



Polyurethane Undercoat

Optimised Surfacing & Sanding

FEATURES

Advantages:

- Excellent build tolerance up to 100µm DFT in a two pass application
- Superior sanding properties
- Excellent water barrier properties
- Improved film strength over competitors – neither brittle nor soft
- Wide maximum over coating times for easy project management
- AY&B Polyurethane Undercoat may be top-coated with either acrylic or polyester urethane finishes and is especially formulated as an undercoat or sealer under AY&B Elite® polyurethane finish coats.
- May be applied as a thin film (50µm DFT) tie/seal coat, or as a higher build undercoat (100µm) applied in two wet-on-tack passes. (see overleaf)
- Surface tolerance and excellent adhesion to a wide range of suitably prepared and / or primed substrates
- Superior adhesion properties compared to other polyurethane undercoats
- Formulated without lead, chromate or mercury containing materials

RECOMMENDED USES

Altex Yacht & Boat Paint Polyurethane Undercoat is a high performance, sandable undercoat which exhibits a number of significant advantages over existing polyurethane undercoats.

By combining new technology polyurethane binders, AY&B Polyurethane Undercoat features excellent build characteristics & superior water resistance, coupled with low temperature cure & extended pot life.

The sanding qualities are second to none - providing both the DIY user and the Professional applicator with an optimised product for all new and maintenance repaint work.

AY&B Polyurethane Undercoat is recommended for:

- Use above the waterline only
- Maximised adhesion when transitioning between epoxy undercoats and the selected polyurethane finish coat - in all marine situations
- Direct application to sanded, aged polyurethane topcoats for "Two step – Two coat" maintenance repaint work
- Exterior topside & superstructure final sealing to provide a fully recoatable surface for extended periods before sanding & finish coating
- Application over all AY&B epoxy systems

Limitations of Use: Not suitable for use below the waterline.

SPECIFICATION DATA

Coating Type:	Polyurethane matrix
Colour:	Standard: Off White NZ only: Mono Grey
Packaging:	1.25 & 5 Litre kit
Mix Ratio:	4 : 1 by volume
Volume Solids:	45% ± 2%
Gloss:	Medium Sheen
Flash Point:	27°C Setflash
Temp. Resistance:	120°C dry
Thinner:	Spray: Thinning Solvent #20 Brush/Roller: Thinning Solvent #22
Pot Life:	2 hours at 25°C
Induction Time:	15 minutes (for cooler temps)
Density:	1.46 kg/litre
VOC (EPA 24):	503 g/litre
Theoretical Coverage Rate:	4.5 sq meters per litre at 100 microns dry
Recommended Film Thickness Per Coat:	111 - 166 microns wet to obtain 50-75 microns dry 166 - 222 microns wet to obtain 75 – 100 microns dry (apply two passes to achieve 75 – 100µm DFT total)
Application:	Spray, brush or roller
Storage:	Store under cool, dry conditions
Dry Times (25°C / 100 µm DFT / 50% RH):	
Touch dry: 1 Hour	Dry to Sand: 16 hours

Recommended Recoat / Overcoat:

Min. Self Recoat:	30 – 60 mins between passes 16 hours between coats
Min. To Topcoat:	16 hours all products
Max. Self Recoat:	4 days without sanding unlimited with thorough sanding.

Max. To Topcoat:

Undercover with Elite® Polyurethane Finishes:

Up to 90 days, freshly sanded within 5 days of finish coating.

Outside with Elite® Polyurethane Finishes:

Up to 60 Days - freshly sanded within 5 days of topcoating.

(all surfaces to be solvent wiped with Altex C50 Surface Cleaner immediately before coating)

(& see additional notes opposite)

Cure Time Notes:

Dry to sand and/or overcoat times will increase with higher film builds, and/or lower temperatures.

Maximum cure times before topcoating are based on thorough fine sanding & dedusting within 5 days and solvent wiping, with C50 Surface Cleaner immediately before application of any subsequent coats.

Application Conditions:

Condition	Material	Surface	Ambient	Humidity
Minimum	12°C	12°C	12°C	0%
Maximum	32°C	32°C	32°C	80%
Optimum	16-24°C	16-24°C	16-24°C	30-70%

This product requires the substrate temperature to be above the dew point

SURFACE PREPARATION

All surfaces must be clean, dry, free of wax or any other contaminants and be suitably abraded.

GRP, Epoxy Glass Laminates, Gelcoat, Carbon Fibre, and Aged Epoxy Fairing or Primers.

An epoxy primer or undercoat should be applied to these surfaces before application of AY&B Polyurethane Undercoat. Refer to AY&B Epoxy Barrier Undercoat, or AY&B Epoxy Primer Data Sheets for details on surface preparation and priming/surfacing.

Epoxy Undercoats, Aged Polyurethanes,

Low pressure water clean (3,000 psi) all surfaces to remove soluble contaminants and salts.
Solvent wipe, using the two rag method with Altex D30 Degreaser / Dewaxer to ensure full removal of all surface contaminants. Or, if residual contamination persists, wash with Altex P40 Prepainting Cleaner. (Refer Product Data Sheet)
Sand all surfaces to achieve an even, fair and matt surface. Typical grades used will be in the range of 120 – 220 grit.

DIRECTIONS FOR USE

Mixing:

Altex Polyurethane Undercoat is a two-component product supplied in kits which contain the correct ratio of ingredients. The entire contents of each container should be mixed together, or care must be taken to accurately measure each component if mixing part packs.

Power mix Part A first to obtain a smooth, blended homogeneous condition. After mixing Part A, add Part B slowly with continued agitation. Continue to stir for at least 5 minutes. Allow an induction time of 15 minutes before thinning & application.

The pot life of the mixed material is 2 hours at 25°C. Higher temperatures will reduce the working life of the coating; lower temperatures will increase it.

Thinning:

Undercoating:

Thinning is not always required. Thin to suit conditions and equipment - typically up to 10% v/v with Altex Thinning Solvent #20. Apply two wet-on-tack passes to achieve a dry film build of 75 - 100µm. For optimum build, thin only sufficiently to achieve good atomisation.

Seal Coating: Thin 10-12% with Altex Thinning Solvent #20 and use a fine finishing tip to achieve a well atomised, thin film of 50 - 60µm dry film thickness.

For brush application, thin no more than 5% with Altex Thinning Solvent #22. Thin only sufficiently to assist application.

Clean-up: Use Altex Thinner #25, #20 or #22.

Application: Altex Polyurethane Undercoat may be applied by spray, brush or roller. Application by air assisted airless (preferred method) or conventional air spray (pressure pot) equipment is the industry norm.

Roller Application: Use a 5mm nap roller – longer fibres will prove to be difficult to use. In cooler temperatures (<20°), try to avoid thinning to assist in achieving film build. In warmer temperatures, thin judiciously with Thinning Solvent #22. Excess thinning will compromise build properties.

Suggested Spray Equipment:

Air Spray: *Graco* - Delta Air Spray; 1.0 – 1.4mm Fluid Nozzle
DeVilbiss - JGA Gun, E Fluid Nozzle, 78 Air Nozzle

Air Assisted Airless: *Graco* 30:1. 2,400 psi: Air 30 psi. 412 tip.
(Note: Other equipment equivalent to the above may be used.)

Sanding:

Hand: AY&B Polyurethane Undercoat is normally hand sanded with 220 – 280 grit (for further undercoating), followed by 320 grit sandpaper prior to topcoating.

Orbital: Use up to 220 - 240 grit when being over-coated with additional coats of AY&B Polyurethane Undercoat, or 280 - 320 grit prior to finish coating. We recommend 3M Free-Cut® Gold or Norton NoFil®, (or equivalent) Zinc Stearate, or Calcium Stearate sandpapers for optimised sanding and self cleaning.

Sanding prior to full through cure will impair sanding properties and tend to clog the sandpaper. Full hard cure will provide a readily sandable surface that will cut efficiently and avoid clogging.

Topcoating: For surface cleaning & dedusting prior to finish coating, use Altex C50 Surface Cleaner, or Altex Thinning Solvent #109, using the two-rag method. We recommend the use of Tack Rags to remove dust residues.

Compatible AY&B Primers:

Epoxy Aluminium Primer
Epoxy Primer
Epoxy Barrier Undercoat
Epoxy High Build Surfacer

Compatible AY&B Topcoats:

Elite® Defender
Elite® 239
Elite® 321 Brushing Polyurethane

PRECAUTIONS

For Professional & DIY Use: Read and follow all the caution statements on this Product Data Sheet, the product label and the Safety Data Sheet (SDS) for health and safety information prior to use.

AY&B Polyurethane Undercoat is flammable. Keep away from heat, sparks and open flame. Use with adequate ventilation. May cause eye and skin irritation. Do not breathe vapour or spray. Wear suitable protective clothing such as gloves and eye and face protection.

AY&B Polyurethane Undercoat contains isocyanate. When sprayed it may be harmful by inhalation - do not breath vapour of spray. Wear suitable clothing, gloves, eye and face protection, including suitable breathing protection such as an air supplied respirator or hood.

Additional information is available from the Worksafe New Zealand Approved Code of Practice for the safe use of Isocyanates. We recommend that the latest information be obtained and read carefully. This information is being constantly updated and needs to be clearly understood by applicators prior to the use of this type of coating.

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