



TECHNICAL DATA SHEET

Fluid Super Metal Resurfacing System

ThistleBond 'Fluid Super Metal Resurfacing System' is a high performance synthetic metal compound specifically developed for resurfacing and reforming damaged metal machinery and equipment.

ThistleBond 'Fluid Super Metal Resurfacing System' is based on a complex blend of epoxy resins combined with a polyamino curing system reinforced with a phosphor steel alloy to enhance the corrosion and chemical resistance of the whole system.

ThistleBond 'Fluid Super Metal Resurfacing System' can be applied to any damaged component and provides an excellent slip resistant surface in combination with a grip and is ideal for drive rollers and brake test rollers where grip is essential.

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

SURFACE PREPARATION

Heavy contamination due to oil or grease must first be removed using **ThistleBond 'Cleaner'**.

All loose material, rust and surface contaminants, including existing coatings, must be removed and the surface roughened by using an angle grinder, needle gun or abrasive blasting. Where grinding or needle gunning is used, the surface should be cross-scored to improve adhesion. Care must be taken, when angle grinding, to avoid polishing rather than roughening metal surfaces.

Where possible, abrasive blasting is the preferred surface preparation, especially in fluid flow repairs.

Surfaces should finally be carefully degreased using **ThistleBond 'Cleaner'**. Cloths should be frequently changed to avoid spreading contamination. On deeply pitted surfaces or porous castings, **ThistleBond 'Cleaner'** should be worked into the surface by brush and washed off using excess cleaner.

Parts (for example, threads or bearing surfaces) which must remain in position during application but must not adhere to **ThistleBond 'Fluid Super Metal Resurfacing System'** must be coated with **ThistleBond 'Release Agent'**.

MIXING

ThistleBond 'Fluid Super Metal Resurfacing System' is a two pack product comprising a resin and hardener component which must be mixed together prior to use.

Two volumes of resin component and one volume hardener component should be transferred to a clean container. The two components should then be thoroughly mixed to produce a completely streak free material.

The mixed material should be used within 40 minutes of mixing at 20°C (68°F). This time will be reduced at higher temperatures and extended at lower temperatures.

APPLICATION

The mixed material should be applied by stiff brush or squeegee to the prepared area as soon as possible after surface preparation, and certainly the same day to prevent flash rusting. If flash rusting does occur, the surface should be re-prepared.

On deeply pitted surfaces, the mixed **ThistleBond 'Fluid Super Metal Resurfacing System'** must be worked into the surface to ensure complete 'wetting out' and prevention of air entrapment. When a two coat application of **ThistleBond 'Fluid Super Metal Resurfacing System'** is specified, the second coat can be applied a minimum of 4 hours after the first application. The maximum overcoating time is 2 days at 20°C (68°F) if this time is exceeded, the surface of the **ThistleBond 'Fluid Super Metal Resurfacing System'** should be lightly abraded prior to application of the second coat.

Where a slip resisting system is required, a grip should be scattered into freshly applied **ThistleBond 'Fluid Super Metal Resurfacing System'**

On applications using formers treated with release agent, these formers can be removed as soon as the **ThistleBond 'Fluid Super Metal Resurfacing System'** has initially set.

All equipment must be cleaned IMMEDIATELY after use, with **ThistleBond 'Cleaner'**.

Theoretical Coverage Rate

1.5 m²/per 800 gm unit at 250 microns dft
(16 ft² per 800 gm unit at 10 mils)

Recommended Film Thickness

Wet 250 microns (10 mils)
Dry 250 microns (10 mils)

PHYSICAL CONSTANTS

Mixing Ratio	Resin	Hardener	
	2	1	By Volume
	5	1	By Weight

Appearance	Resin	Coloured Paste
	Hardener	Amber Liquid

Drying & Cure Times at 20°C

Usable Life	40 minutes
Initial Set	4 hours
Minimum Overcoating	4 hours
Maximum Overcoating	48 hours
Machining	8 hours
Full Mechanical	5 days

Volume Solids 100%

V.O.C. Nil

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).

Operating Temperature

	Maximum	Continuous
Dry Heat	250°C (480°F)	120°C (248°F)
Wet Heat	120°C (248°F)	70°C (158°F)

FOR FURTHER INFORMATION PLEASE CONTACT

PHYSICAL PROPERTIES

Compressive Strength	635kg/cm ² (9000 psi)
ASTM D695	
Flexural Strength	490kg/cm ² (7000 psi)
ASTM D790	
Tensile Shear Adhesion	195kg/cm ² (2800 psi)
ASTM D1002	(applied to blast cleaned steel)
Heat Distortion	60°C (140°F)
ASTM D648	
Corrosion Resistance	5000 hrs
ASTM B117	
Hardness (Shore D)	85
ASTM D2246	

HEALTH AND SAFETY

As long as normal good practice is observed **ThistleBond 'Fluid Super Metal Resurfacing System'** can be safely used.

The use of protective gloves is advisable during use.

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

PACKAGING

Supplied in 1 kg 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.

ThistleBond

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