5 g/lt or 3.9 lbs/gallon
Spray Converter (G3010) – 591g/lt or 4.9 lbs/gallon

Product Components, Reducers, Additives and Auxiliary Components

Awlcraft 2000 Topcoat Base	(Number from the Color Card)
Awlcraft 2000 Clear Base.	F3029
Awlcat #2 Spray Converter	G3010
Standard Reducer Spray	T0003
Fast Evaporating Reducer–Spray.	T0001
Very Fast Evaporating Reducer–Spray	T0002
Hot Weather Reducer–Spray	T0005
Pro-Cure Accelerator X–98	73014
Pro-Cure Accelerator X–138	73015
Crater-X	M1017
Griptex Non-Skid Particles–Fine	73012
Griptex Non-Skid Particles–Coarse	73013
Griptex Non-Skid Particles–Extra Coarse	73237
Flattening Agent	G3013
Equipment Cleaning	T0001, T0002, or T0003 or M.E.K.

AWLCRAFT 2000 ACRYLIC URETHANE TOPCOAT F-LINE continued...

Application Equipment
Conventional air atomized spray or HVLP spray. ***See pages 8–12***.

Surface Preparation
Awlcraft 2000 should be applied over properly prepared **545 Epoxy Primer** or **321 HS Undercoat**. May be applied directly over some existing finishes. The existing finish must be sound, tightly adhered to the substrate, and chemically compatible with **Awlcraft 2000**.

Mixing and Reduction
Spray: Mix by volume two parts **Awlcraft 2000** Topcoat Base Component with one part **Awlcat #2**/G3010 Spray Converter to a smooth, homogenous mixture. Reducer addition level required to achieve 14 seconds viscosity (DIN4 or equivalent) varies color to color. For standard conventional spray application this can be attained by adding up to 25% reducer using the correct spray reducer(s) appropriate for conditions.

Example: If a 25% reduction is used, overall mix is 2:1:¾ by volume. (8 oz. Base, 4 oz. G3010, 3 oz. Reducer.) Clear coats and painting in high temperature conditions may require additional reduction.

Application Instructions
General: The primed surface must be clean and dry. Achieving maximum gloss and distinction of image requires the primer be smooth sanded with 320 grit paper before topcoat application. Using a contrasting mist coat of lacquer primer as a 'guide coat' is recommended. Smooth sanding until all the 'guide coat' is removed indicates a texture free surface. Three coats are recommended for spray applications.

Spray application: Apply a light, smooth, slightly wet tack coat to the surface. Allow tack coat to 'flash off' 15–45 minutes. Allow the second coat to 'flash off' 30–45 minutes until only slightly tacky before applying the third coat. Coats two and three are not 'full, wet' coats. The second coat is a slightly heavy tack coat with the third coat just wet enough to obtain full hide (opacity) or color coverage. More than 3 coats may be required to achieve full hide (opacity) or color coverage.

WARNING:
Do not apply paint materials to surfaces less than 5°F (3°C) above dew point, or to surfaces warmer than 105°F (41°C). Ambient temperature should be minimum 55°F (13°C) and maximum 105°F (41°C).

AWLCRAFT 2000 VOC ACRYLIC URETHANE TOPCOAT F-LINE (NA only)

Features & Uses
VOC Compliant Awlcraft 2000 is a two component, fast drying acrylic urethane coating with long lasting gloss and color retention that is formulated to yield a great finish yet only has a VOC 420g/lt (US only). Provides an easy to apply, buffable finish. Spray application only. Do not use below the waterline. Awlcraft 2000 is also available in a range of metallic colors (refer to separate datasheet).

Specification Data
Type: Two Component Acrylic Urethane.

Color: See Color Card and/or your Awlmix distributor.

Packaging: Available in 1 Gallon and 1 Quart containers.

Theoretical Coverage:
Sq. ft./Gallon; 573 sq. ft (53m²) at 1 mil dry (25 microns); 230 sq. ft (21m²) at recommended dry film thickness. Calculated for mixed base and converter, reduced 25%. Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.

Recommended Wet Film Thickness: 6–9 mils (150–225 microns) total of 2 or more coats.

Recommended Dry Film Thickness: 2–3 mils (50–75 microns) total of 2 or more coats.

Anticipated Cure Time at 77°F (25°C), 50% R.H: 24 hours to tape free; 3 days to light service; 14 days for full cure.

Recoatability: Typical spray applications consist of 2–3 coats applied over 1–4 hours. Exact time will vary with temperature, project size and film thickness applied. Awlcraft 2000 topcoats which have been allowed to cure more than 24 hours must be sanded before recoating.

VOC

Base – 472.5 g/lt or 3.9 lbs/gallon

Spray Converter (G3010) – 71.6g/lt or 0.6 lbs/gallon

Product Components, Reducers, Additives and Auxiliary Components

Awlcraft 2000 Topcoat Base	(Number from the Color Card)
Awlcraft 2000 Clear Base.	F3029
Awlcat #4 Spray Converter	G3038
Standard Reducer Spray	T0167
Fast Evaporating Reducer–Spray.	T0163
Hot Weather Reducer–Spray	T0168
Pro-Cure Accelerator X–98	73014
Pro-Cure Accelerator X–138	73015
Crater-X	M1017
Griptex Non-Skid Particles–Fine	73012
Griptex Non-Skid Particles–Coarse	73013
Griptex Non-Skid Particles–Extra Coarse	73237
Flattening Agent	G3013
Equipment Cleaning	T0163, T0167, or T0168 or M.E.K.

AWLCRAFT 2000 VOC ACRYLIC URETHANE TOPCOAT F-LINE (NA only)
continued...

Application Equipment
Conventional air atomized spray or HVLP spray. ***See pages 8–12***.

Surface Preparation
Awlcraft 2000 should be applied over properly prepared 545 Epoxy Primer or **321 HS Undercoat**. May be applied directly over some existing finishes. The existing finish must be sound, tightly adhered to the substrate, and chemically compatible with **Awlcraft 2000**.

Mixing and Reduction
Spray only: Mix by volume two parts **Awlcraft 2000** Topcoat Base component with one part **Awlcat #4** (G3038) Spray converter to a smooth, homogenous mixture. Reducer addition level required to achieve 14 seconds viscosity (DIN4 or equivalent) varies color to color. For standard conventional spray application this can be attained by adding up to 25% reducer using the correct spray reducer(s) appropriate for conditions.

Example: If a 25% reduction is used, overall mix is 2:1:3⁄4 by volume. (8 oz. Base, 4 oz. G3038, 3 oz. Reducer.) Clear coats and painting in high temperature conditions may require additional reduction.

Application Instructions
General: The primed surface must be clean and dry. Achieving maximum gloss and distinction of image requires the primer be smooth sanded with 320 grit paper before topcoat application. Using a contrasting mist coat of lacquer primer as a 'guide coat' is recommended. Smooth sanding until all the 'guide coat' is removed indicates a texture free surface. Three coats are recommended for spray applications.

Spray application: Apply a smooth, wet coat to the surface. Allow coat to "flash off" 15–45 minutes. Allow the second coat to "flash off" 30–45 minutes until only slightly tacky before applying the third coat. More than 2 coats may be required to achieve full hide (opacity) or color coverage depending on color.

WARNING:
Do not apply paint materials to surfaces less than 5° F (3°C) above dew point, or to surfaces warmer than 105°F (41°C). Ambient temperature should be minimum 55°F (13°C) and maximum 105°F (41°C).

AWLCRAFT 2000 METALLICS

Features & Uses
Awlcraft 2000 Metallics are mixed the same way as conventional **Awlcraft 2000** topcoats. Through the use of flow stabilizers, metallic flake float has been drastically reduced, and color consistency is improved. These new formulas will allow applicators to quickly and easily apply metallics for a finish with outstanding color, brilliance and luster. For use on smaller areas ONLY (such as stripes or parts). For larger area applications, we recommend **Awlcraft SE**.

Awlcraft 2000 metallic flakes are pre-mixed into the pigmented color base which is applied in the same way as conventional pigmented **Awlcraft 2000** topcoats.

NOTE:
- Metallic topcoats must be applied over the appropriate Awlgrip primer or **Awlcraft 2000** topcoat that has cured 12–24 hours and has been sanded until all gloss is removed.
- (Optional) Metallics, may be clear coated when applied as a base coat/clear coat application
- Large area applications such as hull sides will require additional application techniques. Use of an agitated pressure pot is essential for these large areas. Contact your Awlgrip Technical Sales Representative for additional information.

Specification Data
Type: Two Component Acrylic Urethane Metallic.

Color: See color card and/or your Awlmix distributor.

Packaging: Color base available in Gallons and Quarts at your local Awlmix distributors.

Theoretical Coverage: Sq. ft./Gallon 512 sq. ft (48m^2) at 1 mil dry (25 microns)171–256 sq. ft (16–24m^2) at recommended dry film thickness. Calculated for mixed base and converter, reduced 25–35%. Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size and application environment.

Recommended Wet Film Thickness: 6–9 mils (150–225 microns) total of 3 or more coats.

Recommended Dry Film Thickness: 2–3 mils (50–75 microns) total of 3 or more coats.

Anticipated Cure Time at 77°F (25°C), 50% R.H: 24 Hours to tape free; 3 days to light service; 14 days for full cure.

Recoatability: Spray applications consist of 3 coats applied over 2–4 hours. Exact time will vary with temperature, project size, and film thickness applied. **Awlcraft 2000** clear coat can be applied after 12 hours at 77°F (25°C) but before 24 hours of cure. The last coat of metallic should be dry to touch to prevent mottling of the metallic. If sanding is desired, apply 2 coats of **Awlcraft 2000** Clear (F3029) and allow curing over night before sanding. **Awlcraft 2000** Metallics which have been allowed to cure more than 24 hours must be sanded and recoated with **Awlcraft 2000** Metallic before recoating with F3029 clear coat.

AWLCRAFT 2000 METALLICS continued...

VOC

Base (e.g. F4161) – 472.5 g/lt or 3.9 lbs/gallon
Converter (G3010) – 591 g/lt or 4.9 lbs/gallon

Product Components, Reducers, Additives and Auxiliary Components

Awlcraft 2000 Metallic Base . . . . . .F–Code
Awlcraft 2000 Gloss Clear F3029
Awlcat #2 Spray Converter G3010
Fast Evaporating Reducer–Spray. T0001
Very Fast Evaporating Reducer–Spray T0002
Standard Evaporating Reducer–Spray T0003
Equipment Cleaning . . . . . .T0001, T0002, T0003 Reducers or M.E.K.

Application Equipment
Conventional air atomized spray or HVLP spray. Metallic urethanes are spray only. **HVLP** may not provide enough atomization to get uniform distribution of the pearl or metallic particle. Additional reduction may be needed with HVLP equipment. Standard conventional, air atomized spray gun is preferred. ***See pages 8–12***.

Surface Preparation
Awlcraft 2000 metallics should be applied over the appropriate Awlgrip primer or **Awlcraft 2000** topcoat. The primed surface must be clean and dry. Wipe with a surface cleaner such as T0170 (NA) /T0340(EU) or T0008, using the two cloth wipe down method. Achieving maximum gloss and distinction of image requires the primer be smooth sanded with 320 grit paper before topcoat application. When applying metallics over **Awlcraft 2000** topcoats, sand the surface with 400-500 grit paper. After sanding, blow off sanding dust and tack off using **Deluxe Tack Rags (#73009)**.

Mixing and Reduction
Spray only: Mix by volume two parts **Awlcraft 2000** Topcoat Base component with one part **Awlcat #2** (G3010) Spray converter to a smooth, homogenous mixture. Reduce 12.5–25% with T0001 or T0002 reducer ONLY. Overall mix is 2:1:⅜–¾ by volume.

Example: 8 oz. Base, 4 oz. G3010, and 1.5-3.0 oz. Reducer. Clear coats require additional reduction and may require the use of T0003 in certain conditions.

Awlcraft 2000 metallics are designed for spray application only and have a significantly shorter pot life than pigmented topcoats. Do not add accelerators to metallic topcoats.

Application Instructions
Spray Application ONLY: Apply by spray in light, slightly wet coats until hide is achieved, most **Awlcraft 2000** metallic topcoats achieve hide in 3 or more coats. Allow 30–40 minutes tack time between coats. This spray method allows uniform development of the metallic color without flooding or floating the metallic particles.

AWLCRAFT 2000 METALLICS continued...

After achieving the specified color, allow the coating to cure a minimum of 12 hours at 77°F (25°C) but not more than 24 hours before clear applications.

Within this period, seal the **Awlcraft 2000** metallic with **Awlcraft 2000** Gloss Clear (F3029/G3010). Mix by volume two parts F3029 **Awlcraft 2000** Clear with one part **Awlcat #2** (G3010) Spray Converter to a smooth, homogenous mixture. Reduce 25–33% with T0001 or T0002 Reducer. Overall mix is 2:1:1 by volume for example: 8 oz. Base, 4 oz. G3010, 4 oz. Reducer.

Avoid the use of T0005 Reducer.

WARNING:
Temperature Range: Optimal Surface/Ambient Temperature range is 70–90°F (23–32°C). Proper application results may be more difficult to achieve when conditions are outside this range.

Do not apply paint materials to surfaces less than 5°F (3°C) above dew point, or to surfaces warmer than 105°F (41°C). Ambient temperature should be minimum 50°F (10°C) and maximum 105°F (41°C).

Do not use accelerators in Metallic Coatings.

AWLCRAFT SE
TWO COMPONENT SOLIDS AND EFFECTS BASECOAT E LINE

Features & Uses

Awlcraft SE is a revolutionary new topcoat encompassing solids, metallics, pearls and effect finishes and is fast drying with excellent opacity.

Awlcraft SE is designed to work as one layer of a multi-part system. The Awlcraft SE imparts the color and effect and is then topcoated with a clear high gloss finish topcoat to give gloss and protection. This combination forms a high performance, high gloss robust topcoat system.

Awlcraft SE provides coverage, effect finish (solid, metallic, pearl or effect) and is applied to the primer or previous Awlgrip/Awlcraft topcoat finish. Its fast drying formulation allows multiple coats to be applied within a day reducing working time overall.

Note: Metallic topcoats must be applied over the appropriate Awlgrip primer or Awlgrip/Awlcraft 2000 topcoat that has cured 12–24 hours and has been sanded until all gloss is removed.

Specification Data

Type: Two Component Basecoat Finish
Color: See color card and/or your Awlgrip Technical Sales Representative.
Packaging: Available in 1 Gallon and 1 Quart containers.
Theoretical Coverage: 802 sq. ft. / Gallon (19.8m^2/lt) at one mil dry (25 microns); 401–802 sq. ft (10.0–19.8m^2) at recommended dry film thickness: Calculated for mixed base, reducer and converter.

Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.

Recommended Wet Film Thickness: 2–4 mils (50–100 microns) total of 2 or more coats.
Recommended Dry Film Thickness: 1–2 mils (25–50 microns) total of 2 or more coats.
Anticipated Cure Time at 77°F (25°C), 50% R.H: 1 hours to tape free; 1 day to light service; 7 days for full cure.
Recoatability (at 77°F (25°C), 50% RH): Spray applications consist of 2 coats applied with 10–20 minutes ambient flash off time. Exact time will vary with temperature, project size, and film thickness applied.

Awlcraft 2000 clear coat can be applied after 1 hour at 77°F (25°C) but before 24 hours of cure. The last coat of metallic should be completely matt before clearcoating. If sanding is desired, apply 2 coats of Awlcraft 2000 Clear (F3029) and allow curing over night before sanding. Awlcraft SE which has been allowed to cure more than 24 hours must be sanded and recoated with Awlcraft SE before recoating with F3029 clear coat.

VOC

Base (e.g. E4161): 700 g/lt or 5.8 lbs/gallon
Converter (G3010): 591 g/lt or 4.9 lbs/gallon

AWLCRAFT SE
TWO COMPONENT SOLIDS AND EFFECTS BASECOAT E LINE continued...

Product Components, Reducers, Additives, and Auxiliary Components

Awlcraft SE Basecoat . . . . . .E-Code
Awlcat #2 Spray Converter G3010
Fast Evaporating Reducer-Spray T0001
Standard Evaporating Reducer-Spray T0003
Hot Weather Reducer-Spray T0005
Awlcraft 2000 Gloss Clear F3029
Equipment Cleaning . . . . . .T0001, T0002, T0003 or M.E.K.

Application Equipment

Conventional air atomized spray or HVLP spray.
Awlcraft SE is spray only.

SPRAY EQUIPMENT:
Crosscoat Application
Gun Type: Conventional/Compliant
Tip Size: Gravity feed 0.047-0.055" (1.2–1.4mm)
Pressure pot 0.031-0.043" (0.8–1.1mm)
Fluid Flow Rate: 225–250cc/min.
Atomising Air Pressure: Compliant/Conventional as per manufacturer
Gun to Substrate Distance: 9–12" (23-31cm)

Dropcoat / Mistcoat Application (Metallics, Pearls and Effects only)
Gun Type: Conventional/Compliant
Tip Size: Gravity feed 0.047–0.055" (1.2–1.4mm)
Pressure pot 0.031–0.043" (0.8–1.1mm)
Fluid Flow Rate: 225–250cc/min.
Atomizing Air Pressure: Compliant/Conventional as per manufacturer
Gun to Substrate Distance: 23–31" (60–80cm)

Surface Preparation

Awlcraft SE basecoats should be applied over the appropriate Awlgrip primer or previous **Awlgrip / Awlcraft** topcoat. The primed surface must be clean and dry. Wipe with surface cleaner T0170 using the two cloth wipe down method. Achieving maximum gloss and distinction of image requires the primer be smooth sanded with P400 grit paper before application.

Mixing and Reduction (Awlcraft SE is spray only)
Mixing Ratios By Volume:

Awlcraft SE Base: 100 parts
Reducer (T0001, T0003 or T0005): 50 parts
Awlcat #2 (G3010): 15 parts
Example: 10.6 oz. (300ml) base : 5.3 oz. (150ml) reducer : 1.6 oz. (45ml) Awlcat #2)

Application Viscosity: 14–15 secs (Din 4)

Mix to a smooth, homogenous mixture. **Awlcraft SE** basecoats are designed for spray application only and have a significantly shorter pot life than regular topcoats. Do not add accelerators to **Awlcraft SE**.

Induction Time: N/A

AWLCRAFT SE
TWO COMPONENT SOLIDS AND EFFECTS BASECOAT E LINE continued...

Application Instructions

Apply first crosscoat using a smooth, even and fluid spray application technique in order to achieve a uniform, consistent finish. Apply no more than 10–14" (25–35cm) width areas at a time. Constant air pressure is necessary during application to ensure evenness of finish. Allow to flash off until surface is matt (~10mins at 77°F/25°C).

Apply second crosscoat in the same way as the first. For metallics, pearls and effect finishes, an optional dropcoat (mistcoat) can be applied prior to clear coating. This can be applied whilst previous crosscoat is wet or once surface is matt.

Once the surface has gone completely matt apply 2 full coats of **Awlcraft 2000** Clear. After applying the specified basecoat color, allow the coating to cure a minimum of 1 hour at 77°F (25 °C) but not more than 24 hours before clear applications. Seal the **Awlcraft SE** basecoat with **Awlcraft 2000** Gloss Clear (F3029/G3010). Mix by volume two parts F3029 **Awlcraft 2000** Clear with one part **Awlcat #2** (G3010) Spray Converter to a smooth, homogenous mixture. Reduce 25-33% with T0001, T0003 or T0005 Reducer. Overall mix is 2:1:1 by volume for example: 8 oz. Base, 4 oz. G3010, 4 oz. Reducer.

WARNING:
Awlcraft SE must be clear coated.

WARNING:
Temperature Range: Optimal Surface/Ambient Temperature range is 70–90°F (23–32°C). Proper application results may be more difficult to achieve when conditions are outside this range. Do not apply paint materials to surfaces less than 5°F (3°C) above dew point, or to surfaces warmer th an 105°F (41°C). Ambient temperature should be minimum 50°F (10°C) and maximum 105°F (41°C).

Do not use accelerators in Awlcraft SE.

AWLBRITE CLEAR ACRYLIC URETHANE J3005/J3006

Features & Uses
Awlbrite Clear is a high build, three component, acrylic urethane clear wood finish which offers a durable finish for prepared wood. For above waterline use only.

Specification Data

Type: Three Component Acrylic Urethane.
Color: Clear.
Packaging: Pints, Quarts, Half Gallons and Gallons.
Theoretical Coverage: Sq. ft/Gallon; 930 sq. ft (86m^2) at 1 mil dry (25 microns); 93 sq. ft (8.6m^2) at recommended dry film thickness of 10 coats. Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size and application environment.
Recommended Wet Film Thickness: 2.0–2.5 mils (50–62 microns) per coat.
Recommended Dry Film Thickness: 1.0–1.2 mils (25–30 microns) per coat.
Anticipated Cure Time at 77°F, 50% R.H: 3 hours to recoat; 12 hours to light service; 7 days for full cure.
Recoatability: With itself: 3 hours minimum, 36 hours maximum without sanding or scuffing.

VOC
Base (J3005) – 372 g/lt or 3.1 lbs/gallon
Converter (J3006) – 146 g/lt or 1.2 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

Base J3005
Converter J3006
Brushing Activator A0031
Spray Activator . . . . . .A0001 or A0006
Equipment Cleaning . . . . . .T0001, T0002, T0003 or M.E.K.

Application Equipment
Brush, roller and spray application. ***See pages 8–14***.

Surface Preparation
Apply over cured **Awlspar** or **Awlbrite Quik-Fil**. Do not apply Awlbrite direct to bare wood.

NOTE: Due to the wide variety of substrates, surface preparations, application methods and environments, customers should test the complete system for adhesion and compatibility under their conditions prior to full scale application.

AWLBRITE CLEAR ACRYLIC URETHANE J3005/J3006 continued...

WARNING:
Wood should have no more than 15% moisture content. Old finishes in good condition should be washed with **Awlprep** Surface Cleaner, then sanded with 220–320 grit paper to remove the gloss. Old finishes in poor condition should be removed. Test on a small area to make sure **Awlbrite Clear** doesn't attack the old finish. If old finish is attacked, it must be completely removed.

Mixing and Reduction
Awlbrite Clear is a three component product.

Brush: Mix by volume 2 parts J3005 with 1 part J3006 until one smooth, homogenous mixture is obtained. Then add ½ part A0031. Overall mix is 2:1:½ by volume.
Example: 4 oz. J3005, 2 oz. J3006, 1 oz. A0031. Additional A0031 can be added if desired, but standard 2:1:½ ratio is required.

Spray: Mix by volume 2 parts J3005 with 1 part J3006 until one smooth, homogenous mix is obtained. Then add ¾–1 part A0001 (standard) or A0006 (cool temperatures) Activator.

WARNING:
Keep the original containers closed when not in use.
Do not shake **Awlbrite Clear**.

Induction time after mixing: None.
Anticipated Pot Life at 77˚F (25˚C), 50% R.H: 1–2 Hours.

Application Instructions
General: The key to performance of any varnish system is applying enough material. This is especially true with **Awlbrite Clear** Urethane. These directions call for more coats than are needed to achieve basic cosmetic qualities. If you stop the system when it looks good, or sand excessively, you will not achieve the desired performance.
General: Apply light, smooth coats. Apply 2 coats in an 8 hour period. Allow to cure 8–12 hours or overnight and repeat. Ten coats are recommended.

Sand as little as possible. Sanding is only required when:
- Runs, sags or brush marks need to be leveled
- Dirt or grit needs to be removed from the surface
- If it has been more than 36 hours since the last application

If no levelling is required, but it has been more than 36 hours since the last application, dulling the surface with Scotch-Brite® Pads is recommended; see the application guide for systems.

WARNING:
Avoid applying or curing the material in direct sunlight. Do not apply or attempt to cure **Awlbrite Clear** below 65˚F (18˚C) or over 95°F (35°C).

AWLBRITE SEMI GLOSS J3630 (NA ONLY)

Features & Use
Awlbrite Semi Gloss provides a low sheen, 30° gloss, finish for interior surfaces where a durable fast drying finish is required.

The **Awlbrite** product line provides a far more durable finish than varnish, is faster curing and as easy to apply.

For interior use only.

Specification Data
Type: Three Component Acrylic Urethane.
Color: Clear Semi Gloss.
Packaging: Gallons and Quarts.
Theoretical Coverage: Sq. ft / Gallon; 930 sq. ft (86m²) at 1 mil dry (25 microns); 93 sq.ft (8.6m²) at recommended dry film thickness of 10 coats. 93 sq. ft at recommended dry film thickness of 10 coats. Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size and application environment.
Recommended Wet Film Thickness: 2.0–2.5 mils (50–62 microns) per coat.
Recommended Dry Film Thickness: 1.0–1.2 mils (25–30 microns) per coat.
Anticipated Cure Time at 77˚F (25˚C)/50% R.H: 3 hours to recoat; 12 hours to light service; 7 days for full cure.
Recoatability: 3 hours minimum, 24 hours maximum without sanding or scuffing.

Semi Gloss (J3630) – 352 g/lt or 2.9 lbs/gallon
Converter (J3006) – 146 g/lt or 1.2 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

Base – Semi Gloss	J3630
Converter	J3006
Spray Activator	A0001, A0003 or A0006
Brush Activator	A0031
Equipment Cleaning	T0001, T0002, T0003 Reducers or M.E.K.

Application Equipment
Conventional air atomized spray or HVLP spray only.
See pages 8–12.

Surface Preparation
The wood should be clean, dry, smooth and well seasoned, with less than 15% moisture content.

Ideally **Awlbrite Semi-Gloss** is applied as a finish coat.

Apply **Awlbrite Semi-Gloss** to wood that has been sealed with **Awlbrite Quik-Fil**, **Awlbrite Clear** or **Awlspar**.

NOTE: Due to the wide variety of substrates, surface preparation methods, application methods and environments, customers should test the complete system for adhesion and compatibility under their conditions prior to full scale application.

AWLBRITE SEMI GLOSS J3630 (NA ONLY) continued...

Mixing and Reduction
Awlbrite Semi-Gloss is a three component product. Mix by volume 2 parts J3630 with 1 part J3006 until one smooth, homogenous mixture is obtained. Then add ½ part Activator (A0001 or A0006). Overall mix is 2:1:½ by volume.

Example: 4 oz. J3630, 2 oz. J3006, 1 oz. A0001. Additional A0001 can be added if desired, but standard 2:1:½ ratio is required. Mix and use small quantities of **Awlbrite** products at a time. Keep the original containers closed when not in use.

Induction time after mixing: None.

Anticipated Pot Life at 77°F (25°C), 50% R.H: 1–2 Hours.

Awlbrite Semi-Gloss is designed for spray application only due to the possibility of uneven gloss when applying semi-gloss products. Adding **Pro-Cure** accelerators will continue to shorten the pot life.

Application Instructions
Apply **Awlbrite Semi-Gloss** by spray in light, slightly wet coats until desired finish is achieved. Allow 3 hours tack time between coats. This spray method allows uniform development of the material without flooding or floating.

Sand as little as possible. Sanding is only required when:

- Runs, sags or brush marks need to be levelled
- Dirt or grit needs to be removed from the surface
- If it has been more than 24 hours since the last application

If no levelling is required, but it has been more than 24 hours since the last application, dulling the surface with Scotch-Brite® Pads is recommended. If possible, avoid applying or curing the material in direct sunlight.

WARNING:
Do not exceed the recommended wet film thickness.
Temperature Range: Optimal Surface/Ambient Temperature range is 60–95°F (18–35°C). Proper application and/or cure results may be more difficult to achieve when conditions are outside this range. Do not apply paint materials to surfaces less than 5°F (3°C) above dew point, or to surfaces warmer than 105°F (41°C). Ambient temperature should be minimum 50°F (10°C) and maximum 105°F (41°C). Do not attempt to cure products below 50°F (10°C).

AWLSPAR CLASSIC SPAR VARNISH M3131

Features & Uses
Awlspar Classic Spar Varnish is a phenolic tung oil varnish used for brightwork protection against water and weather.
For use above the waterline only.

Specification Data
Type: Phenolic Varnish.
Color: Amber.
Packaging: Available in Quarts.
Theoretical Coverage: Sq. ft / Gallon; 700 sq. ft (65m²) at 1 mil dry (25 microns); 70–100 sq. ft (6.5–9.0 m²) at recommended total dry film thickness of 7–10 mils (175–250 microns). Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size and application environment.
Recommended Wet Film Thickness: 2–3 mils (50–75 microns) per coat.
Recommended Dry Film Thickness: 1–1½ mils (25–37.5 microns) per coat.
Anticipated Cure Time at 77°F/50% R.H: 24 hours to handle.
Recommended Coats: 7–10.
Recoatability: With itself: 3–4 hours, 36 hours maximum without sanding or scuffing. With **Awlbrite Clear or Awlbrite Quik-Fil:** 3 days minimum

VOC
404 g/lt or 3.4 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

Awlspar Base – Amber/Clear M3131
Awlspar Brush Reducer T0016
Awlspar Spray Reducer T0180
Equipment Cleaning . . . . . .T0016 or Odorless Mineral Spirits

Application Equipment
Brush, roller and spray application. ***See pages 8–14***.

Surface Preparation
The wood should be clean, dry, smooth and well seasoned.

WARNING:
Wood should have no more than 15% moisture content.

New Wood: Use of a marine teak cleaner or wood bleach is advised on new wood to remove excess oils, promote color uniformity and adhesion. Follow manufacturer's instructions for use and thoroughly remove all cleaner and neutralizer residue before proceeding. Rough sawn lumber must receive heavy sanding to level the grain. Work through the grits to effectively level the grain 60/80–100/150–220 and so on. When the grain is level, smooth sand the surface with 320 grit paper.

AWLSPAR CLASSIC SPAR VARNISH M3131 continued...

Old finishes in good condition: should be washed with **Awlprep 400 Wipe Down Solvent,** then sanded with 220–320 grit paper to remove the gloss. Old finishes in poor condition should be removed. Test on a small area to make sure **Awlspar** doesn't attack the old finish. If old finish is attacked, it must be completely removed.

Mixing and Reduction

New Wood Reduction: When finishing new wood reduce 100% (1 part M3131 to 1 part T0016 by volume) with T0016 for first coat only. This will allow the **Awlspar** to penetrate and seal the grain. Otherwise thinning or reduction is not normally required. If desired, reduce up to 20% with T0016.
Stir only do not shake!
Induction time after mixing: N/A.
Anticipated Pot Life at 77°F (25°C), 50% RH: N/A.

Application Instructions

Awlspar can be used to seal wood and build up a complete finishing system. Alternatively, **Awlbrite Quik-Fil Clear J3901/J3902** is a clear, fast drying wood grain filler that can be used to seal the wood prior to finishing with **Awlspar** (4–6 coats).

After new wood has been sealed, or on previously coated surfaces, apply light, smooth, even coats (2–3 mils / 50–75 microns wet) of full bodied material.

At temperatures above 77°F (25°C), 2–3 coats can be applied per day. If sanding is required, allow to cure 24 hours before sanding. Best results are achieved when surface is sanded smooth with 320–400 grit paper after every 2–3 coats. A good system would include 7–10 coats. Exact number of coats needed will vary by applied film thickness and the amount of sanding. **Awlspar** will cure at temperatures as low as 45°F (7°C); however, best results are achieved when temperatures are between 60°F (15°C) and 90°F (32°C).

WARNING:

Avoid applying or curing the material in direct sunlight. Do not apply paint materials to surfaces warmer than 105°F (41°C) or colder than 45°F (7°C). Do not attempt to cure products at temperatures below 45°F (7°C).

AWLWOOD MA – EXTERIOR CLEAR ACRYLIC URETHANE SYSTEM J3809/J9809/J7809

Features & Uses

Awlwood MA is an exterior clear system made up of a Primer and Clear Gloss Finish. The synergistic effect of combining the Primer and Clear together results in an outstanding performing system that adheres and bonds directly to the wood cellular structure giving extended performance and retaining the same gloss, DOI and natural appearance as first application.

Awlwood MA Primer incorporates Flex-Link™ technology, which works by adhering and embedding into the wood to provide a strong yet flexible link with the wood structure and the coating whilst allowing the natural coating and grain to shine through. This gives superior flexibility and unrivalled resistance to delamination at damage points.

For exterior, above waterline use only.

Specification Data

Type: Low VOC Acrylic Urethane
Color: Clear (J3809), Yellow (J9809), Red (J7809)
Packaging: Available in Quarts.
Theoretical Coverage: 10m²/lt or 407.4 ft²/gl
Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.
Recommended Wet Film Thickness: ~4.0 mils (100 microns) per coat by brush and by roller application.
Recommended Dry Film Thickness: 2.0 mils (50 microns) per coat by brush and by roller application.
NOTE: The quantity of primer required varies depending on timber density/absorbency and the application method. Hard timbers (e.g. Teak) absorb less primer than soft timbers (e.g. Oregon). Brushing the primer on before removing excess material with a rag will use more primer than applying as per a rubbing stain but can give a more desirable result.

Anticipated Cure Time at 77°F/50% R.H: 8 hours touch dry; 12 hours hard dry
Recommended Coats: 1 coat (1 application). It is recommended to continue primer application until timber saturation is achieved. Once saturated, do not apply any more materials.
Recoatability: 12 hours minimum and 18 hours maximum using **Awlwood MA Clear Gloss**
Sanding at 77°F/25°C: All **Awlwood MA** Primers are sandable after 12 hours. Use P400 grit sandpaper for colored Primers and P280-320 grit for clear.

VOC

J3809/J7809/J9809 Primers: 500g/lt or 4.17lb/gl

AWLWOOD MA – EXTERIOR CLEAR ACRYLIC URETHANE SYSTEM J3809/J9809/J7809 continued...

Product Components, Reducers, Additives, and Auxiliary Components

Awlwood Clear Primer J3909
Awlwood Yellow Primer J9809
Awlwood Red Primer J7809
Awlwood Brush Cleaner T0200

Application Equipment
Brush and roller application. ***See pages 8–14***.

NOTE: Preparation techniques and results will vary according to individual conditions, equipment age and other factors. Testing on a non-critical area should be carried out prior to full-scale preparation.

WARNING:
NEVER USE TEAK CLEANERS – oxalic acid residues impede proper curing of both primers and topcoats.

Surface Preparation
Any cracks in the timber should be epoxy filled or splined with timber prior to sanding. All previous coating systems must be removed. The surface of the timber should be mechanically removed until coloration is even and the original timber tone is exposed.

Sanding
- Timber must be sanded using no finer than P120 grit
- If timber is weathered, scrub with the grain using a stiff bristled wire brush and running water to remove all grey timber prior to sanding
- Bare timber that has been saturated by salt water at any stage must be scrubbed well with fresh water to remove salt deposits before commencing sanding.
- If timber gets wet after the final sand, water spots may appear. Re-sand these areas with P120 grit paper before priming.

Applying to Resinous Timber
Any cracks in the timber should be epoxy filled or splined with timber prior to sanding. All previous coating systems must be removed. The surface of the timber should be mechanically removed until coloration is even and the original timber tone is exposed.

Filling Defects/Fixing Holes
Where possible, and especially for screw holes, wooden plugs of the same wood are the best solution for filling. Plugs should be fixed in place using an epoxy resin based glue, with care being taken to line the grain up. Any excess glue should be removed by sanding before priming.
If this method is not feasible then use an epoxy resin mixed with dust/shavings (preferably from the same wood that is being coated). Once cured, these filled areas should be sanded and excess glue removed before application of the primer.

AWLWOOD MA – EXTERIOR CLEAR ACRYLIC URETHANE SYSTEM J3809/J9809/J7809 continued...

NOTE: This method may result in filled areas appearing slightly darker than surrounding wood due to the absorbencies of epoxy compared to wood. Use of a colored primer will help to minimize color differences. Always test on a small non-visible area first.

Mixing and Reduction
Awlwood MA Primers should **NOT** be reduced.

Application Instructions

General: Awlwood MA Primers should be applied in conditions between 4°C–30°C, with relative humidity of 30%–95%. **Awlwood MA Primers** cure by the mechanism of moisture in the air (humidity), therefore very low moisture content in the air will lead to longer cure times. Do not use this product in an air-conditioned environment. If **Awlwood MA Primers** is to be applied in an environment where it is suspected that low humidity will inhibit the cure of the primer, apply to a test area first.

General: Decant sufficient product for 30 minutes use into a roller tray or working pot. Seal the original container immediately to prevent moisture exposure.
Do not tip unused primer back into the can.

Awlwood MA Primer Clear
Apply by brush or roller until timber is saturated. Do not attempt to build a film. On very deep grained timbers, do not flood-coat the grain. This will need to be filled using successive coats of **Awlwood MA Clear Gloss**.

Awlwood MA Red & Yellow
There are two application methods that can be used for applying **Awlwood MA** colored Primers:

1. Apply with a rag or staining cloth as if rubbing a stain, ensuring the primer is applied until timber is saturated. Do not attempt to build a film. This method helps create less mess if brush splatter (on decks etc.) is an issue.
2. Apply using a brush or roller. Working in sections of approximately 1m wide, apply the primer until timber is saturated and remove excess material as you go. This helps prevent excess primer becoming non-removable. Do not attempt to build a film.

Wiping off excess primer right down to the timber surface is key to achieving a natural appearance. If excess primer becomes tacky, apply fresh primer up to 15 minutes after application to re-dissolve. This will make the primer workable for ~5 minutes, depending upon application conditions. Wet edges must not dry for longer than 3 minutes before applying and overlapping the next section of primer.

AWLWOOD MA – EXTERIOR CLEAR ACRYLIC URETHANE SYSTEM J3809/J9809/J7809 continued...

TIPS:

1. Primer Bleed:
Hardwoods with a deep capillary structure may "bleed" Primer as it cures leaving a spotted or bubbled effect. The clear primer can be tipped with a brush if wet, however the colored primers should be wiped with a rag prior to the primer curing. If necessary, the rag can be moistened with **Awlwood MA** Brushing or Spray Reducer. If using the colored primer in direct sunlight, this effect may be more pronounced. If possible try to apply indoors, in overcast conditions or early in the day.

2. Even Coloration:
On extremely absorbent timbers (such as Spruce), using colored primers can give a mottled appearance. In this situation, using **Awlwood Clear Primer** and adding no more than 10% colored primer to the **Awlwood MA Clear Gloss** topcoat will give a more even coloration.

3. Mixing Colored Primers:
Awlwood MA Primers are all intermixable. On soft absorbent timbers (such as Cedar), the colored primer tint strengths can give an overly dark appearance. Here the colored primers are generally mixed 50/50 by volume with the clear primer to reduce the tint strength.

4. Darker Timber Tone:
Apply multiple coats of **Awlwood MA Gloss** with no more than 10% colored primer added.

5. Topcoating at a later time:
Apply one or two coats of **Awlwood MA Clear Gloss** over primed timber if the job sequence is to be broken. Sand well before continuing. For chemical adhesion the ideal time to apply the first coat of **Awlwood MA Clear Gloss** over the primer is 24 hours.

WARNING:

Awlwood MA Primers are not suitable for use in temperatures less than 4°C or in very low humidity atmospheres. **DO NOT** add **Awlwood MA Brush Cleaner**, universal or alcohol-based thinners or reducers to **Awlwood MA** Primers.

AWLWOOD MA – EXTERIOR CLEAR ACRYLIC URETHANE SYSTEM CLEAR GLOSS J3890

Features & Uses

Awlwood MA is an exterior clear system made up of a Primer and Clear Finish Gloss. The synergistic effect of combining the Primer and Clear together results in an outstanding performing system that adheres and bonds directly to the wood cellular structure giving extended performance and retaining the same gloss, DOI and natural appearance as first application.

Awlwood MA Clear Gloss features an inherently non-yellowing polymer further stabilized with high performance UV absorbers. When combined with Awlwood MA Primers, it gives outstanding performance extending re-coat cycle times. The elastomeric nature of the cured film results in excellent toughness and abrasion resistance giving amazing in-service performance.

For exterior, above waterline use only.

Specification Data

Type: Low VOC Acrylic Urethane
Color: Clear (J3890)
Packaging: Gallons and Quarts.
Theoretical Coverage: 12m²/lt or 490ft²/gl at 1.5mils (36 microns) Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.
Recommended Wet Film Thickness: 3.0 mils (80 microns) per coat by brush, roller or spray application.
Recommended Dry Film Thickness: 1.5 mils (36 microns) per coat by brush, roller or spray application.
NOTE: When applying **Awlwood MA Clear Gloss**, a specific volume is applied, rather than applying by wet film thickness.

Anticipated Cure Time at 77°F/50% R.H: 2 hours touch dry; 24 hours hard dry
Recommended Coats: 8
Recoatability: 2 hours minimum and 24 hours maximum (without sanding and if not exposed to direct sunlight) using **Awlwood MA Clear Gloss**.
Sanding at 77°F/25°C: 4 hours. Use P220-280 grit sandpaper for build coats and up to P600 grit for the final coat.

VOC 487g/lt or 4.06lb/gl

Product Components, Reducers, Additives, and Auxiliary Components

Awlwood Clear Gloss J3890
Awlwood Clear Primer J3909
Awlwood Yellow Primer J9809
Awlwood Red Primer J7809
Awlwood Brushing Reducer T0201
Awlwood Spray Reducer T0202
Awlwood Brush Cleaner T0200

AWLWOOD MA – EXTERIOR CLEAR ACRYLIC URETHANE SYSTEM CLEAR GLOSS J3890 continued...

Application Equipment
Brush, roller and spray application. *See pages 8–14*.

Equipment Type	Air Atomized Spray Gravity Feed Conventional
Fluid Tip	1.4*–2.0**

* Recommended to thin up to 10% if using a smaller fluid tip

** Recommended NO thinning if using a larger fluid tip.

NOTE: Heavier coats are recommended when spraying as product will flow out and "pull" flat upon curing.

Surface Preparation

NOTE: Preparation techniques and results will vary according to individual conditions, equipment age and other factors. Testing on a non-critical area should be carried out prior to full-scale preparation.

Primer should be sufficiently cured that it sands easily. If a greasy timber has been primed or a contaminated substrate is suspected, solvent wipe with Acetone on a rag before applying the topcoat. Contaminants from the substrate that float to the surface of the primer can compromise intercoat adhesion.

Applying over Awlwood MA Clear Primer (J3809):
Lightly hand or machine sand using P280-320 grit paper, taking care to avoid sanding through the primer. If this does occur, spot prime the area and sand carefully when primer has cured. Ensure glossy areas are well sanded.
Applying over Awlwood MA Red or Yellow Primer (J7809 or J9809):
Hand sand lightly with the timber grain using P400 grit paper or ScotchPad#7447. Take care to avoid sanding through the primer (this causes uneven coloration).
Applying over Epoxy Primer or Fiberglass/Carbon Fiber:
Machine or hand sand to remove defects. Ensure that no Epoxy blush is present. Test in a small non-visible area if unsure.
Topcoating at a later time:
Apply one or two coats of Awlwood MA Clear Gloss over primed timber if the job sequence is to be broken. Sand well before continuing. For chemical adhesion the ideal time to apply the first coat of **Awlwood MA Clear Gloss** over the primer is 24 hours.

NOTE: If the **Awlwood MA Clear Primer** feels sticky to the touch or cannot be sanded in temperatures less than 4°C or in very low humidity atmospheres, allow more time for curing before proceeding.

AWLWOOD MA – EXTERIOR CLEAR ACRYLIC URETHANE SYSTEM CLEAR GLOSS J3890 continued...

Mixing and Reduction
Brush: Not normally required when brushing. If necessary, up to 10% by volume with T0201 Brushing Reducer.
Spray: Up to 10% volume with T0202 Spray Reducer

Application Instructions

General: Ideally aim to apply the first coat of **Awlwood MA Clear Gloss** within 24 hours of primer application to attain an optimum chemical bond. **Awlwood MA Clear Gloss** should be applied in conditions between 4°C–30°C, with relative humidity of 30%–95%. **Awlwood MA Clear Gloss** cures by the mechanism of moisture in the air (humidity), therefore very low moisture content in the air will lead to longer cure times. Do not use this product in an air-conditioned environment.

General: Decant sufficient product for 30 minutes use into a roller tray or working pot. Seal the original container immediately to prevent moisture exposure. A deep working pot is best to minimize moisture exposure and maximize pot life.
Do not tip unused gloss back into the can.

Brushing/Rolling
Aim to apply approximately 12m²/lt (490ft²/gl) on horizontal surfaces and 14m²/lt on verticals. **Awlwood MA Clear Gloss** can be applied at a greater rate than standard varnish. Aim to minimize wet edge times and do not overwork the surface. The product will defoam and level well but tacks up relatively quickly.

To obtain full grain fill, especially on Hardwoods with a deep grain structure, and to maximize finish, follow the below recommendations:

Apply the first two coats of **Awlwood MA Gloss** at one day intervals, preferably by brush or roller at 12–14m²/lt to ensure full grain penetration and fill. Sand each coat with P220–P280 grit paper to flatten the grain texture without sanding through to the primer. This will fill the grain more effectively, reduces solvent entrapment in the pits of the grain and minimizes air bubbles forming in the topcoat before the grain is fully sealed. If any bubbles do occur from wet product displacing air in the timber grain, gently tipping these with a dry brush before the product cures is easier than sanding later and will, in many cases, seal the pinhole.

Apply the remaining coats as per the Multicoating section below.
For the final coat, refer to the Final Coat Application section below.

Spraying
If necessary, when applying **Awlwood MA Clear Gloss** by air atomized spray gun, gloss may need to be reduced up to 10% with **Awlwood MA Spray Reducer (T0202)**. Alternatively, safely warm the can – do not use universal thinners.

AWLWOOD MA – EXTERIOR CLEAR ACRYLIC URETHANE SYSTEM CLEAR GLOSS J3890 continued...

To obtain full grain fill, especially on Hardwoods with a deep grain structure, and to maximize finish, follow the below recommendations:

Apply the first two coats of **Awlwood MA Gloss** at one day intervals, preferably by brush or roller at 12–14m²/lt to ensure full grain penetration and fill. If these initial coats are sprayed they may not flow in and fill the grain since there are no shear forces to force product into the grain. Spray application of these first two coats can also result in air bubbles breaking and forming near invisible pin holes which may show up as cissing on the next application of finish coat.

Sand each coat with P220–P280 grit paper to flatten the grain texture without sanding through to the primer. This will fill the grain more effectively, reduces solvent entrapment in the pits of the grain and minimizes air bubbles forming in the topcoat before the grain is fully sealed. If any bubbles do occur from wet product displacing air in the timber grain, gently tipping these with a dry brush before the product cures is easier than sanding later and will, in many cases, seal the pinhole.

Apply the remaining coats as per the Multicoating section below.
For the final coat refer to the Final Coat Application section below.

Do not rapidly apply **HEAVY** coats to give film build up quickly as solvents will remain trapped in the coating, inhibiting performance. Allow each coat to become touch dry before applying the subsequent coat.

WARNING:
Do not leave **Awlwood MA Clear Gloss** in spray pots between coating applications.

Coloring Topcoats

For a richer, more traditional appearance, up to 10% of the **Awlwood MA** colored Primers can be added to **Awlwood MA Clear Gloss**. This should be done in the first few coats then overcoated with clear topcoat to attain the full coating thickness.

Film Build

For a richer, more traditional appearance, up to 10% of the **Awlwood MA** colored Primers can be added to **Awlwood MA Clear Gloss**. This should be done in the first few coats then overcoated with clear topcoat to attain the full coating thickness.

On hardwoods, the first couple of coats can develop bubbles from air being pushed out of the grain. Once the timber is completely sealed off this will stop. This effect is significantly exacerbated in full sun conditions and when the substrate is warming. Try to apply these first two coats in shaded conditions or early in the day.

WARNING:
In full sun, the timber substrate can easily reach 140°F (60°C) which can cause the **Awlwood MA Gloss** to cure in as little as 10 minutes. If numerous tiny bubbles appear in the surface in these conditions, sand them out and try to apply the coating either at the end of the day, in the shade or in overcast conditions.

AWLWOOD MA – EXTERIOR CLEAR ACRYLIC URETHANE SYSTEM CLEAR GLOSS J3890 continued...

Between Coats

Sanding is generally **not necessary** if overcoating on the same day unless extreme drying conditions are present (full sun or high temperatures) in which case rubbing down with P280 grit paper or Scotchpad#7447 will ensure good intercoat adhesion. For general indoor applications, sanding is needed if more than 24 hours elapse between coats.

At the start of each day, sand lightly to remove defects using P220–280 grit paper only if necessary. Take care to not over-sand edges. Machine sanders can be used on build coats after an overnight cure. Before the final coat, hand sanding through to P600 grit paper working with the grain will give best results. Horizontal applications will require far less sanding than vertical.

After sanding, remove sanding dust by vacuuming then warm water wash only using lint free cloths until surface is completely clean. Tack cloths are not recommended. If contamination is suspected solvent wash the surface using only **Awlwood MA Brush Reducer** or **Awlwood MA Spray Reducer** before and after sanding well.

Multicoating

Apply **Awlwood MA Clear Gloss** within recommended overcoating intervals. Multiple coats may be applied in one day provided the previous coat is sufficiently cured. As a general indicator, when one coat can be pressed with a finger without leaving an indented fingerprint, another coat can be applied without sanding being required. If the brush or roller binds with, or re-dissolves the previous coat, more drying time is needed. Alternatively if the cured film can be gently sanded with P220 grit paper without binding it can be overcoated. Applying multiple coats in a single day will reduce flow and levelling necessitating more sanding the following day however, multicoating is a useful means of attaining rapid film build.

If multicoating, lightly scuffing between coats with ScotchPad#7447 will dull the surface making it easier for the applicator to avoid misses.

Good practice is to gently sand/scuff the surface at the start of each day to remove any texture, especially on vertical surfaces, and then multi-coat as above.

Final Coat Application

For maximum effect, 8 coats of **Awlwood MA Clear Gloss** should be applied. The final coat should be applied in a single application after fine sanding: any remaining texture will be visible in the finish coat.

If brushing or rolling, better flow levelling will be attained on a well cured substrate. For best results, the final coat should be applied in optimal conditions: out of direct sunlight and in minimal wind. Early in the day is best. Reduce the final coat of **Awlwood MA** 10% by volume. Apply the final coat removing any heavy sags or runs but do not overwork the product. Once a non-running film is achieved, allow **Awlwood MA** to cure and flow on its own – **DO NOT CONTINUE TO BRUSH** to remove brush marks etc. **Awlwood MA** is designed to flow and level without the need for over-working the product.

AWLWOOD MA – EXTERIOR CLEAR ACRYLIC URETHANE SYSTEM CLEAR GLOSS J3890 continued...

If spraying, meticulous care must be taken to ensure a dust and contaminant free environment. If not being applied in a booth, best practice is tenting the area being coated and forcing filtered air in. As a minimum, the area should be completely closed up, vacuumed and thoroughly washed, then washed again the day of application. Reduce the final coat of **Awlwood MA** 10% by volume. Apply a mist coat then follow up with a coat applied with a cross spray pattern or alternatively, cross spray a single coat without the initial mist coat.

When removing masking tape, score the film along the masking line with a blade taking care to avoid cutting right through the film. Remove tape by folding it over 180 degrees to minimize stress on the film.

TIPS:

1. In hot and/or windy conditions, **Awlwood MA Gloss** will tack up rapidly when applying with brush or roller. To extend the wet edge and increase workability in these conditions thinning up to 10% with **Awlwood MA Brush Reducer** will assist.
2. If brushes are binding up with curing product during use, they can be quickly freed up by washing with Acetone, **Awlwood MA Brushing Retarder** or **Awlwood MA Spray Reducer**.

WARNING:

Awlwood MA Clear Gloss is not suitable for use in temperatures less than 4°C or in very low humidity atmospheres. Do not apply when condensation may form on uncured coating. DO NOT add any universal or alcohol-based thinners or reducers to **Awlwood MA Clear Gloss**.

Some sunscreens contain 'nano grades' of Titanium Dioxide or Zinc Oxide which when transferred from hands onto varnished exterior surfaces will accelerate UV degradation of the surface significantly.

REDUCERS
(Topcoat/Special Purpose/Primer)

General Information
All of the listed reducers for **Awlgrip**, **Awlcraft 2000** and **Awlcraft SE** Topcoats can be blended with each other in any ratio to fine tune flow and evaporation rates. Most **Awlgrip**, **Awlcraft 2000** and **Awlcraft SE** Topcoats recommend up to 25% reduction. The reduction percentage is calculated from the combined total of the base component and converter component. Mixing a quart of base and a quart of converter yields 2 quarts of mixed base and converter: 25% would be ½ quart of reducer. **Note: Awlcraft SE** is recommended up to 30% reduction.

Examples of total mix quantities for 1:1 and 2:1 base to converter ratios are as follows:

1:1 Mix Products	
Reduction	25%
Color Base	12 oz.
Converter	12 oz.
Reducer	6 oz.
Total Mix	30 oz.

2:1 Mix Products	
Reduction	25%
Color Base	12 oz.
Converter	6 oz.
Reducer	4.5 oz.
Total Mix	22.5 oz.

At higher temperatures reducers evaporate faster. When painting in hot conditions increasing the amount of reducer in the mix by 5–10% will help compensate for this factor.

TOPCOAT Reducers

T0001- Fast Evaporating Reducer for Spray Applied Urethane Topcoats
Use T0001 in **Awlgrip**, **Awlcraft 2000** and **Awlcraft SE** Topcoats when application and cure temperatures are 60–75°F (16–24°C). At 60–75°F (16–24°C), T0001 will keep the paint film open for good flow but evaporate fast enough to provide adequate dry and dust-free times.

VOC 888 g/lt or 7.4 lbs/gallon

T0002 - Fast Evaporating Reducer and Equipment Cleaner
Use T0002 in **Awlgrip**, **Awlcraft 2000** and **Awlcraft SE** Topcoats when application and cure temperatures are 55–70°F (13–21°C). At 55–70°F (13–21°C), T0002 will keep the paint film open but evaporate fast enough to provide adequate dry and dust-free times. T0002 is also an excellent gun and equipment cleaner. T0002 can also be used in conjunction with T0005 at higher temperatures (> 90°F/32°C) to combat solvent popping. Use T0002 as the reducer for topcoats flattened with **G3013 Flattening Agent and G2002 Awlgrip Flat Black** for best finish development.

VOC 806 g/lt or 6.7 lbs/gallon

REDUCERS
(Topcoat/Special Purpose/Primer) continued...

T0003 - Standard Reducer for Spray Applied Urethane Topcoats
Use T0003 in **Awlgrip**, **Awlcraft 2000** and **Awlcraft SE** Topcoats when application and cure temperatures are between 70–90˚F (21–32˚C). T0003 will keep the paint film open but evaporate fast enough to provide adequate dry and dust–free times.

VOC 930 g/lt or 7.8 lbs/gallon

T0005 - Hot Weather Reducer for Urethane Topcoats
Use T0005 in **Awlgrip**, **Awlcraft 2000** and **Awlcraft SE** Topcoats when application and cure temperatures are 90–105°F (32–41°C). T0005 is most often used as an additive, blended with other spray reducers to improve flow. T0005 is seldom the sole reducer. At lower temperatures (below 90˚F/32˚C) T0005 can be blended at any ratio with other Awlgrip topcoat reducers to improve flow with those products or increase the evaporation rate of T0005. T0005 has a very slow evaporation rate; using T0005 at temperatures below 75˚F (24˚C) may result in very long dry and tape times.

975 g/lt or 8.1 lbs/gallon

WARNING:
Large amounts of T0005 in flat or semi-gloss products may result in higher gloss levels. Use care when adding T0005 to these products.

T0031 - Brushing Reducer for Epoxy Primers and Urethane Topcoats
Use T0031 in **Awlgrip** Topcoats, **545 Epoxy Primer**, and **Awlquik** Sanding Surfacer in brush/roller applications. T0031 evaporates very slowly, keeping the paint film open, maximizing flow and levelling while minimizing brush marks and roller stipple. For **Awlgrip** Topcoats, add T0031 at 10–33% of the total volume of the mixed color base and converter. Application and cure temperatures between 60–90˚F (16–32˚C) produce the best results, with 70–85˚F (21–29˚C) being the optimum. T0031 is not recommended for use in spray applications. If a 'retarder' reducer is needed for spray application, T0005 should be used.

940 g/lt or 7.8 lbs/gallon

REDUCERS
(Topcoat/Special Purpose/Primer) continued...

VOC EXEMPT Reducers (NA Only)

T0167 - Standard Reducer for Acrylic Urethane Topcoats
Use T0167 in **Awlgrip** and **Awlcraft 2000** Topcoats when application and cure temperatures are 60–75°F (16–24°C). At 60–75°F (16–24°C), T0167 will keep the paint film open for good flow but evaporate fast enough to provide adequate dry and dust-free times.

VOC 0 g/lt or 0.0 lbs/gallon

T0163 - Fast Evaporating Reducer for Acrylic Urethane Topcoats and Equipment Cleaner
Use T0163 in **Awlgrip** and **Awlcraft 2000** Topcoats when application and cure temperatures are 55–70°F (13–21°C). At 55–70°F (13–21°C), T0163 will keep the paint film open but evaporate fast enough to provide adequate dry and dust-free times. T0163 is also an excellent gun and equipment cleaner. Use T0163 as the reducer for topcoats flattened with **G3013 Flattening Agent and G2002 Awlgrip Flat Black** for best finish development.

VOC 0 g/lt or 0.0 lbs/gallon

T0168 - Hot Weather Reducer for Acrylic Urethane Topcoats
Use T0168 in **Awlgrip** and **Awlcraft 2000** Topcoats when application and cure temperatures are between 70–90°F (21–32°C). At 70–90°F (21–32°C), T0168 will keep the paint film open but evaporate fast enough to provide adequate dry and dust-free times.

VOC 0 g/lt or 0.0 lbs/gallon

WARNING:
VOC Exempt Reducers are not suitable for use on **Awlcraft 2000** SE Topcoats.

REDUCERS
(Topcoat/Special Purpose/Primer) continued...

SPECIAL PURPOSE Reducers

A0001 - Spray Activator/Reducer for Awlbrite J3005/J3630
Use between temperatures of 70–85°F (21–29°C). A0001 should not be used in any epoxy primers or **Awlgrip**/**Awlcraft 2000** Topcoats.

A0006 - Spray Activator/Reducer for Awlbrite J3005/J3630
Use between temperatures of 60–80°F (16–27°C). A0006 should not be used in any epoxy primers or **Awlgrip**/**Awlcraft 2000** Topcoats.

A0031 - Brushing Activator/Reducer for Awlbrite Clear J3005/J3006. A special blend of solvents and additives which is a required part of the **Awlbrite Clear** mix. A0031 contains additives which stabilize the pot life of the mixture and initiate cure of the product.

863 g/lt or 7.2 lbs/gallon

T0016 - Brushing Reducer for Awlspar Varnish
T0016 is specially formulated as a brushing reducer for use in **Awlspar** varnishes. It should not be used in any urethane or epoxy coating.

782 g/lt or 6.5 lbs/gallon

T0101 - Awlstar Gold Label Antifouling
T0101 is specially formulated for spray and brush/roll applications of **Awlstar Gold Label** Antifouling. It should not be used in urethane or epoxy coatings.

867 g/lt or 7.2 lbs/gallon

T0180 - Spray Reducer for Awlspar Varnish
T0180 is specially formulated as a spray reducer for **Awlspar** varnish. It should not be used in any urethane or epoxy coating.

739 g/lt or 6.17 lbs/gallon

REDUCERS
(Topcoat/Special Purpose/Primer) continued...

PRIMER Reducers

T0001
Usually used in **Awlgrip**, **Awlcraft 2000** and **Awlcraft SE** Topcoats. T0001 is also recommended for use in **Quik-Grip** Primer and **Awlbrite Quik-Fil Clear**.

888 g/lt or 7.4 lbs/gallon

T0003
Usually used in spray applications of **Awlgrip**, **Awlcraft 2000** and **Awlcraft SE** Topcoats. T0003 is also recommended for use in **Quik-Grip** Primer and **Awlbrite Quik-Fil Clear**.

930 g/lt or 7.8 lbs/gallon

T0006
Standard epoxy reducer for spray application of **545 Epoxy Primer**, **Awlquik**, **Sprayable Fairing Compound**, **Max Cor CF**, **High Build** and **Ultra Build** Epoxy Primers. Also recommended for **Hullgard Extra Epoxy Primer**.

850 g/lt or 7.1 lbs/gallon

T0031
Brushing reducer to be used when brushing or rollering **545 Epoxy Primer** or **Awlquik** Primer.

940 g/lt or 7.8 lbs/gallon

T0073
Special reducer for **Ultra Build** (D8008/D3018).

836 g/lt or 7.0 lbs/gallon

T0176
A medium evaporating VOC exempt reducer (NA only) for **High Build**.

0 g/lt or 0 lbs/gallon

REDUCERS
(Topcoat/Special Purpose/Primer) continued...

VOC EXEMPT Reducers (NA Only)

T0167
Standard reducer usually used in **Awlgrip** and **Awlcraft 2000** Topcoats. T0167 is also recommended for use in **Quik-Grip** Primer and **Awlbrite Quik-Fil Clear**.

VOC 0 g/lt or 0.0 lbs/gallon

T0163
Fast Evaporating reducer usually used in **Awlgrip** and **Awlcraft 2000** Topcoats. T0163 is also recommended for use in **Quik-Grip** Primer and **Awlbrite Quik-Fil Clear**.

VOC 0 g/lt or 0.0 lbs/gallon

T0168
Hot Weather reducer usually used in **Awlgrip** and **Awlcraft 2000** Topcoats. T0168 is also recommended for use in **Quik-Grip** Primer and **Awlbrite Quik-Fil Clear**.

VOC 0 g/lt or 0.0 lbs/gallon

GRIPTEX FINE / COARSE / EXTRA COARSE NON SKID ADDITIVE 73012/73013/73237

Features & Uses
Griptex Non-Skid is a polymer bead aggregate used to provide non–skid deck and step areas when mixed with any Awlgrip topcoat.

Specification Data
Type: Polymer Bead.
Color: Translucent.
Packaging: 1 Quart – approx. 1 pound (0.44 kg), 1 Gallon – approx. 4 pounds (1.8 kg).
Bead Size: Fine: 130µm
Coarse: 300µm
Extra Coarse: 240–350µm

VOC 0 g/lt or 0 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

Griptex Non-Skid Particles – Fine 73012
Griptex Non-Skid Particles – Coarse 73013
Griptex Non-Skid Particles – Extra Coarse 73237

Application Equipment
Use air atomized spray equipment recommended for **Awlgrip** or **Awlcraft 2000** Topcoats. Fluid tip must be at least .070". Do not use airless or air-assisted airless spray equipment.

Surface Preparation
This product is an additive component. See instructions for the primary product.

Mixing & Reduction
For spray application, add 8–10 oz. (227–284 grams) by weight of **Griptex** Non-Skid Particles to each gallon (3.785 lt) of mixed color base and converter.

Application Instructions
Griptex Non-Skid Particles may be added to mixed topcoats and applied by spray. The dry particles can also be broadcast or sprinkled into a tacky paint film.

WARNING:
Do not apply paint materials to surfaces warmer than 105˚F (41˚C) or colder than 55˚F (13˚C). Do not attempt to cure products at temperatures below 55˚F (13˚C).

GRIPTEX FINE / COARSE / EXTRA COARSE NON SKID ADDITIVE 73012/73013/73237

continued...

CAUTIONS:

1. Previously painted surfaces must be tested for compatibility before applying Awlgrip Products.
2. Gelcoat non–skid areas need to be thoroughly cleaned and abraded. Use Scotch-Brite®, water, abrasive cleaners, and stiff brushes to ensure proper cleaning.
3. For final removal of abrasive residues and sanding dirt, wrap a stiff bristle brush in a clean cotton cloth. Scrub the sanded surface with the cloth wrapped brush. The bristles of the brush force the cloth into the grooves and valleys of the old non–skid, removing contaminants from the surface. Change the cloths frequently. Flush the surface with fresh water, allow to dry, then wipe with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep T0008**, **Awlprep 400 T0170** or **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**).

TIP:

Even on small jobs, long–term performance is improved if surfaces are primed before an **Awlgrip** or **Awlcraft 2000** Topcoat is applied.

Application Instructions of Awlgrip or Awlcraft 2000 Topcoat with Griptex Non-Skid Particles – Broadcast Method:

The easiest way for beginners to obtain a non–skid finish is to use the Broadcast/Shaker Method. **Griptex** Non-Skid is added to a still tacky application of **Awlgrip**/**Awlcraft 2000** Topcoat.

1. Clean the primed and sanded surface with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) using the Two Cloth Method.
2. Mask the perimeter of the non-skid areas. 3M #218 Fine Line Tape can be used in all areas except those with tight curves. Use 3M #471 Blue Vinyl Plastic Tape for sections with tight curves.
3. Apply a light, smooth coat of **Awlgrip** or **Awlcraft 2000** Topcoat by spray, brush or roller. Allow the topcoat to flash off 10–20 minutes until the surface is slightly dry but still sticky.
4. Using a flour sifter, powdered sugar shaker, or the punctured container itself, sprinkle the **Griptex** Non-Skid into the paint film. To use the **Griptex** container, first punch holes in the lid with a nail or ice pick. Overlap the broadcasting stroke to provide a uniform pattern. Allow to dry 12–16 hours.
5. Vacuum or blow off loose excess **Griptex** Non-Skid Particles. Repeat Steps 3 and 4 on any areas that need additional non-skid particles.
6. Apply 1 or 2 sealer coats of **Awlgrip** or **Awlcraft 2000** Topcoat over the entire non-skid surface. This coat encapsulates the **Griptex** Non-Skid Particles in the paint, maximizing durability.

GRIPTEX FINE / COARSE / EXTRA COARSE NON SKID ADDITIVE 73012/73013/73237

continued...

Application Instructions of Awlgrip or Awlcraft 2000 Topcoat with Griptex Non-Skid Particles– Spray Method:

Use a siphon gun or a pressure pot with an agitator. A .070" fluid tip is required. Surround non-skid areas with 36 inches (.914 meters) of masking paper. Also, protect other areas from overspray. Each spray pass must begin and end on the masking paper.

TIP:

Place a couple of 1–1½ inch steel ball bearings in the bottom of the pressure pot and swirl pot after each pass, if internal agitation is not available.

WARNING:

1. Do not stop spraying until you reach the masking paper on the opposite side. Each spray pass must begin and end on the masking paper. Large areas may require walking on the surface.
2. **Griptex** Particles can be trapped in the fluid tip when the gun is shut off, causing the gun to spit and drip. Keep a rag handy to wipe the gun tip after each pass.
3. Never use **Griptex** Particles in an airless spray gun or an air assist airless spray gun.

Mastering the spray application of non-skid finishes can be a very time consuming process.

Applicators that do not apply non–skid materials on a regular basis will find the Broadcast Method much easier to master.

1. Clean the primed and sanded surface with **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep Plus T0115**; EU: **Surface Cleaner T0340**) using the Two Cloth Method.
2. Mask the perimeter of the non-skid areas. 3M #218 Fine Line Tape can be used in all areas except those with tight curves. Use 3M #417 Blue Vinyl Plastic Tape for those areas.
3. Surround all non–skid areas with 3 feet (.914 meters) of masking paper.
4. Mix **Awlgrip** Color Base with **Awlcat #2** and the appropriate reducer. Overall mix for this coat should be 1:1:1 by volume. Add 8–10 oz. (227–284 grams) by weight of **Griptex** Non-Skid Particles for each mixed gallon of **Awlgrip** or **Awlcraft 2000** Topcoat.
5. Apply by triggering the gun over the masking paper and spraying across the non-skid area in one continuous pass. The spray gun should be held well off the surface. Spraying from waist high while walking is ideal. The paint will fall to the surface as a light, dry coat. If using a siphon gun, shake the gun and cup at the end of each pass to keep the **Griptex** mixed in the paint. Allow the coat to thoroughly tack.
6. Apply a coat of **Awlgrip** or **Awlcraft 2000** Topcoat to seal the surface.

PRO-CURE ACCELERATOR X-98: 73014 or X-138: 73015

Features & Uses

Pro-Cure Accelerators may be used to decrease dry and cure times in **Awlgrip** and **Awlcraft 2000** Topcoats. Do not use in primers, metallics topcoats or **Awlbrite** products.

Specification Data

Type: Accelerator additive.
Packaging: 2 ounce bottles/12 per case

VOC
73014 – 888 g/lt or 7.4 lbs/gallon
73015 – 951 g/lt or 7.9 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

Pro-Cure X-98 and **Pro-Cure X-138** are additives used in **Awlgrip** and **Awlcraft 2000** Topcoats.

Application Equipment

This product is an additive component. See instructions for the primary product application.

Surface Preparation

This product is an additive component. See instructions for the primary product application.

Mixing & Reduction

Pro-Cure X-98 (73014) ½ liquid ounce per 2 gallons of mixed topcoat color base and converter before reduction. This is the maximum amount; lesser quantities may be sufficient. This is equivalent to 3 capfuls if measured using the screw top cap.

Pro-Cure X-138 (73015) 1 liquid ounce per 2 gallons of mixed topcoat color base and converter. This is the maximum amount; lesser quantities may be sufficient. This is equivalent to 6 capfuls if measured using the screw top cap (two US tablespoons).
Induction Time after Mixing: N/A

Application Instructions

Pro-Cure X-98 should only be used in spray applications.
Pro-Cure X-138 may be used in both spray and brush applications.
Recoatability: Awlgrip Topcoats with a full add of **Pro-Cure X-98** may be recoated or taped in 4–6 hours at 77°F (25°C), 50% R.H. Awlgrip Topcoats with a full add of **Pro-Cure X-138** may be recoated or taped in 6–8 hours at 75°F (23°C)/50% R.H.

Spray Application

Dry Time: The amount of time required before the applied coating can be masked and taped.
Application Life: The amount of time required for the initial application viscosity to double.

PRO-CURE ACCELERATOR X-98: 73014 or X-138: 73015 continued...

WARNING:
Accelerators are not recommended above 85°F(30°C). **Pro-Cure X-98** should not be used above 75°F (25°C). Do not exceed recommended accelerator levels as this could impair performance.

Temp °F	Temp °C	Reducer	Pro-Cure Accelerator	Dry Time	Application Life (hrs)
80	27	T0003	X–138	4–5	4–5
70	21	T0003	X–138/X–98	11–12/4–5	6–7/2–3
60	16	T0001	X–138/X–98	12+/6–7	6–7/3–4

Pro-Cure X-138: 1 liquid ounce per 2 gallons of catalyzed topcoat before adding reducer.
Pro-Cure X-98: ½ liquid ounce per 2 gallons of catalyzed topcoat before adding reducer.

** The chart is for Awlgrip Topcoats mixed for spray application. Results for Awlcraft 2000 will be similar. Awlgrip Topcoats mixed for brush/roll applications will have dry times of 10-20% longer. Application life will be the same to 10% shorter.*

WARNING:
Do not apply paint materials to surfaces warmer than 105°F (41°C) or colder than 55°F (13°C). Do not attempt to cure products at temperatures below 55°F (13°C).

FLATTENING AGENT: G3013 FOR AWLGRIP OR AWLCRAFT 2000 TOPCOATS

Features & Uses

Flattening agent reduces the gloss of **Awlgrip** and **Awlcraft 2000** Topcoats to a flat or semi–gloss finish.

Not recommended for application to large expances of surface as unequal gloss and appearance may result.

Specification Data

Type: Inert Extender.
G3013 is an additive used in urethane topcoats.
Packaging: Quarts and Gallons.

VOC

721 g/lt or 6 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

Flattening Agent G3013

This is an additive component, see instructions for the primary product

Application Equipment

This product is an additive component. See instructions for the primary product.

Surface Preparation

This product is an additive component. See instructions for the primary product.

Mixing & Reduction

Thoroughly agitate **G3013 Flattening Agent**. Thoroughly mix the color base and G3013 Flattening Agent. Then stir in the **Awlcat #2 Spray Converter** G3010. When one homogenous mixture is obtained add the T0002 Reducer and stir well. Strain mix with a 60–100 mesh cone strainer before applying.

WARNING:
Reduction with T0001 or T0003 may result in higher than anticipated gloss levels.

Awlgrip Topcoat: Mixture for Flat Finish
1 part by volume **Awlgrip** Color Base
1 part by volume **G3013** Flattening Agent
1 part by volume **Awlcat #2** Converter
1 part by volume **T0002** Reducer
Example: 8 oz. color base : 8 oz. G3013 : 8 oz. G3010 : 8 oz. T0002

Awlgrip Topcoat: Mixture for Semi–Gloss Finish
1 part by volume **Awlgrip** Color Base
½ part by volume **G3013** Flattening Agent
1 part by volume **Awlcat #2** Converter
1 part by volume **T0002** Reducer
Example: 8 oz. color base : 4 oz. G3013 : 8 oz. G3010 : 8 oz. T0002

FLATTENING AGENT: G3013 FOR AWLGRIP OR AWLCRAFT 2000 TOPCOATS
continued...

Awlcraft 2000 Topcoat: Mixture for Flat Finish
2 parts by volume **Awlcraft 2000** Color Base
2 parts by volume **G3013** Flattening Agent
1 part by volume **Awlcat** #2 Converter
1 part by volume **T0002** Reducer
Example: 8 oz. color base : 8 oz. G3013 : 4 oz. G3010 : 4 oz. T0002

Awlcraft 2000 Topcoat: Mixture for Semi-Gloss Finish
2 parts by volume **Awlcraft 2000** Color Base
1 part by volume **G3013** Flattening Agent
1 part by volume **Awlcat #2** Converter
1 part by volume **T0002** Reducer:
Example: 8 oz. color base : 4 oz. G3013 : 4 oz. G3010 : 4 oz. T0002

Application Instructions

Spray application is recommended when using G3013.

WARNING:
Do not apply paint materials to surfaces warmer than 105˚F (41˚C) or colder than 55˚F (13˚C). Do not attempt to cure products at temperatures below 55˚F (13˚C).

CRATER-X ANTI-CRATERING SOLUTION M1017

Features & Uses

Crater-X is an anti–cratering additive used to alter the surface tension of **Awlgrip** and **Awlcraft 2000** Topcoats to improve flow and levelling.

Specification Data

Type: Surface tension modifier.
M1017 is an additive used in urethane topcoats.
Packaging: Pint Cans.

VOC

829 g/lt or 6.9 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

Crater-X M1017

Application Equipment

This product is an additive component. See instructions for the primary product.

Surface Preparation

See instructions for the primary product.

Mixing & Reduction

Add ½ –1 liquid ounce (15–30ml) of **Crater-X** to one gallon of **Awlgrip** or **Awlcraft 2000** base component. Thoroughly mix material under mechanical agitation.

Important: Allow mixture to stand for 30 minutes; then add converter and reducer and apply in the standard fashion.

Crater-X can be added to topcoats when the base, converter, and reducer are already combined. However, **Crater-X** is most effective when **Crater-X** is added to the base component before the base and converter are combined. **Crater-X** must be added to every coat of topcoat during the application process once use has begun.

TIP:

Do not use **Crater-X** in primers

Application Instructions

This product is an additive component. See instructions for the primary product.

WARNING:

Do not apply paint materials to surfaces warmer than 105˚F (41˚C) or colder than 55˚F (13˚C). Do not attempt to cure products at temperatures below 55˚F (13˚C).

AWLCOAT TPC WP101

Features & Uses

Awlcoat TPC is a waterbased temporary protective coating to protect surfaces from damage and contamination, guarding against scuffing, abrasion and over-spray.

Specification Data

Type: Vinyl Acrylic.
Packaging: Available in 5 gallon containers.
Theoretical Coverage: Sq. ft/Gallon: 267–160 sq. ft/gl at 3–5 mils dry (4–7 m^2/lt at 75–125 microns dry). Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and environment.
Recommended Wet Film Thickness: 6–10 mils (150–250 microns) per coat.
Recommended Dry Film Thickness: 3–5 mils (75–125 microns) per coat. A minimum of 3 mils (75 microns) is recommended to ensure easy removal. To increase resilience to wear damage (abrasion, etc) a higher film build is recommended (5–10 mils/125–250 microns dry film thickness). This may require a two coat application.
Recoatability at 59˚F (15˚C):
Minimum (with itself): 30 mins (touch dry).
Max time: Indefinite.
Recoatability at 77˚F (25˚C):
Minimum (with itself): 20 mins (touch dry).
Max time: Indefinite.
NOTE: High Humidity will extend the dry time.
Peel time* (at 55–104˚F / 13–40˚C): 1 hour. **Awlcoat TPC** should not be left on the painted surface for more than 4 months.
*This is the minimum time required in which sufficient film strength has developed to facilitate the peeling process. Peel times beyond those quoted will allow further film strength development to take place and subsequently improve peeling efficiency.
Do not apply other Awlgrip products over Awlcoat TPC.
Do not apply Awlcoat TPC to unpainted gelcoat substrates.

VOC

Light Gray (WP101) – 55 g/lt / 0.46 lbs per gallon
Volume Solids: 50%

Product Components, Reducers, Additives, and Auxiliary Components

Light Gray WP101
Equipment Cleaning . . . . . .Water (when wet) or M.E.K.

Application Equipment

Conventional or airless spray. Brush application is suitable for small areas only. ***See pages 8–14***.

AWLCOAT TPC
WP101 continued...

Surface Preparation

Awlcoat TPC is suitable for application over **Awlgrip** and **Awlcraft 2000** Topcoats. It is important that the coating materials have undergone sufficient cure to ensure properties such as gloss and color are not affected by the application of **Awlcoat TPC**. The surface of Awlgrip or **Awlcraft 2000** should be clean, dry (cured) and free from contaminants. Use masking tape to protect adjoining surfaces from overspray and 'feather edges' that would be difficult to peel. Mask off areas such as deep joint seams, channels and granular non–skid surfaces that may create a mechanical keyway into which the coating will lock. **Awlcoat TPC** can wrap around sharp edges but due to limited film build on such edges this may prove more difficult to peel. Therefore, mask the sharp edges prior to application. Plastic masking tape (3M's Fine Line®) is recommended as this material doesn't react with the water content in the wet film.

Mixing & Reduction

Awlcoat TPC is a single component coating and should be mixed thoroughly prior to application. A power agitator will aid the mixing process.

WARNING:
Do not reduce **Awlcoat TPC**.

Application Instructions

Allow **Awlgrip** and **Awlcraft 2000** to cure for a minimum of two cure cycles, 96 hours at 77˚F (25˚C). Ensure the surface is clean from contaminants. The product is water-based and good air flow is therefore encouraged. Apply **Awlcoat TPC** to the recommended film thickness. For best result aim for a smooth, continuous film and avoid sags or other defects as in warmer climates this could result in a 'print through' effect on the finish. For additional protection a second coat can be applied after 20 minutes or when it is touch-dry.

Overspray will not peel off but can be removed with a damp cloth or wiped off using alcohol. You can recoat overspray to build film thickness then peel off.

Awlcoat TPC has a tendency to develop a level of 'sticking' when pressed against another surface or itself. This should be taken into consideration when stacking coated material. Placing heavy items on top of **Awlcoat TPC** could leave an imprint in substrate underneath. Masking tape should ideally be removed from edges when the product is still wet.

TIP:
Due to the wide variety of application methods, environments and expectations, customers should test the complete system for compatibility & suitability under their own conditions prior to full scale application. **Do not apply over polycarbonates, glass or wood.**

AWLCOAT TPC
WP101 continued...

Removal

Once dry, **Awlcoat TPC** can easily be removed by grasping the edge of the film and peeling it off the surface. Thicker areas will dry slower. If product is removed before it's completely dry the peel characteristics will be compromised.

On rare occasions **Awlcoat TPC** may leave a very light haze on the topcoat surface. Frequently this haze self-corrects over a 24 hour period or shorter, especially if exposed to sunlight. In other examples a wet cloth is needed to remove the effect.

Disposal: Once removed, **Awlcoat TPC** can be compacted by hand (using gloves) to reduce waste volume and the product should be disposed of in accordance with appropriate regional regulations.

WARNING:
Do not apply paint materials to surfaces less than 5˚F (3˚C) above dew point or to surfaces warmer than 105˚F (41˚C). **Awlcoat TPC** is water-based and should be kept from freezing. Due to the fast drying nature of **Awlcoat TPC**, keep container closed when not in use as it is prone to skinning. During application keep spray gun aircap clean with water and brush. It is good practice to filter Awlcoat with mesh (60) screen prior to application.

AWLCRAFT SE REPAIR PRODUCTS E3001, T0190, T0195

Features & Uses

Should the need arise to repair your **Awlcraft SE** coating system, from the smallest scratch through to a large scale repair, this product in conjunction with the **Awlcraft SE** repair Manual will take you through to a seamless repair (also see Repairing an **Awlcraft SE** Topcoat section in this guide).

Awlcraft SE repair products are all used as part of the **Awlcraft SE** repair system.

Specification Data

Type: Primer and Blending Reducers
Packaging: All products are available in Quart size packs.

VOC

Repair Primer (E3001) – 768.6 g/lt / 6.41 lbs per gallon
Blending Solution (T0190) – 825.1 g/lt / 6.89 lbs per gallon
Blending Solvent (T0195) – 841.7 g/lt / 7.02 lbs per gallon

Repair Primer (E3001)
Volume Solids: 10.37% (MS 13.31%)
Specific Gravity: 0.89
Blending Solution (T0190)
Volume Solids: 9.76% (MS 11.70%)
Specific Gravity: 0.93
Blending Solvent (T0195)
Volume Solids: 0.025% (MS 0.03%)
Specific Gravity: 0.84

Product Components, Reducers, Additives, and Auxiliary Components

Repair Primer OE3001
Blending Solution OT0190
Blending Solvent OT0195

Application Equipment

See **Awlcraft SE** Repair Manual for equipment advice (also see Repairing an **Awlcraft SE** Topcoat section in this guide).

Surface Preparation

The surface preparation advice provided, and equipment suggestions, can be used as a guide. Preparation techniques and results will vary according to individual conditions, equipment age and other factors. Testing on a non-critical area should be carried out prior to full-scale preparation. The surface preparation of the area to be repaired is described in the separate **Awlcraft SE** Repair Manual (also see Repairing an **Awlcraft SE** Topcoat section in this guide).

AWLCRAFT SE REPAIR PRODUCTS E3001, T0190, T0195 continued...

Mixing & Reduction

Mixing and reduction requirements will vary according to individual conditions, climate, equipment age and other factors. Mixing and application of a small sample before full scale application is recommended. The mixing and reduction instructions for the repair products are described in the separate **Awlcraft SE** Repair Manual (also see Repairing an **Awlcraft SE** Topcoat section in this guide).

Application Instructions

Application equipment and parameters are given as a guide. Actual equipment choices will vary according to application conditions, equipment age and other factors. Testing on a non-critical area should be carried out prior to full-scale application. Application parameters will vary according to individual conditions, climate, equipment age and other factors. Apply to a small non-critical area prior to full scale application. Contact local technical service representative for further advice if necessary. For use and application of the **Awlcraft SE** Repair Products please refer to the separate **Awlcraft SE** Repair Manual (also see Repairing an **Awlcraft SE** Topcoat section in this guide).

Recoatability and Drying Time

The data given for recoatability is not exhaustive. Actual recoatability can vary according to individual conditions, climate and surroundings. If unsure consult local technical service representative before proceeding. The recoatability information and recommended drying times for the repair products are described in the separate **Awlcraft SE** Repair Manual (also see Repairing an **Awlcraft SE** Topcoat section in this guide)

WARNING:

Do not use unless mixed thoroughly with the curing agent at specified ratio.

Do not use below 13°C/55°F or warmer than 40ºC/104°F. Proper application and/or cure results may be more difficult to achieve when conditions are outside this range.

Avoid conditions of low temperature with high humidity as this can result in the formation of a surface by-product that must be removed by either detergent wash followed by fresh water wash or by sanding.

Check with local authorities to determine VOC restrictions in your area.

Please ensure a risk assessment is carried out to assess the level of PPE required for the particular task undertaken when using this product.

AWLSTAR GOLD LABEL ANTIFOULING (EU ONLY) BP204, BP507, BP508, BP705 & BP809

Features & Uses

Awlstar Gold Label Antifouling is a self-polishing antifouling used to deter fouling growth, ensuring the ultimate underwater protection for both power and sailing yachts.

Specification Data

Type: Self Polishing Antifouling.
Packaging: Available in a 1 Gallon and 15lt containers
Theoretical Coverage at 1 mil (25 microns) Dry Film Thickness: 791 sq. ft /Gallon (19.72 m^2/lt). At recommended dry film thickness of 8 mils (200 microns): 99ft^2/gl or 2.4m^2/lt per coat.
By Spray: 197 sq. ft /Gallon (4.8m^2/lt).
By Brush/Roller: 407 Sq. ft /Gallon (10m^2/lt).
Coverage calculations are based on theoretical transfer efficiency of 100%. Actual coverage rate obtained will vary according to equipment choice, application techniques, part size, and application environment.
Recommended Wet Film Thickness:
4 mils (100 microns) by brush. 2–3 coats recommended.
8 mils (200 microns) by spray. 1–2 coats recommended.
Recommended Dry Film Thickness:
2 mils (51 microns) by brush / roller per coat.
4 mils (102 microns) by spray per coat.
Drying and launch times at 75°F (25°C), 50% R.H:
Recoatability: With itself; 6 hours minimum. No maximum recoat time. To Launch: 2 hours minimum, 24 hours preferred. 2 months maximum launch time. If maximum launch time is exceeded apply a new fresh coat of **Awlstar Gold Label.**
Drying and launch times at 55°F (13°C), 50% R.H:
Recoatability: With itself; 10 hours minimum. No maximum recoat time. To Launch: 5 hours minimum, 3 months maximum launch time. If maximum launch time is exceeded apply a new fresh coat of **Awlstar Gold Label.**

VOC

Average 450 g/lt or 3.76 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components

Charcoal Black BP204
Light Blue BP508
Deep Blue BP507
Red BP705
White Lightning BP809
Reducer T0101
Equipment Cleaning . . . . . .T0101 Reducer or M.E.K.

Application Equipment

Airless spray, Airmix, Brush, Roller. ***See pages 8–14***.

AWLSTAR GOLD LABEL ANTIFOULING (EU ONLY) BP204, BP507, BP508, BP705 & BP809 continued...

Surface Preparation

New Applications: Prime with **Hullgard Epoxy Primer (EU only)** D6070/D3707. Apply the first coat of **Awlstar Gold Label** according to recommended recoat times (***see page 58***). Existing Antifouling that is incompatible or unknown: Remove all incompatible or unknown antifouling and re-prime with **Hullgard** primers.
Renewing Awlstar: High pressure water wash as soon as the boat comes out of the water, allow to dry. Sanding (80 grit) / removal of old coating is not normally required but is advised under any of the following conditions:

- Any time the cleanliness of the surface is in doubt.
- Fast boats which have ablated to a very smooth surface.
- Sailboats which were recently burnished.
- The surface was not power washed immediately after hauling.

Mixing & Reduction

Check for settling then thoroughly mix until a consistent homogenous blend is obtained. Power mixers or shakers are preferred. If not available, thorough hand mixing is acceptable. Reduction is not normally recommended. However, if needed for spray equipment or brush/roller application, 10% or 12 oz. (400ml) per gallon with T0101 is a recommended maximum reduction.
Induction Time after Mixing: N/A.
Anticipated Pot Life at 75°F (25°C)/50% R.H.: N/A.

Application Instructions

Awlstar Gold Label can be applied by airless spray, brush, roller or airmix. For brush/roller, apply heavy coats of 4 mils (100 microns) WFT per coat, yielding 2 mils (51 microns) DFT per coat. For spray application, apply heavy coats of up to 8 mils (200 microns) WFT per coat, yielding 4 mils (102 microns) DFT. For maximum antifouling performance and protection apply a minimum of 2 coats of **Awlstar Gold Label** Antifouling by brush/roller. Optimum performance is achieved at a total dry film thickness of 4 mils (100 microns) minimum. To provide a built-in indicator of when it is time to renew your **Awlstar Gold Label** Antifouling, apply the first coat in a different color from the remaining coats. When you can see the first color showing through, it is time to renew. Extra protection and more uniform wear properties result when 1 or 2 extra coats of **Awlstar Gold Label** Antifouling are applied to high wear areas.

WARNING:

Important, **Awlstar Gold Label** Antifouling must not be used on aluminum. Do not apply paint materials to surfaces less than 3°C (5°F) above dewpoint or warmer than 35°C (95°F). Ambient temperature should be minimum 13°C (55°F) and maximum 35°C (95°F).

AWLWASH WASH DOWN CONCENTRATE 73234

Features & Uses
Awlwash is a wash down concentrate formulated to clean **Awlgrip**, and **Awlcraft 2000** Topcoats.

Specification Data
Type: Wash Down Concentrate.
Packaging: Quarts (.946 Liters) and Gallons (3.785 Liters), Quart (.946 Liters) is a refillable 'tip 'n' measure' container.
Theoretical Coverage: 1 oz. (30 ml) of **Awlwash** per Gallon of Water.

VOC
0 g/lt or 0 lbs/gallon

Keep container tightly closed and upright to prevent leakage. Keep from freezing

Product Components, Reducers, Additives, and Auxiliary Components
Awlwash 73234

Application Equipment
Use a soft, non–abrasive applicator.

Surface Preparation
Rinse surface thoroughly prior to washing.

Mixing & Reduction
One (1) ounce (30 ml) of **Awlwash** per each gallon (3.785 Liters) of water.

Application Instructions
Wash surface while still wet from initial rinsing, using a soft, non–abrasive applicator when washing the surface. Do not allow **Awlwash** to dry on the surface prior to rinsing. Wash small sections of large surfaces to insure the surface stays wet. Rinse thoroughly after washing. When finished, wipe surface with soft cotton towel or chamois to prevent water spots.
NOTE: If water spots are a problem, Awlgrip recommends the use of a water softener to reduce water spots. Water spots are caused by organic and inorganic impurities in the water. If water beads are allowed to air dry, the water evaporates and leaves a residue on the paint. If this residue is not removed it may gradually etch the paint. If water spots occur, they can be removed with **Awlcare Protective Polymer Sealer (73240)**.

Stubborn stains may require a higher concentration of **Awlwash**. High concentrations will require increased amounts of rinsing. Some stubborn stains may require **Awlwash** to be used at full strength.

TIP: For further information regarding the care and maintenance of **Awlgrip** products **please refer to awlgrip.com**.

AWLCARE PROTECTIVE POLYMER SEALER 73240

Features & Uses
Awlcare is a protective polymer sealer formulated to protect and remove mild stains from **Awlgrip** and **Awlcraft 2000** Topcoats.

Specification Data
Type: Protective Polymer Sealer.
Packaging: Pint (.473 Liters) and Half Gallon (1.872 Liters).
Theoretical Coverage: One pint (.473 Liters) will cover 450 sq. ft (42m^2) with one coat. Two coats are recommended for initial application.
Keep container tightly closed and upright to prevent leakage. Keep container closed when not in used. Keep from freezing.

VOC
230 g/lt or 1.92 lbs/gallon

Product Components, Reducers, Additives, and Auxiliary Components
Awlcare 73240

Application Equipment
Apply with a 100% cotton applicator or cloth. Do not apply **Awlcare** with mechanical devices, apply by hand only.

Surface Preparation
Wash surface with **Awlwash** Wash Down Concentrate (73234), rinse and wipe dry.

Mixing & Reduction
Shake **Awlcare** well before applying.

Application Instructions
Shake **Awlcare** well and apply with a 100% cotton applicator or cloth. **Awlcare** can be applied in sun or shade and can be applied to large areas before removing. Do not apply **Awlcare** with mechanical devices. Allow **Awlcare** to dry to a haze. Wipe off haze with a 100% clean, cotton cloth.

TIP:
Awlgrip recommends washing the surface once a week to prevent dirt build up. Use **Awlwash** Wash Down Concentrate (73234) to minimize removal of the **Awlcare** Protective Polymer Sealer. Multiple coats of **Awlcare** may be needed to protect water run-off areas.

TIP:
For further information regarding the care and maintenance of **Awlgrip** products **please refer to awlgrip.com**.

APPLICATION LOG

Date _____ Painter _____

Inspector _____

Ref Docs _____

Job No. _____

Specification Required: | **DET:** | **SP:**

		Substrate	Coat 1	Coat 2	Coat 3	Coat 4	Coat 5	Coat 6	Coat 7	Coat 8
CLIMATE DATA	Date/Time									
	Conditions									
	% RH									
	Air Temperature									
	Dew Point									
	Surface Temperature									
	Paint: YES/NO									
SURFACE PREPARATION	Date/Time									
	Cleanliness									
	Profile/Sanding									
PAINT APPLICATION	Date/Time									
	Product									
	Batch No. A									
	Batch No. B									
	Other Batch No.									
	Thinning %									
	Reducer									
	Volume Liters/Gallons									
	Induction Time									
	Recoat Time Min/Max									
	W.F.T									
COATING INSPECTION	Date/Time									
	Number									
	Min									
	Max									
	Average									
	Std Dev									
	Average									
	Pass/Fail/Repair									

PRODUCT CHECK LISTS

Topcoats

Awlgrip Polyester Urethane Topcoat (See color card)
Awlgrip Clear Topcoat Base (G3005)
Awlcraft 2000 Acrylic Urethane Topcoat (See color card)
Awlcraft 2000 Clear Topcoat Base (F3029)
Awlcraft SE Two Component Special Effect Basecoat
Awlcat #2 Standard Topcoat Converter for Spray Application (G3010)
Awlcat #3 Brushing Topcoat Converter (H3002)
Awlcat #4 VOC Exempt Topcoat Converter (G3038)

Primers & Sealers

545 Epoxy Primer
Gray Base D1001
White Base D8001
Clear Base D3020
Converter D3001

321 HS Undercoat
White Base R8100
Gray Base R1100
Converter R3100

Awlquik Sanding Surfacer
Pale Yellow Base D8003
Converter D9001

Quik-Grip Fast Dry Non–Sanding Primer
Gray Base D8016
Converter D3040

High Build Epoxy Primer
Off-White Base D8002
Yellow Base D9002
Converter D3002

Ultra Build Epoxy Primer
White Base D8008
Converter D3018

Hullgard Epoxy Primer (EU Only)
Base D6070
Converter D3707

Hullgard Extra Epoxy Primer
Base D6120
Converter D3730

Corrosion Inhibiting Surface Treatment

Max Cor CF
Base R4330
Converter R3330
Aerosol S4010

Corrosion Inhibiting Surface Treatment

Wash Primer Cor CF
Base D6600
Converter D3300

PRODUCT CHECK LISTS

Fairing & Surfacing

Awlfair LW Epoxy Trowelable Fairing Compound

White Base D8200
Standard Converter D7200
Fast Converter D7222

Epoxy Sprayable Fairing Compound

Tan Base D6001
Converter D3011

Awlfair Surfacing Filler (EU Only)

Base D6200
Converter D3200

Brightwork Varnish & Interior Wood

Awlbrite

Clear Base J3005
Semi Gloss Base J3630
Converter J3006

Awlspar

Classic Spar Varnish M3131

Awlwood MA

PRIMERS
Clear Primer J3809
Yellow Primer J9809
Red Primer J7809

FINISH
Clear Gloss J3890

CLEANER AND REDUCERS
Brush Cleaner T0200
Brushing Reducer T0201
Spray Reducer T0202

Activators

Standard Activator for Spray Application A0001
Fast Drying Activator for Spray Application A0006
Awlbrite Brush Reducer A0031

Reducers

Topcoat Reducers

Fast Evaporating Reducer for Spray Applied Urethane Topcoats and Quik-Grip Primer T0001
Fast Evaporating Spray reducer and Equipment Cleaner T0002
Standard Evaporating Reducer for Spray Applied Urethane Topcoats and Quik-Grip Primer T0003
Hot Weather Reducer / Retarder T0005
Awlspar Brushing Reducer T0016
Slow drying Reducer for Brush Applied Epoxy Primers and Urethane Topcoats T0031
Reducer for Awlstar Gold Label Antifouling T0101
Awlspar Spray Reducer T0180

PRODUCT CHECK LISTS

Reducers

VOC Exempt Reducers (NA Only)

Standard Reducer for Acrylic Urethane Topcoats T0167
Fast Evaporating Reducer for Acrylic Urethane Topcoats and Equipment Cleaner T0163
Hot Weather Reducer for Acrylic Urethane Topcoats T0168

Primer Reducers

Standard Reducer for Epoxy Primers T0006
Slow drying Reducer for Brush Applied Epoxy Primers and Urethane Topcoats T0031
Ultra Build Reducer and Epoxy Primers Brushing Reducer T0073

Wipe Down Solvents

Surface Cleaner / Degreaser (EU only) T0340
Awlprep Surface Cleaner T0008
Awlprep Plus Wax and Grease Remover T0115
Awlprep 400 . . . . . T0170
High Build VOC Exempt (NA/AP only) Reducer T0176

Auxiliary Products

Deluxe Tack Rags 73009
Griptex Fine Grit Non-Skid Particles 73012
Griptex Coarse Grit Non-Skid Particles 73013
Griptex Extra Coarse Grit Non-Skid Particles 73237
Pro-Cure X-98 Fast Accelerator for Urethane Topcoats 73014
Pro-Cure X-138 Inhibited Accelerator for Urethane Topcoats 73015
Flattening Agent for Urethane Topcoats G3013
Crater-X Anti–Cratering Solution M1017
Cold-Cure Accelerator for 545 Epoxy Primer M3066
Awlcoat TPC WP101
Awlcraft SE Repair Primer E3001
Awlcraft SE Blending Solution T0190
Awlcraft SE Blending Solvent T0195

Antifoulings

Awlstar Gold Label Antifouling (EU Only)

Charcoal Black BP204
Light Blue BP508
Deep Blue BP507
Red BP705
White Lightning BP809

Maintenance Products

Awlwash 73234
Awlcare 73240

PRODUCT DESCRIPTION BY CODE NUMBER

73009	**Deluxe Tack Rags**
73012	**Griptex** Fine Grit Non-Skid Particles
73013	**Griptex** Coarse Grit Non-Skid Particles
73014	**Pro-Cure X-98** Fast Accelerator for Urethane Topcoats
73015	**Pro-Cure X-138** Inhibited Accelerator for Urethane Topcoats
73234	**Awlwash** Wash Down Concentrate
73237	**Griptex** Extra Coarse Grit Non-Skid Particles
73240	**Awlcare** Protective Polymer Sealer
A0001	Standard Activator for Spray Application
A0006	Fast Drying Activator for Spray Application
A0031	**Awlbrite** Brush Reducer
BP204	**Awlstar Gold Label Antifouling (EU only)** Charcoal Black
BP508	**Awlstar Gold Label Antifouling (EU only)** Light Blue
BP507	**Awlstar Gold Label Antifouling (EU only)** Deep Blue
BP705	**Awlstar Gold Label Antifouling (EU only)** Red
BP809	**Awlstar Gold Label Antifouling (EU only)** White Lightning
D1001	**545 Epoxy Primer** Gray Base
D3001	**545 Epoxy Primer** Converter
D3002	**High Build** Converter
D3011	**Epoxy Sprayable Fairing Compound Converter**
D3018	**Ultra Build** Converter
D3020	**545 Epoxy Primer** Clear Base
D3040	**Quik-Grip** Fast Dry Non Sanding Primer Converter
D3300	**Wash Primer CF** Converter
D3707	**Hullgard Epoxy Primer** Converter **(EU Only)**
D3730	**Hullgard Extra** Converter
D6001	**Epoxy Sprayable Fairing Compound** Tan Base
D6070	**Hullgard Epoxy Primer** Base **(EU Only)**
D6120	**Hullgard Extra** Base
D6200	**Awlfair Surfacing Filler** Base **(EU only)**
D3200	**Awlfair Surfacing Filler** Converter **(EU only)**
D6600	**Wash Primer CF** Base
D7200	**Awlfair LW** Standard Converter
D7222	**Awlfair LW** Fast Converter
D8001	**545 Epoxy Primer** White Base
D8002	**High Build** Off-White Base
D8003	**Awlquik** Primer Pale Yellow Base
D8008	**Ultra Build** White Base
D8016	**Quik-Grip** Fast Dry Non Sanding Primer Gray Base
D8200	**Awlfair LW** White Base
D9001	**Awlquik** Primer Converter
D9002	**High Build** Yellow Base
E3001	**Awlcraft SE** Repair Primer
G3010	**Awlcat #2** Standard Topcoat Converter for Spray Application
G3013	**Flattening Agent** for Urethane Topcoats
G3038	**Awlcat #4** VOC Exempt Topcoat Converter
H3002	**Awlcat #3** Brushing Topcoat Converter
J3005	**Awlbrite** Clear Base
J3006	**Awlbrite** Converter
J3630	**Awlbrite** Semi Gloss Base

PRODUCT DESCRIPTION BY CODE NUMBER

J3809	**Awlwood MA** Clear Primer
J3890	**Awlwood MA** Clear Gloss
J7809	**Awlwood MA** Red Primer
J9809	**Awlwood MA** Yellow Primer
M1017	**Crater-X** Anti–Cratering Solution
M3048	**Spatter-It** Texture Additive
M3066	**Cold-Cure** Accelerator for 545 Epoxy Primer
M3131	**Awlspar** Classic Spar Varnish
R1100	**321 HS Undercoat** Gray Base
R3100	**321 HS Undercoat** Converter
R3330	**Max Cor CF** Converter
R4330	**Max Cor CF** Base
R8100	**321 HS Undercoat** White Base
S4010	**Max Cor CF** Aerosol
T0001	Fast Evaporating Reducer for Spray Applied Urethane Topcoats and Quik-Grip Primer
T0002	Fast Evaporating Spray reducer and Equipment Cleaner
T0003	Standard Reducer for Spray Applied Urethane Topcoats and Quik-Grip Primer
T0005	Hot Weather Reducer / Retarder
T0006	Standard Reducer for Epoxy Primers
T0008	**Awlprep** Surface Cleaner
T0016	**Awlspar** Brushing Reducer
T0031	Slow drying Reducer for Brush Applied Epoxy Primers and Urethane Topcoats
T0073	Ultra Build Reducer and Epoxy Primers Brushing Reducer
T0101	Reducer for Awlstar Gold Label Antifouling
T0115	**Awlprep Plus** Wax and Grease Remover
T0163	**VOC Exempt** Fast Evaporating Reducer and Equipment Cleaner (NA Only)
T0167	**VOC Exempt** Standard Reducer for Acrylic Urethane Topcoats (NA Only)
T0168	**VOC Exempt** Hot Weather Reducer for Acrylic Urethane Topcoats (NA Only)
T0170	**Awlprep 400** Wax and Grease Remover
T0176	**High Build** VOC exempt (NA only) Reducer
T0180	**Awlspar** Spray Reducer
T0190	**Awlcraft SE** Blending Solution
T0195	**Awlcraft SE** Blending Solvent
T0340	Surface Cleaner / Degreaser (EU only)
T0200	**Awlwood MA** Brush Cleaner
T0201	**Awlwood MA** Brushing Reducer
T0202	**Awlwood MA** Spray Reducer
WP101	**Awlcoat TPC**

GLOSSARY OF TERMS

Ablative Coating: A coating that wears away in service by design. **Awlstar Gold Label** Antifouling is an ablative coating.

Accelerator: Catalyst, a material which accelerates the curing of certain coatings. **Pro-Cure X-98 and X-138** are accelerators for **Awlgrip** Topcoats.

Acrylic: Coating based on a polymer containing short chain esters of acrylic and methacrylic acid. **Awlcraft 2000** is an acrylic resin cross-linked with an isocyanate resin (acrylic urethane).

Activator: Term used for the converter or curing agent. A required component in a coating's mix.

Additives: Any one of a number of special chemicals added to paint to bring about special effects; examples are **Pro-Cure** Accelerator, **Griptex** Non-Skid, and Flattening Agent.

Adhesion: The phenomenon by which one material is attached to another by means of surface attraction.

Adsorption: Process of attraction to a surface; attachment. The retention of foreign molecules on the surface of a substance.

Air Cap: The structure at the front of a spray nozzle which directs compressed air against the paint to form and shape an atomized cloud of droplets.

Airless Spray: System of applying paint in which the paint, under high pressure, is passed through a nozzle and broken into droplets (i.e. atomized) when it enters the lower pressure region outside the gun tip. A much smaller volume of air is used than in conventional air spraying so that problems of dry spray and paint bounce-back are reduced. Airless spray is preferred for **Hullgard** Primers and **Awlstar** Antifoulings.

Air Spray: System of applying paint in the form of tiny droplets in air; paint is broken into droplets (i.e. atomized) by a spray gun as a result of being forced into a high velocity air stream. Shape and paint density of the resulting droplet cloud can be controlled by air pressure, paint viscosity, and gun tip geometry. Air spray is preferred for applying **Awlgrip** Topcoats.

Atomization: Formation of tiny droplets of liquid as in paint spraying process; atomization is usually caused by turbulence in an air stream, or sudden drop in pressure.

Blistering: The formation of hollow bubbles or water droplets in a paint film; usually caused by the expansion of air or moisture trapped beneath the film. Blisters can form around salt crystals trapped under a paint film because salt attracts moisture.

Break-Free Rinse: When the rinse water sheets out over a surface with no holes, breaks, or 'pull backs' after cleaning. This indicates the surface is clean; free of dirt, wax, grease, oil and other contaminants. Also known as a water break-free surface.

Catalyst: Chemical used to change the rate of a chemical reaction; catalyst differs from a converter/curing agent in that the catalyst is not itself chemically consumed in the reaction while a curing agent is consumed; technically, catalysts that increase reaction rates are called accelerators; those which decrease reaction rates are called inhibitors or retarders. Often used incorrectly to identify converters or co-reactants in two component coatings. See Converter.

GLOSSARY OF TERMS

Checking: Type of failure in which cracks in the film begin at the surface and progress downward; the result is usually a straight V-shaped crack which is narrower at the bottom than the top. Checking is a method for relieving surface stresses. If the underlying surface is exposed, the failure is called cracking.

Converter: Co-reactant of the base in a two component coating; often, but not always transparent, containing only resin and solvent. When the base and converter are mixed in different volumes, the converter quantity is usually listed second, after the base quantity. Converters are often called catalyst, activator or hardener.

Copolymer: In antifouling coatings, an ablative antifouling with the toxin chemically bound to the polymer.

Corrosion: Decomposition of a metal in contact with its environment.

Coverage: The area a given unit of paint will cover at a specified thickness.

Curtain Call: The time at which gravity overcomes a coating's film forming properties resulting in sags or curtains.

Cross-Linking: Method by which polymers unite to form a protective film; the method of cure in two component enamels.

Cure: The process by which paint is converted from the liquid to the solid state.

Curtaining: Sagging.

Dew Point: The temperature at which water vapor condenses from the air; the dew point varies with relative humidity.

Distinction of Image (DOI): The quality of the reflection in a high–gloss finish. The mirror effect of the finish.

Dry Film Thickness (DFT): The film thickness of paint after all the solvent has evaporated from the wet paint.

Dry Spray: Sprayed paint which loses so much solvent in the air that it becomes too dry to flow out over the surface; dry spray usually has a lower gloss than the properly sprayed surface.

Drying Time: Time interval between application and final cure.

Dry to Handle: Time interval between application and ability to handle without damage.

Dry to Recoat: Time interval between application and ability to receive next coat satisfactorily.

Dry to Touch: Time interval between application and tack-free time.

Enamel: 1. A paint which forms a film by chemical union of its component molecules during cure; **2.** In shop terminology, any paint which is not a lacquer.

Epoxy: Type of paint, adhesive or plastic noted for high mechanical strength, good adhesion and resistance to solvents, acids, alkalis and corrosion. Epoxies do not weather well.

Fairing Compound: Filler putty used to fill surface depressions and shape forms until they are fair or smooth.

Filler Primer: Heavy paint applied to fill holes or other irregularities in a surface prior to topcoating.

GLOSSARY OF TERMS

Film Build: Dry film thickness characteristics per coat.

Film Thickness Gauge: Device for measuring film thickness above substrate; dry or wet film thickness gauges are available.

Flash Point: The lowest temperature at which a given flammable material will flash if a flame or spark is present.

Fluid Needle: The stop/start valve for fluid flow through the fluid tip.

Fluid Tip: Orifice in a spray gun into which a fluid needle is seated. The paint exits the spray gun at the fluid tip.

Hiding Power: The ability of a paint to mask the color or pattern of a surface.

High Solids Paint: Coatings that comply with regulations limiting the amount of volatile (organic solvents) materials in their composition. High solids coatings are generally more than 50% solids by volume. **321 HS Undercoat** is a high solids coating.

Incompatibility: Inability to mix with, or adhere to, another material.

Induction: The time period required for the mixed base and converter components to cross-link chemically. Products requiring induction periods before application will not perform as designed without this waiting period.

Intercoat Adhesion: The ability of each coat of paint to stick to the preceding coat.

Isocyanate Resins: Resins characterized by NCO grouping. Isocyanate resins are used in polyurethane converters. **Awlcat #2** and **Awlcat #3** contain isocyanate resin.

Lacquer: Traditionally a paint which contains a synthetic resin and forms a film by solvent loss; the film remains susceptible to attack by the same or similar solvents; there is no chemical reaction or curing by the polymer.

Lifting: Softening and raising of an undercoat by application of a topcoat.

Linear Polymer: Polymer containing little or no branching (e.g. high density polyethylene and nitrocellulose of acrylic lacquers).

Osmosis: Transfer of liquid through a paint film or other membrane.

Overspray: Sprayed paint which misses the area being painted and falls upon the surrounding surface.

Paint: Material which when applied as a liquid to a surface, forms a solid film for the purpose of decoration and/or protection; generally a paint contains a binder(s), solvent(s) and a pigment(s); often other materials are present to give special properties to the paint film (e.g. such additives are rust inhibitors, light stabilizers and softening agents (i.e. plasticizers).

Polyester: Type of paint or plastic containing the chemical group (RCOOCT). **Awlgrip** Topcoats are made from polyester resins.

Polymers: Poly – meaning many, mer – meaning units; very large molecules built up by the combination of many small molecules; they often consist of many thousands of atoms. Polymers form the backbone or binder of a coating; often called resin.

GLOSSARY OF TERMS

Polyurethane: Wide range of possible binder systems with unique qualities; the aliphatic type is used for the highest quality enamels. The most durable aliphatic polyurethanes are polyester resins co-reacted with an isocyanate resin. Awlgrip Topcoats are based on this chemistry.

Primer: Type of paint applied to a surface to increase its compatibility for the topcoat or to improve adhesion or the corrosion resistance of the substrate.

Primer Surfacer: Paint used to prime a surface as well as fill irregularities.

Profile: Surface contour as viewed from the edge.

Reducer: Solvent added to a coating to reduce the viscosity and/or alter the dry time. Often called thinner.

Resin: Material, natural or synthetic, contained in varnishes, lacquers and paints; the film former.

Retarders: A solvent added to a paint to slow down its evaporation rate; retarders are often esters.

Sheeting Out: When rinse water spreads out over a surface in sheets, with no holes, breaks or 'pull backs'. Also known as a water break-free or break-free surface.

Solids: The resins, pigments and additives that form the permanent paint film after the volatile (solvents) components have evaporated. The solids content is expressed as a percentage of the total wet mix. Low VOC coatings are often referred to as 'High Solids'.

Solvent: The liquid or blend of liquids used to dissolve or disperse a paint; a true solvent is a single liquid that can dissolve the paint.

Spray Cap: Front enclosure of a spray gun equipped with atomizing air holes.

Viscometer: Device for measuring the viscosity of a liquid. Several types are in use; some measure the time for a bubble to rise, or a ball to fall through a column of liquid. Others measure the time required for a given volume of liquid to drain through a standard size hole in the bottom of a cup.

Viscosity: The property of liquid which enables it to resist flow; a thick liquid such as molasses has a high viscosity.

Wash Primer: Thin, corrosion inhibiting paint usually chromate pigmented with a polyvinyl butyrate binder.

Wet Edge: Keeping the paint wet enough when it is applied by brush so it can be brushed back into without showing lines or demarcations from one painted area to the next.

Wet Film Thickness (WFT): The thickness of a paint film measured while it is still wet. Wet film thickness must be measured immediately after application before any solvent evaporation and the resultant film shrinkage occur.

MAINTAINING AN AWLGRIP OR AWLCRAFT 2000 TOPCOAT

It is difficult for dirt grime and grease to adhere to an **Awlgrip** or **Awlcraft 2000** Topcoat. However, over time, a build up of dirt, grease and other contaminants can cause the finish to appear dull.

The mirror-like gloss can be easily maintained by following these simple rules:

DO:

1. Wash the surface regularly with **Awlwash 73234** and water. Regular cleaning will avoid build up which can slowly attack the topcoat, prematurely ageing the coating. Use soft, non-abrasive cloths, sponges or washing mitts when washing.
2. **Awlgrip only:** Solvents such as **Awlprep T0008**, **Awlprep Plus T0115**, toluene, lacquer thinner, M.E.K., acetone or kerosene may be used to soften or remove heavy build-ups of grease and grime, felt tip markings or spray paint on the topcoat.

   Awlcraft 2000 only: Use only mild solvents to remove stubborn stains. **Awlprep T0008**, mineral spirits, xylene, kerosene and diesel fuel are acceptable for use on **Awlcraft 2000**.

   Awlgrip and **Awlcraft 2000:** Apply solvents with soft clean cloths. Wipe up solvent quickly. Do not allow solvent to dry on the surface or puddle and soak into the surface. Wash these areas with **Awlwash** and water to remove solvent residue. When using solvents to remove stains, test an inconspicuous area first.
3. Always thoroughly rinse surfaces with fresh water after cleaning with **Awlwash** or solvents. Latent solvent residue can attack the topcoat, while detergent residue will attract dirt.
4. Use distilled white vinegar and hot water to remove stubborn salt stains. Washing with **Awlwash** after use of vinegar is recommended.
5. Use **Awlcare** 73240 by hand only to remove mild diesel soot stains.

   Awlgrip and **Awlcraft 2000:** Protecting the surface with **Awlcare 73240** will help maintain the gloss of **Awlgrip** or **Awlcraft 2000**. **Awlcare** is a hand applied, non-abrasive, synthetic polymer. It will remove mild stains, water spots and diesel soot while increasing resistance to attack from acid rain and other pollutants, when applied regularly. It contains no harsh abrasives. **Awlcare** leaves a non-yellowing, protective polymer coating which lasts through multiple washings. Use **Awlcare** to temporarily seal and restore gloss to painted surfaces dulled by age or mistreatment.

DO NOT:

1. Do not use traditional waxes.
   General: Traditional waxes break down rapidly. The residue can cause the topcoat to appear yellow, plus it attracts dirt. This creates the need to maintain the wax, increasing overall maintenance. Traditional waxes which contain no abrasives probably do little harm to the coating, but offer no benefit. **Awlgrip** has developed **Awlcare Protective Polymer Sealer 73240** for those who want to enhance their finish and need the additional cleaning power of a hand applied, dry wash product. **Awlcare** is a non-yellowing sealer that will protect both **Awlgrip** and **Awlcraft 2000** with regular applications.

MAINTAINING AN AWLGRIP OR AWLCRAFT 2000 TOPCOAT
continued...

Hand applied Awlcare will not harm **Awlgrip** topcoats and can easily be removed with **Awlprep Plus T0115** (or T0340 Surface Cleaner in Europe) when it is time to repaint.

Awlgrip Only: Regular applications of Awlcare will help temporarily seal and restore shine to painted surfaces that have become porous due to age or mistreatment, helping to maintain a satisfactory appearance until there is time to repaint.

Awlcraft 2000 Only: Awlcare Protective Polymer Sealer will help maintain the gloss on **Awlcraft 2000** topcoats with regular applications, especially those which have been buffed or polished. Remember, **Awlcare** is only applied and buffed by hand. Never apply or buff **Awlcare** with a machine.

2. Do not use abrasives, scratch pads or polishing compounds. Scratching the surface gives dirt a place to cling while wearing out the resin layer. Using abrasives of any kind will reduce the overall life of the finish and voids the **Awlgrip** Limited Warranty.
3. Do not allow contact between the **Awlgrip** or **Awlcraft 2000** Topcoat and teak cleaners. Most teak cleaners contain acids or caustic agents that stain and discolor an **Awlgrip** or **Awlcraft 2000** Topcoat.
4. Do not allow metal polishes to dry on the surface of Awlgrip or **Awlcraft 2000**. Metal polishes may discolor and stain the painted surface. Metal polishes contain acids. Rainwater and dew running off metal fittings will spread metal polish residue onto the paint surface and will etch and dull the paint finish. Washing freshly polished metal fittings thoroughly with **Awlwash** and water can help eliminate polish residue and reduce the metal polish run off.
5. Do not use strong solvents (eg. lacquer thinner, M.E.K., acetone) to clean **Awlcraft 2000**, **Awlbrite Clear** or **Awlspar varnish**.
6. Do not allow wet equipment (e.g. seat cushions, coils of line, sails, sail covers, coolers) to trap and hold moisture against **Awlgrip** Topcoats. This condition can result in blistering or delamination of the **Awlgrip** or **Awlcraft 2000** Topcoat.
7. Do not use acrylic Teflon® coatings over an **Awlgrip** or **Awlcraft 2000** Finish. Use of these coatings void the **Awlgrip** Limited Warranty.
8. Do not 'shrink wrap' or tightly bind **Awlgrip** or **Awlcraft 2000** Topcoat surfaces with plastic wrappings. The cover system, whether synthetic or natural fiber, should be ventilated to allow the coating system to 'breathe'. Do not pull the cover tight to the surface painted with **Awlgrip** or **Awlcraft 2000** Topcoat. This can trap and hold moisture on the surface, resulting in loss of gloss, blistering, or delamination of the topcoat. Do not allow the cover to chafe against the painted surface, a chafing cover, especially when accompanied by airborne dirt, can abrade the surface and cause premature loss of gloss.

REPAIRING AN AWLCRAFT SE TOPCOAT

The following guide will take you step-by-step through the preparation, application and finishing of Awlcraft SE to achieve a seamless repair.

Awlcraft SE, the revolutionary topcoat encompassing metallics, pearls and effect pigments, is a fast drying, high opacity formulation that, when topcoated with **Awlcraft 2000** High Gloss Clear (F3029) is not only a high gloss, robust metallic topcoat system but is also repairable and buffable.

Should the need arise to repair your **Awlcraft SE** coating system, from the smallest scratch through to a large scale repair, the following guide will take you step-by-step through the process resulting in a seamless repair.

It is important that **every** step in the process is followed as described or the resultant repair will be visible and require repeating.

Note: Some colors may be harder to repair than others. The following instructions and application procedures require a degree of application skill and previous spray application experience.

STEP 1. Preparation:

As with any application or repair, preparation is a key stage in the process. The area to be repaired, and a large section of area around it, should be thoroughly cleaned and degreased. Use commercial detergents, steam cleaners or pressure washers. Be sure all detergent residue is rinsed from the surface. Use **Awlgrip Wipe-Down Solvent** (NA/AP: **Awlprep 400 T0170**; EU: **Surface Cleaner T0340**) as a final wipe down of the surface using the Two Cloth Method.

STEP 2. Sanding repair and surrounding area:

Sand the repair area, and the surrounding area. For small repairs (<6"/15cm) sand approximately 5 times the size of the damaged area. For larger repairs sand 12–36" (30–92cm) beyond the edge of the damaged area to allow room for the subsequent coats in the remaining steps.

Note: If repairing a metallic system, allow a minimum of 8 times the size of the damaged area for the full repair; if repairing a pearlescent system allow a minimum of 10 times the size of the damaged area for the full repair.

Sand the repair area using 400 grit paper, work a second area beyond the 400 with 800 grit, and sand beyond the 800 grit with 1500 grit out on to the undamaged paint area. Blow off the surface with clean, dry compressed air while dry wiping with clean rags to remove sanding dust and residue. Following removal of the dust and residue, wipe the surface with (NA/AP: **Awlprep 400 T0170**; EU: **Surface Cleaner T0340**) using the Two Cloth Method.

Note: Care must be taken not to cut through the top coat or other high spots. Hold the DA flat, turn down the air pressure (slow to medium speed), and sand using very light pressure.

STEP 3. Application of Awlcraft SE Repair Primer (E3001):

Apply **Awlcraft SE Repair Primer** (E3001) over the repair area and to approximately 50% of the size of the total sanded area.

REPAIRING AN AWLCRAFT SE TOPCOAT continued...

Note: The Repair Primer does **not** need to be mixed with reducer or converter prior to application. It is recommended to use a gravity gun setup [Tip size: .047–055" (1.2–1.4mm)] to apply the **Awlcraft SE Repair Primer** and a lower atomizing pressure than would be used for applying the standard **Awlcraft SE** mix.

Awlcraft SE Repair Primer should be applied in the same fashion as the standard **Awlcraft SE Basecoat.** See **Awlcraft SE** Application Guidance document for more details.

TIP:
Using disposable spray pots with all the necessary mixed products already pre-filled into them will make the job easier and faster. Simply switch between the disposable pots as necessary at each step of the repair.

STEP 4. Application of Awlcraft SE Basecoat (standard product):

Once the **Awlcraft SE Repair Primer** has dried, mix standard **Awlcraft SE Basecoat** as per product datasheet. Apply **Awlcraft SE Basecoat** over the damaged area **only** as per normal **Awlcraft SE** application techniques.

IMPORTANT:
Full coverage and hide of the damaged area with the **Awlcraft SE Basecoat** needs to be achieved before proceeding to step 5.

IMPORTANT:
When applying the **Awlcraft SE Basecoat** care should be taken to apply a fully coalesced film, but not over-apply. Always spray perpendicular to the substrate except when coming to the outer edge of the area being coated at which point the spray gun should be pivoted away from the substrate to 'fade-out' the **Awlcraft SE Basecoat**.

STEP 5a. Mixing of Awlcraft SE Basecoat with Awlcraft SE Blending Solution (T0190) or Awlcraft SE Basecoat with Awlcraft SE Pearl Mid-Coat:

CHOOSE ONE OF THE FOLLOWING OPTIONS:

1. TWO STAGE REPAIR FOR MOST METALLIC SYSTEMS:

Firstly, prepare a normal mix of standard **Awlcraft SE Basecoat** as per product datasheet, but instead use a slower solvent than what would typically be selected for **Awlcraft SE Basecoat** applications. For example, if the typical choice is T001 Fast Spray Solvent, then instead select T0003 Standard Spray Reducer for the mix reducers for your application conditions. Once ready, mix 50:50 by volume with **Awlcraft SE Blending Solution** (T0190).

2. THREE STAGE REPAIR FOR PEARL SYSTEMS ONLY:

Awlcraft SE Basecoat (mixed as per datasheet) with **Awlcraft SE Pearl Mid-coat** (mixed as per datasheet) allows for easier blending of the base repairs.

REPAIRING AN AWLCRAFT SE TOPCOAT continued...

Mix 100:50 by volume, or when the base becomes translucent on a 3 second run off on mixing stick, of **Awlcraft SE Basecoat** mix with **Awlcraft SE Pearl Mid-coat** mix. Note: Both products are reduced and catalyzed before mixing the two to get the blend coat.

STEP 5b. Application of blended Awlcraft SE Basecoat/Awlcraft SE Blending Solution or Awlcraft SE Basecoat/Awlcraft SE Pearl Mid-coat.

Once the **Awlcraft SE Basecoat** has flashed off, apply the mixed **Awlcraft SE Basecoat/Awlcraft SE Blending Solution** over the previously applied area (step 4) and slightly further out. Care should be taken to not apply the mix over the whole of the previously applied **Awlcraft SE Repair Primer.** Depending on the size of the damaged area, apply the mix from between 50-90% of the Repair Primer layer area. Apply the blend as per normal **Awlcraft SE** application techniques taking care to apply a fully coalesced film, but do not over-apply. Always spray perpendicular to the substrate except when coming to the outer edge of the area being coated at which point the spray gun should be pivoted away from the substrate to "fade-out" the blended **Awlcraft SE Basecoat**. The application of the blended **Awlcraft SE Basecoat/Awlcraft SE Blending Solution** MUST NOT extend beyond the area coated in Step 3.

IMPORTANT:
If you are working on a TWO-STAGE REPAIR, skip step 6 (related to applying PEARL SYSTEMS) and proceed to step 7.

TIP:
For best results, we strongly suggest the use of Let Down Panels prior to step 6.

STEP 6. Application of Pearl Coats:

a. Apply the first coat to the **entire (sanded)** working area.

b. Apply the second coat of pearl to approximately **50%** of the sanded area.

c. Apply the second coat of pearl to approximately **75%** of the sanded area.

d. Apply the second coat of pearl to approximately **90%** of the sanded area.

Always spray perpendicular to the substrate except when coming to the outer edge of the area being coated at which point the spray gun should be pivoted away from the substrate to 'fade-out' the blended **Awlcraft SE Basecoat**.

STEP 7. Application of Awlcraft 2000 Clearcoat (F3029)

Prepare a standard mix of **Awlcraft 2000 Clearcoat (F3029)**. Once the previous coat has dried, apply **Awlcraft 2000** Clearcoat as per product datasheet over the damaged area, the **Awlcraft SE Repair Primer** (as applied in Step 3) and to about 3" (8cm) from the edge of the sanded area. Apply the **Awlcraft 2000 Clearcoat** as per datasheet taking care to apply a full film.

REPAIRING AN AWLCRAFT SE TOPCOAT continued...

IMPORTANT:
Apply two coats of F3029; apply 1st coat, allow to flash, apply second coat and move to steps 9 & 10 while second coat is still tacky to carry wet edge out further with the second coat slightly overlapping the first.

STEP 8. Mixing of Awlcraft 2000 Clearcoat and Awlcraft SE Blending Solvent (T0195):

Firstly prepare a normal mix of standard **Awlcraft 2000 Clearcoat** as per product datasheet using the most suitable reducers for your application conditions. Once ready, mix this 50:50 **by volume** with **Awlcraft SE Blending Solvent** (T0195).

STEP 9. Application of blended Awlcraft 2000 Clearcoat/ Awlcraft SE Blending Solvent:

Apply the above blend over the freshly applied and still tacky **Awlcraft 2000 Clearcoat** (as per **Awlcraft 2000 Clearcoat** datasheet) to the outer wet edge of the last coat.

IMPORTANT:
This is one of the most crucial steps in the whole repair process and is vital for obtaining an invisible repair. Care must be taken to not go over the edge of the sanded area. If this occurs the whole repair process will need to be repeated.

Apply the **Awlcraft 2000 Clearcoat** blend as per normal clearcoat application taking care to apply a full film.

IMPORTANT:
Carry Out Step 10 IMMEDIATELY

STEP 10. Application of blended Awlcraft 2000 Clearcoat/ Awlcraft SE Blending solvent:

While the previous coat is still wet, apply straight (neat) **Awlcraft SE Blending Solvent** (T0195) starting ~2–3" (5–8cm) in from the outer edge of the **Awlcraft 2000 Clearcoat Blend** (step 9) continuing to apply right over the edge of the clear and to the edge of the sanded area in order to blend the clear into the existing coating.

IMPORTANT:
Using the same tip and aircap as for all previous applications, reduce air pressure and fluid feed for the application of the pure **Awlcraft SE Blending Solvent**.

As this step involves applying straight solvent take care to not over-apply or have excessive volumes of solvent on the surface as this could result in defects from the solvent flowing unevenly across the repair area.

STEP 11. Final Steps

The above steps should result in a near-invisible repair that may not require buffing. However, once cured the **Awlcraft 2000 Clearcoat** can be buffed to further blend in the repair.

Notes:

REPAIRING AN AWLCRAFT SE TOPCOAT – CHARTS

The following charts will take you step-by-step through the preparation, application and finishing of Awlcraft SE to achieve a seamless repair.

Larger versions of these charts can be downloaded at: www.awlgrip.com/ProdLit/Awlcraft_SE_Repair_Manual.pdf

COLOR MATCHING TIPS:
Using test panels for color matching

Two Stage Repair:

Spray a panel same as you would doing the boat originally except add more coats of metallic covering each coat as you go along, then unmask and clear the whole panel.

By comparing the panel to the original paint job, it will give you a good idea of how many coats of metallic it will require. For example, if two coats were originally used on the boat, it may take three to get a match, which you would not know without a step panel.

Three Stage Repair:

Technical Basics: Let Down Panels

"Let Down" Panels can be utilized as an aid to determine the approximate number of mid-coat layers needed to achieve a color match when matching three stage paints.

By comparing the various layers of pearl on the let down panel to an adjacent panel on the vehicle, a guide for the mid-coat application can be determined.

Panel Preparation:

1. Apply basecoat foundation color to hiding, then let flash/dry

2. Mask off panel in approximately six equal segments to illustrate film build variations

3. Apply one single coat of mid-coat

4. Remove the 1st section of masking paper, then:

5. Apply another single coat of mid-coat

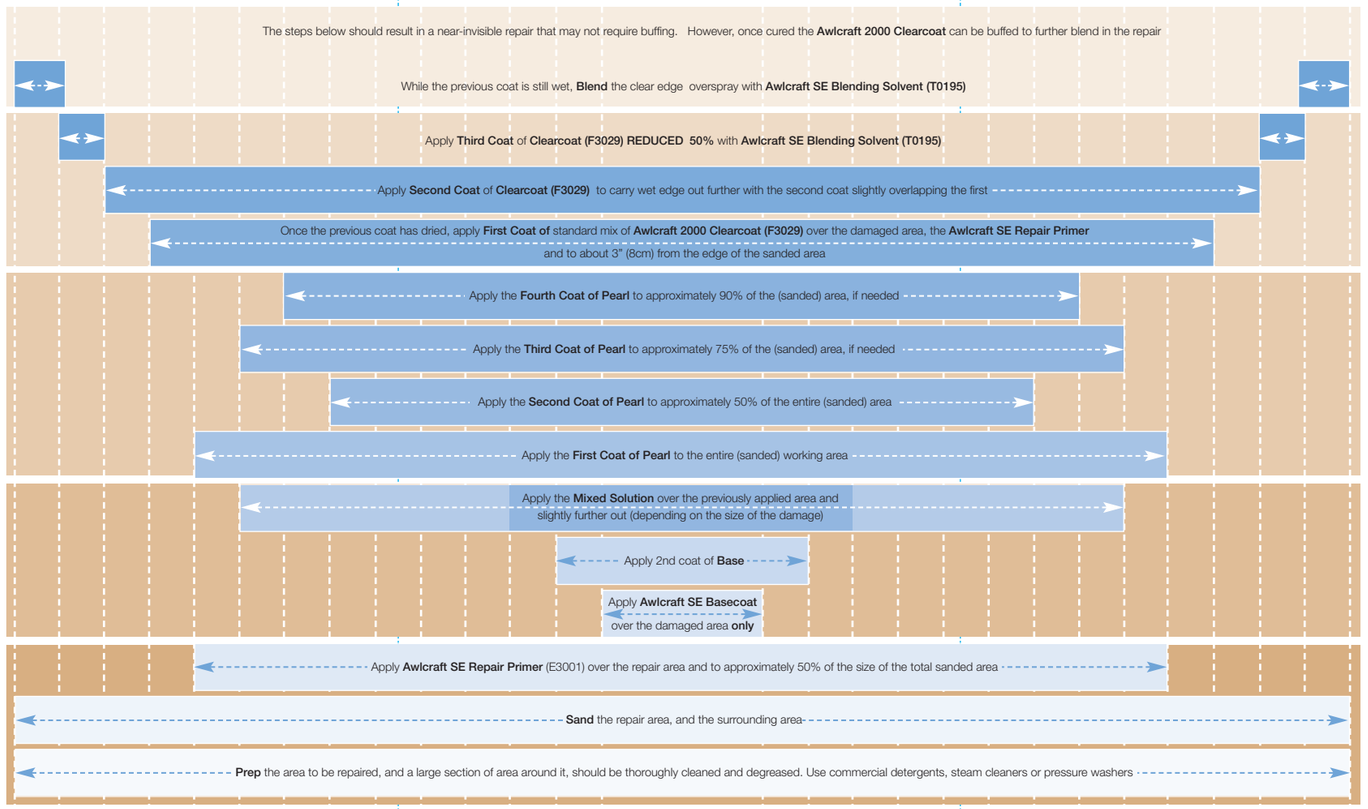
6. Repeat above steps until complete panel has been sprayed with the pearl/mid-coat

7. Flash/dry for 20 minutes, mask off ½ of panel length-wise and apply F3029 Clearcoat over unmasked side of panel.

8. Lastly, compare the different shades on the let down panel to the finish and use the appropriate number of pearl coats to reach the desired color.

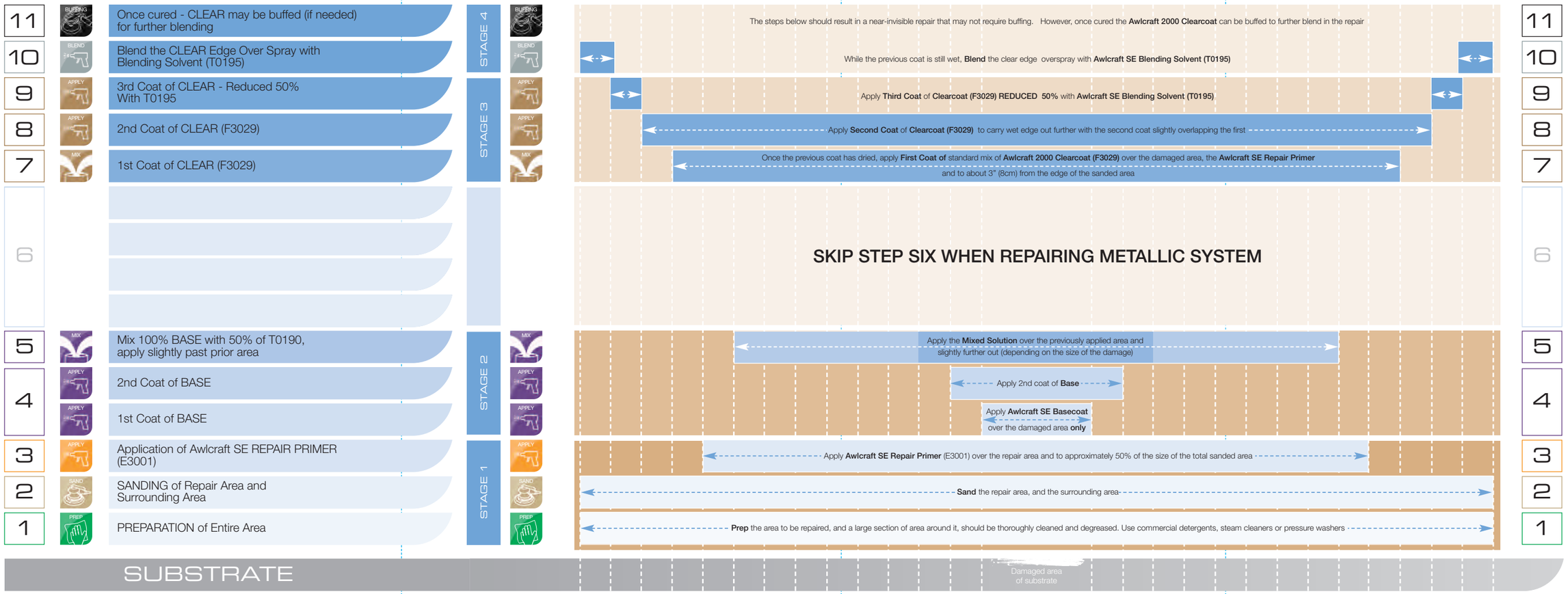
AWLCRAFT SE REPAIR SYSTEM
3 STAGE - PEARL / CANDY

11	BUFFING	Once cured - CLEAR may be buffed (if needed) for further blending	STAGE 5
10	BLEND	Blend the CLEAR Edge Over Spray with Blending Solvent (T0195)	
9	APPLY	3rd Coat of CLEAR - Reduced 50% with T0195	STAGE 4
8	APPLY	2nd Coat of CLEAR (F3029)	
7	MIX	1st Coat of CLEAR (F3029)	
6	APPLY	4th Coat of PEARL	STAGE 3
	APPLY	3rd Coat of PEARL	
	APPLY	2nd Coat of PEARL	
	APPLY	1st Coat of PEARL	
5	MIX	Mix 100% Base with 50% of T0190, apply slightly past prior area	STAGE 2
4	APPLY	2nd Coat of BASE	
	APPLY	1st Coat of BASE	
3	APPLY	Application of Awlcraft SE Repair Primer (E3001)	STAGE 1
2	SAND	Sanding of Repair Area and Surrounding Area	
1	PREP	PREPARATION of Entire Area	



SUBSTRATE

AWLCRAFT SE REPAIR SYSTEM
2 STAGE - METALLIC



APPLICATION GUIDE

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