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# TECHNICAL DATA SHEET

## MA3 Tie-Coat

**ThistleBond 'MA3 Tie-Coat'** is a high performance anti-corrosive solvent based epoxy coating designed for use as a versatile universal primer for metallic and GRP substrates.

**ThistleBond 'MA3 Tie-Coat'** uses a well established blend of high molecular weight epoxy resin and a range of fine inorganic pigments and fillers combined with a specially formulated polyamine adduct which react together to produce an effective anti-corrosive system with excellent adhesion to a wide range of surfaces whilst providing an extended overcoating window for most finish Systems.

**Before proceeding, please read the following information carefully to ensure that the correct application procedure is fully understood.**

### SURFACE PREPARATION

**Steel Surfaces:** All oil and grease must be removed by thoroughly degreasing with **ThistleBond 'SFE Thinners'**. All rust and millscale must be completely removed. The preferred method for removal of rust and millscale is abrasive blast cleaning to a minimum of SA2½ to British Standard 7079 Part A1:1989 or equivalent near white finish. Where blast cleaning is not possible surfaces should be thoroughly cleaned by grinding or needle gunning.

**Galvanised Steel:** All oil and grease must be removed by thoroughly decreasing with **ThistleBond 'SFE Thinners'**. Any zinc corrosion salts must be removed by abrasion or thorough wire brushing.

**Aluminium Surfaces:** All oil and grease must be removed by thoroughly degreasing and the metal surface should then be abraded or lightly abrasive blasted.

**Polyester/Phenolic GRP Surfaces:** Abrade with 80 grade abrasive paper to remove all surface contamination. On Gelcoat use a random orbit sander to achieve a uniform mat finish.

### MIXING

**ThistleBond 'MA3 Tie-Coat'** is a two component material which must be mixed together prior to use.

The resin component should be thoroughly stirred to incorporate any slight separation then the total contents of the hardener container should be added and stirring continued until a homogeneous mix is achieved. Mechanical stirring using an electric drill fitted with a mixing device is the preferred method.

The mixed material must be used within 8 hours of mixing at temperatures of 20°C (68°F).

### APPLICATION

Application should not be carried out when the temperature is below 7°C (45°F) nor when the relative humidity exceeds 90% or the surface to be coated is less than 3°C above the dew point.

**ThistleBond 'MA3 Tie-Coat'** can be applied by brush, roller or spray.

**ThistleBond 'MA3 Tie-Coat'** is supplied ready for use for application by brush or roller, but will require thinning for application by spray.

Good quality brushes and mohair rollers are recommended for these methods of application and the **ThistleBond 'MA3 Tie-Coat'** should be applied to give a uniform coating thickness.

**Airless Spray Application:** Equipment with a 32:1 pump ratio should be used with an input pressure of 60 psi, 13-15 thou spray tips should be used.

**Conventional Spray:** Most types of equipment are suitable.

A typical set up using Devilbis Equipment is:

JGA Gun  
1.1MM Needle & Nozzle  
704 Aircap

**ThistleBond 'MA3 Tie-Coat'** does not normally require thinning for spray application. Where thinning is necessary due to climatic conditions then up to 10% **ThistleBond 'SFE Thinners'** may be added by volume.

All equipment must be cleaned IMMEDIATELY after use with **ThistleBond 'SFE Thinners'**.

#### Theoretical Coverage Rate

10 m<sup>2</sup> / litre at 50 microns dft (108 ft<sup>2</sup> / litre at 2 mils dft)

#### Recommended Film Thickness

Wet 100 microns (4 mils)

Dry 50 microns (2 mils)

## PHYSICAL CONSTANTS

**Mixing Ratio** 3 parts resin to 1 part hardener by volume.

**Appearance** Resin Thixotropic Liquid  
Hardener Clear Liquid

#### Drying & Cure times at 20°C

Usable Life	8 hours
Touch Dry	4 hours
Hard Dry	16 hours
Minimum Overcoating	16 hours
Maximum Overcoating	3 months
Full Cure	7 days

**Volume Solids** 50%

**V.O.C.** 475 gm/litre

**Shelf Life** Use within 5 years of purchase. Store in original sealed containers at temperatures between 5°C (40°F) and 30°C (86°F).

## PHYSICAL PROPERTIES

<b>Abrasion Resistance</b> ASTM D4060	70mgm weight loss per 1000 cycles-1kg load-CS17 wheel
<b>Impact Resistance</b> BS 3900 E3	Direct-5mm (0.2 inch) Reverse-2.5mm (0.1 inch)
<b>Dry Heat Resistance</b> ASTM D2485	100°C (212°F)
<b>Direct Pull Adhesion</b> ASTM D4541	38kg/cm <sup>2</sup> (550psi) (abrasive blasted steel)
<b>Salt Fog Resistance</b> ASTM B117	Excellent, unaffected after 5,000 hours exposure
<b>Tensile Shear Adhesion</b> ASTM D1002	140kg/cm <sup>2</sup> (2000psi)
<b>Humidity Resistance</b> BS 3900 Part F2	Unaffected 5,000 hours exposure
<b>Scratch Resistance</b> BS 3900 Part E2	No Failure 2.5kg (5.5 lbs) load

## HEALTH AND SAFETY

As long as normal good practice is observed **ThistleBond 'MA3 Tie-Coat'** can be safely used.

Protective Gloves should be worn to prevent skin contact.

Vapour masks should be worn for spray application.

A fully detailed **Material Safety Data Sheet** is either included with the material or is available on request.

## PACKAGING

Supplied in 2.5- litre packs.

The information provided in this Product Data Sheet is intended as a general guide only and should not be used for specification purposes. The information is given in good faith but we assume no responsibility for the use made of the product or this information because this is outside the control of the company. Users should determine the suitability of the product for their own particular purposes by their own tests. Detailed specifications are available on request from the company.

FOR FURTHER INFORMATION PLEASE CONTACT

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