

### Polyurethane Finish

**ThistleBond 'Polyurethane Finish'** is a high performance polymeric finish system specifically developed for the long term cosmetic protection of all types of structures such as concrete, brickwork, plaster, GRP, steel, aluminium or galvanised steel.

**ThistleBond 'Polyurethane Finish'** is based on a unique blend of polyester and urethane polymers reinforced with colour stable, chemical resistant pigments to produce a system which offers outstanding weather, abrasion, chemical and graffiti resistance, together with optimum gloss and colour stability.

**ThistleBond 'Polyurethane Finish'** is totally unaffected by extreme levels of ultra violet light and offers outstanding protection to internal and external surfaces.

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

#### SURFACE PREPARATION

All surfaces should be primed with the appropriate **ThistleBond Primer**.

Aluminium, galvanised steel and abrasive blasted steel surfaces should be primed with **ThistleBond 'MA3 Tie-Coat'** or **ThistleBond 'MA9 Tie-Coat'**.

Manually prepared steel surfaces should first be primed with **ThistleBond 'Anti-Corrosion Aluminium'**

All primed surfaces must be clean, dry and free from oil, grease and other contamination.

All primers should be applied in accordance with their product tech sheet.

#### MIXING

**ThistleBond 'Polyurethane Finish'** 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, whilst continuing stirring the contents of the hardener container should be added. Continue stirring until a homogeneous mix is obtained.

The mixed material must be used within 2 hours of mixing at 20°C (68°F).

#### APPLICATION

Application should not be carried out when relative humidity exceeds 85% or when the surface to be coated is less than 3°C above the dew point. The minimum temperature for application is 2°C (36°F).

**ThistleBond 'Polyurethane Finish'** is primarily supplied for application by conventional or airless spray. However, for small areas can be applied by brush or roller.

**Brush:** Good quality brushes should be used with even strokes, ensuring that the **ThistleBond 'Polyurethane Finish'** is not overbrushed leading to less than the specified coating thickness.

**Roller:** Short pile mohair rollers are the preferred equipment for this application method. **ThistleBond 'Polyurethane Finish'** should be spread evenly with regular checks made to ensure the correct uniform wet film thickness is achieved.

**ThistleBond 'Polyurethane Finish'** does not normally require thinning for brush / roller application. Where thinning is required **ThistleBond 'Polyurethane Thinners'** may be added.

Typical spray settings are as follows:

<b>Airless Spray:</b>	Pump Ratio	32:1
	Tip Size	0.0011-0.0015"
	Tip Pressure	2000 psi (145 Bar)

<b>Conventional Spray</b>	Pressure Pot	
	Needle Setup	1.1 - 1.8 mm

Excessively high tip spraying pressure should be avoided. The minimum pressure at the pump conducive to good atomisation should be used. **ThistleBond 'Polyurethane Finish'** may require up to 10% **ThistleBond 'Polyurethane Thinners'** for airless spray application.

**Conventional Spray:** Pressure Pot or Airless Assisted units are suitable types of equipment. A typical tip setting is a Devilbiss JGA 502 Gun with JGA 402FF Needle. **ThistleBond 'Polyurethane Finish'** may require up to 30% **ThistleBond 'Polyurethane Thinners'** for conventional spray application.

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 (107 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** 4 parts resin to 1 part hardener by volume.

**Appearance** Resin Coloured Liquid  
 Hardener Clear Liquid

**Drying & Cure Times at**

<b>20°C (68°F)</b>	Usable Life	2 hours
	Touch Dry	1 hour
	Hard Dry	4 hours
	Minimum Overcoating	1 hour
	Maximum Overcoating	24 hours
	Full Cure	7 days

**Volume Solids** 50%

**V.O.C.** 370 gms/litre

**Shelf Life** Use within 2 years of purchase. Store in original sealed containers at temperatures between 5°C (40°F) and 30°C (86°F).

**Fire Performance**

Meets requirements of BS476 Part 7 Class 1 surface spread of flame BS476 Part 6 Class 0 in accordance with UK Building Regulations 1985 Approvals Document B2/3/4 Appendix A, when applied to a variety of primed substrates, full details available on request.

**Food Contact** Meets FDA requirements CFR.21.175.300 for food contact.

**PHYSICAL PROPERTIES**

<b>Abrasion Resistance</b> ASTMD4060	25 mgm weight loss per 500 cycles-CS10 wheel
<b>Impact Resistance</b> BS2782 Part 3	No failure (0.9 kg load dropped 45 cm)
<b>Scratch Resistance</b> BS3900 Part E2	No failure 2.5 kg load
<b>Water Vapour Permeability</b> ASTMD1653	1.2 gm/mm/m <sup>2</sup> /24 hours
<b>U.V. Resistance</b> ASTM G 53	1000 hours QUV-B no loss of gloss, no colour change

**HEALTH AND SAFETY**

As long as normal good practice is observed **ThistleBond 'Polyurethane Finish'** can be safely used.

Vapour masks should be worn for spray applications.

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

**PACKAGING**

Supplied in 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.



[www.thistlebond.com](http://www.thistlebond.com)

**ThistleBond Division of E. Wood Ltd.**  
 Standard Way, Northallerton,  
 N. Yorks. U.K. DL6 2XA  
 Tel: +44(0)1609 780170  
 Fax: +44(0)1609 780438 & 777905  
 E Mail: [info@thistlebond.com](mailto:info@thistlebond.com)

FOR FURTHER INFORMATION PLEASE CONTACT

