Australian Made NORGLASS Specialty Finishes Australian Owned

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INFORMATION GUIDE

ALUMINIUM

Introduction

The painting of an aluminium structure requires considerably more care in the preparation than most other surfaces, due to two factors.

1. In the extruding process of aluminium, a rolling oil is used as a lubricant which remains on the surface long after the finished product is put into use. **This has to be removed before painting can commence** otherwise the paint will not adhere properly.

2. Because the metal is non-absorbent the adhesion of paint can only be mechanical (sitting on top of the metal). Therefore, any form of condensation or contamination will **reduce adhesion** and result in failure of the paint system.

Preparation (New or Bare Aluminium)

On unpainted new aluminium the first step to a successful paint finish is the cleaning and degreasing of the metal. With an unused paint brush, apply a brushed coat of **NORGLASS METAL ETCH CLEANER** (phosphoric acid based) over the metal surfaces and allow the acid to react for 15 minutes. **Do not leave METAL ETCH CLEANER more than 15 minutes before removal.** Hose off thoroughly and allow to dry. Force dry areas along welded seams, corners or rivets with a hot air blower or hair dryer. On large areas, do small sections that can be treated and washed off within the 15 minute time frame.

Precaution: When using **NORGLASS METAL ETCH CLEANER** wear protective clothing to avoid skin contact, wear goggles to protect the eyes. Read all can directions for use and safety precautions.

Note: At this stage all care must be taken to prevent **skin contact** with the metal surface, to avoid contamination by body fats. This occurs by condensation due to the different surface temperatures i.e. warm skin and cold metal will cause condensation to settle on the surface and reduce adhesion. An example of this is: Place your hand on a mirror. Warm skin on the cold glass will leave a print of body oils and condensation behind.

If the first coat of paint cannot be applied on the day of cleaning, the prepared surface must be covered to avoid contamination.
On dull or weathered aluminium follow the above procedures and remove any powdered aluminium by sanding/scrubbing with a plastic scouring pad and domestic cream cleanser. Then proceed with cleaning, using **NORCLEAN-PLUS** on a paper towel & leave to dry off.
Note: On the day of painting the surface must be cleaned with NORCLEAN-PLUS prior to painting.

Preparation (previously painted)

If the paint condition is generally poor remove it all by Soda blasting, or using **NORGLASS ORANGE-PEEL** paint stripper and prepare as above. Alternatively abrade the surface with 220 grade sandpaper by orbital sander, or by hand (using a cork block). If the latter method is used, wear a pair of fabric gardening gloves to prevent skin contact with metal. Remove all loose and flaking paint. Dust off or vacuum the surface, clean with NORCLEAN-PLUS, then apply **NORGLASS SHIPSHAPE PRIMER UNDERCOAT** as indicated further on.

Note: If there is to be any delay in applying the **SHIPSHAPE** cover the metal with plastic dust sheets to avoid atmospheric contamination or moisture. Wipe over the entire surface with **NORCLEAN-PLUS** before continuing.

NORGLASS SHIPSHAPE PRIMER UNDERCOAT is a 2 pack Epoxy coating with excellent adhesive properties as well as filling characteristics. Because of its high resin loading, **SHIPSHAPE** eliminates the need to etch-prime the surface and provides an excellent base for single or 2 pack finish paints. **SHIPSHAPE** can be applied by brush, roller or spray and produces a satin finish to easily highlight surface defects. Colours available are white and grey.

Application

Pour the **SHIPSHAPE HARDENER** into the **BASE** can (which will give the correct mixing ration of 3:1) and stir thoroughly to blend both components. Allow to stand for 10 minutes so that the chemical induction process can begin. If spraying, add 25-33% of **NORTHANE SPRAYING THINNERS** to the mixed paint and apply at 50-70 PSI pressure using a 1.4-1.5 nozzle appiture. Allow the applied paint film 15-20 minutes to tack up and respray with another coat. Additional coats can be applied in the same manner on the same day.

If **SHIPSHAPE** is to be applied by brush or roller, thinning is not recommended, but 5% of Norglass Epoxy Thinners can be added in hot weather. On broad areas, application by a Mohair or Microfibre roller (4mm nap) will give the best results. It is important to understand that all primer and undercoats are designed to seal and/or fill the surface being coated and therefore, do not **self-level** like finish coats. The density and texture they provide will require sanding so the smoother the product is applied, the less sanding will be needed later.
Note: Because **SHIPSHAPE** is constructed with higher resin loadings than other paints, paint runs are more likely to occur if applied too heavily, so care should be taken. The higher the resin ratio, the better the adhesion which is the prime function of this product.

Where a brush or roller is used, the coating **will require overnight curing and light sanding before another can be applied**. For a superfine finish the last coat of **SHIPSHAPE** should be wet and dry sanded using 400 grit paper.
Note: **The pot life of mixed SHIPSHAPE is six hours (minimum at 20 °C). Over coating SHIPSHAPE with other products must not be considered until 24 hrs have elapsed.**
Note: Epoxies like Shipshape and Norflex will not cure below 10°C

Filling

Any cosmetic filling can only be considered **after** the metal has been coated up with the **SHIPSHAPE.** The most important step is covering the bare metal as soon as it is cleaned down. The longer it is left exposed the greater the risk of contamination.
Therefore, **sealing it off** with **SHIPSHAPE** means any filling that is needed can be done at leisure and without fear of compromising the paint system. Any filling or fairing can safely be done with **NORFLEX EPOXY FILLER** over the lightly sanded **SHIPSHAPE.** When the **NORFLEX** is cured, sanding back will probably break through the **SHIPSHAPE** in small areas exposing bare metal but this is not a problem. All that is required before further filler or **SHIPSHAPE** may be applied – is to wipe the bare metal areas over with **NORCLEAN-PLUS** to eliminate moisture or other contaminants.
To achieve a perfect background surface the final coat of **SHIPSHAPE** will need to be fine sanded with 400 wet and dry sandpaper to remove **all traces** of gloss. Any remaining shiny spots of **SHIPSHAPE** will denote a hollow, so continue until the spot disappears. Where multiple coats have been applied within a few days, consideration should be given to leaving the final coat of **SHIPSHAPE** until all solvents have migrated out of the previous coats. This can take up to one week. Premature final sanding can still result in film contraction meaning surface variations may show through the finish coats at a later stage.

Finishing

At this stage a wide variety of products can be used depending on the performance required. For the best result use **NORTHANE.** This is the **premium finish** 2 pack polyurethane which produces a very high gloss with excellent fade resistance and durability. When cured, the paint gives the impression of being a baked enamel finish and has outstanding chemical resistance as well as being waterproof. On boats that are subjected to stone chipping and abrasion **NORTHANE** affords the best long term protection.

NORTHANE Application

Clean the surface with NORCLEAN-PLUS prior to applying NORTHANE. Pour the contents of the **NORTHANE HARDENER** into the **BASE** can and stir thoroughly until blended (mixing ratio 2:1 by volume). **Add up to 33%** of **NORTHANE SPRAYING THINNERS** at 50-70 P.S.I. on conventional spray units to the volume of mixed paint and re-stir. Pour into the spraying pot and apply at 50-70 PSI. HVLP and other spray equipment will require variations to the thinning ratio. If lower pressure systems are used consult the appropriate reference data on thinning, by the equipment suppliers.

Note: Spray a light tack coat evenly over the surface and allow 10 to 15 minutes for the film to become tacky. This can be determined by testing the paint on the masking tape. This tack coat is designed to "hold up" the next application of a full bodied pass with the spray gun without sagging. At this stage the obliteration of the **SHIPSHAPE** will determine whether further passes are required. Where **NORTHANE White** is applied over **SHIPSHAPE** the one full bodied spray coat may be sufficient to produce a solid looking job and eliminate the need for further coats. However, if **dark NORTHANE colours** are selected additional coats will be required and the selection of SHIPSHAPE GREY should be used instead,

The use of yellows and oranges are notoriously difficult to obtain coverage when applied over a less than uniform background. Any patchy areas will still show through after several coats of NORTHANE or WEATHERFAST PREMIUM enamel.
This is a problem with all yellow and orange lead free pigments regardless of manufacturer. The only solution is to make sure the background colour *is completely uniform* before painting i.e. uniformly white, grey, blue etc.

Brush or roller

Do not thin unless used in hot conditions. Up to 5% **NORTHANE BRUSHING THINNERS** can be added to assist flow and apply liberally. Keep the can or paint tray in the shade in order to, reduce solvent evaporation when using. If a thickening of the paint occurs add more Brushing Thinners (sparingly) to improve flow. Allow 10 minutes for the aeration to settle after mixing with the Hardener and then apply direct from the can or paint tray. Apply with a minimum of strokes. Use a Mohair or Microfibre roller (4mm nap) and new synthetic brush. Mask up as if for spraying to reduce working time and cutting into edges and corners. A fine line masking tape is the preferred option to prevent paint creeping under the tape. The blue painters tape works best.

Important: When the final coat of **NORTHANE** has been applied, no further treatment is required to achieve a mirror gloss finish. However, if the job is completed outside and is not under cover, a tarpaulin or cover must be placed above the job 2 hours after painting is complete. This covering is to protect the **NORTHANE** from dew settling onto the Horizontal surfaces and affecting the gloss. **If the cover has not been installed by 4 pm in shady areas, some flattening of the gloss level (horizontal surfaces only) will occur and require more sanding and recoating.**
NOTE: Care must also be taken up to 48 hours after **NORTHANE** has been applied because the finish will "bruise" or "imprint" if pressure is applied to the paint finish.
Where **NORTHANE** is to be masked up within 48 hours of drying, use only fine line masking tape. Otherwise the pressure applied to the normal masking tape will imprint into the uncured paint finish.

WEATHERFAST PREMIUM Enamel Alternative

Complete all previous stages up to **FINISHING.**
WEATHERFAST PREMIUM Enamel is a carefully modified Polyurethanes coating to provide excellent gloss, coverage and durability. Read data sheet information and can directions for use before painting.

Application

Spray - Thin with 25-33% of **WEATHERFAST SPRAYING THINNERS** and apply at 50-70 PSI. Allow to tack off (15-20 minutes) and recoat. If HVLP spray equipment is used, follow the recommendations described.
If **WEATHERFAST PREMIUM Enamel** is applied in an exposed area, allow to become dust free and cover lightly with plastic sheets to avoid dew affecting the gloss as described above. Treat the cured finish carefully for the first week to allow through curing.

Brush or Roller - Do not thin. Apply directly from the can. In hot weather add up to 5% of **WEATHERFAST BRUSHING THINNERS** (10 – 50 mls per litre) to improve the flow. Allow overnight to dry before attempting to recoat. Recoating may be done without further sanding, provided that no more than 4 weeks elapses. Light sand after that time.
Clean up with **WEATHERFAST BRUSHING THINNERS.** If using strong colours in hot weather keep the container in the shade and add more Brushing Thinners to assist the flow.