



Elite[®] Defender

Professional Use Polyurethane Finish

FEATURES

Elite[®] Defender:

For professional use only.

- Convenient 1:1 volume mix ratio
- Improved wet flow coupled with excellent hold up of the wet film
- Superior 'lay-down' characteristics minimise orange peel and enhance the Distinctness of Image (DOI)
- Excellent re-flow on laps and spot sprayed areas
- Formulated with a complex blend of solvents designed to provide a staged evaporation rate. (see overleaf for additional thinning directions to provide absolute control over application characteristics)
- Rapid cure to early tape time - typically overnight
- Available in a full range of colours – including custom colours, as well as Clear for additional durability
- Gloss levels may be reduced with Altex Polyurethane Flattening Paste to provide low sheen finishes for interior work

Limitations of Use

- Do not apply to areas below the waterline
- Deep tone shades are invariably based on transparent or semi-transparent pigments – such colours will require multiple coats to ensure full coverage and opacity are achieved.
- Do not apply in temperatures less than 10°C, or when the dew point is within 3°C of the surface temperature.

RECOMMENDED USES

Elite[®] Defender is a professional grade spraying finish coat especially formulated for use in the marine industry and provides a convenient 1:1 (Part A : Part B) mix ratio by volume.

Elite[®] Defender is based on the latest aliphatic urethane technology, giving exceptional UV protection and an ultra-durable gloss. It has been developed specifically to resist the high UV light exposure in both NZ and Australia.

Elite[®] Defender is designed to provide a high-quality finish for both maintenance repaint and new construction in the marine industry.

Elite[®] Defender is recommended for:

- application over either:
 - AY&B Epoxy Barrier Undercoat or
 - AY&B Polyurethane Undercoat
- Topsides, decks, interiors, and fittings that require a premium quality finish.
- Areas such as showers, heads, and galleys where a highly cross-linked film is needed to resist moisture and heat.
- Masts, spars, and other exterior fittings & fixtures

SPECIFICATION DATA

Generic Type:	Linear Aliphatic Polyurethane
Colour:	White, AY&B Standard and Custom Colours (refer to colour card) NZ Only: Clear
Packaging:	2 and 8 litre kits
Mix Ratio:	1:1 by volume
VOC:	518 g/L (mixed)
Thinner:	Altex Thinning Solvent #20 (see overleaf for further details)
Pot Life (unthinned):	3 - 4 hours at 25°C
Pot Life (thinned):	5 - 6 hours at 25°C
Induction Time:	20 minutes at 25°C
Volume Solids:	38%
Shelf Life	Part A = 24 months Part B = 24 months

Storage:

The Part B is moisture reactive. Store under cool and dry conditions. Avoid cyclic conditions that may cause condensation. Avoid using part tins wherever possible. Do not store part tins for more than 2 – 3 months, and check the contents before mixing with the Part A.

Theoretical Coverage Rate:

7.6 sq metres per litre at 50 microns dry
5.0 sq metres per litre at 75 microns dry

Recommended Film Thickness Per Coat:

60-70 microns wet, per pass, applied in 3 passes to achieve 60 - 80 microns total dry film build (unthinned)
(see application notes overleaf)

Dry Times (50µm DFT / 25°C / 50% RH):

Touch Dry:	1 - 2 hours
Hard Dry:	4 - 6 hours
Dry to Tape:	Overnight
Self Recoat:	4 hours minimum 24 hours maximum without sanding

Note: If recoating is required after more than 24 hours, matt the surface using fine grade (320 - 400 grit) sandpaper, Wet-or-Dry, or Scotchbrite[®] pad (fine green grade). DO NOT sand using lubricated (stearate or similar coated) paper. Dedust and degrease thoroughly.

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 should be clean, dry, and free from all contaminants.
All undercoated & sanded surfaces must be thoroughly dedusted before application of the Elite finish coat. We also strongly recommend the use of Altex C50 Surface Cleaner to aid removal of sanding particles, and light grease/oil contamination. Ensure that the undercoat is fully cured before degreasing to avoid solvent marring of the surface.

The degree of surface preparation will have a direct impact on the finish achieved. Attention to detail in the undercoating and sanding processes is critical to a satisfactory outcome. The use of guide coats when sanding is strongly recommended to ensure even sanding and surfacing.
Before application, ensure that adequate product is available for the surface area to be coated and that all tinted product is boxed / blended to ensure colour continuity.

DIRECTIONS FOR USE

Mixing:

Elite® Defender is a two-component product supplied in 2 and 8 litre kits which contain the correct (1:1 v/v) ratio of ingredients. Equal volumes of both Parts A and B must be mixed together.

Power mix Part A first to obtain a smooth, homogeneous condition. After mixing Part A, decant the required volume into a clean mixing container and add the Part B slowly with continued agitation. Allow an induction time of 15 minutes before application.

The pot life of the mixed material at 25°C is 3 - 4 hours, unthinned, and 5 - 6 hours thinned. Higher temperatures will reduce the working life of the coating; lower temperatures will increase it.

Thinning:

For optimised laydown of the film, use Altex Thinning Solvent #20 in temperatures between 15 and 20°C.

For faster evaporation (cooler temperatures <15°C) use Altex Thinner #76, or a blend of #76 and #20.

For warm temperatures, Thinning Solvent #22 will increase the wet edge time and enhance flow.

The level of thinning required will depend on environmental conditions, application techniques and the equipment used. In ideal conditions, only small volumes of thinners may be required - normally 5% by volume, and no more than 10%.

Optimum atomisation and flow are typically achieved with volume solids in the 20 - 30% range, and a viscosity of 15 - 17 seconds in a Ford 4 Cup.

Application:

Best results will be obtained using the three pass, wet-on-tack method, allowing approximately 40 - 60 minutes between passes.

Three passes, one ¼ wet coat, followed by two full wet coats (approximately 50 + 60 + 60 microns wet film thickness for each pass) will achieve a film build in the range of 50 - 60µms DFT total (assuming thinning of 5-10%)

For DFT's in the range of 70 - 75µms, we recommend a fourth pass, or a proof coat / full coat methodology.

Sufficient wet film build is required to achieve levelling and flow within the film. Do not apply in thin, dry coats.

Elite® Defender must be applied by spray - do not attempt to apply by brush or roller. Application by gravity fed or conventional pressure pot equipment are the preferred methods.

Suggested spray equipment is:

Air Spray	Pressure pot 1-1.6 bar (5-10 psi), atomizing air ~3.3 bar (~50 psi) 1.1 - 1.4mm fluid nozzle.
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(Note: Other equipment equivalent to the above may be used.)

Ensure all equipment and lines are clean, oil and moisture free. Check that the air supply is adequate (compressor capacity must be 16 cubic feet or greater) Do not apply to wet surfaces, in very cold temperatures, or under very humid conditions where condensation or fog could settle on the coating during the application or curing process.

PRECAUTIONS

For Professional Use Only: 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.

Elite® Defender 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.

Elite® Defender 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 SafeWork Australia and 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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