

## Flexibilised Fluid Ceramic Carbide Compound

**ThistleBond 'Flexibilised Fluid Ceramic Carbide Compound'** is a high performance solvent free flexible polyceramic repair coating designed for the resurfacing of equipment operating in fluid flow environments.

**ThistleBond 'Flexibilised Fluid Ceramic Carbide Compound'** is based on a complex blend of high molecular weight and urethane polymers blended with inert pigments and silicas reacted with an amine accelerated isocyanate resin which produces a system with the optimum physical and mechanical strength.

**ThistleBond 'Flexibilised Fluid Ceramic Carbide Compound'** offers a resilient high performance system with outstanding protection against impingement, entrainment, cavitation and erosion corrosion and is ideal for resurfacing, propellers, kort nozzles, guide vanes and tube sheets etc.

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

### SURFACE PREPARATION

All dirt, and contamination should be removed, then surfaces should be degreased using **ThistleBond 'Cleaner'**. Surfaces should now be abrasive blasted to Sa2½ BS7079: PART A1 1989, or equivalent with a medium to coarse profile.

Equipment which has become salt impregnated due to service conditions should, first be wet blasted then dry abrasive blasted and checked for presence of salts. This process should be repeated until the salts are removed.

Alternatively, surfaces should be warmed with a blow torch or heat gun to bring salts up to the surface. The surface should once again be blast cleaned. This process must be repeated until no further sweating of impregnated salts is evident.

All residual abrasive dust should be blown clear of the prepared surface. Surfaces which are not required to bond to the **ThistleBond 'Flexibilised Fluid Ceramic Carbide Compound'** should be treated with **ThistleBond 'Release Agent'**.

### MIXING

**ThistleBond 'Flexibilised Fluid Ceramic Carbide Compound'** is a two component solvent free material comprising resin and hardener components which must be mixed together prior to use.

Add all the contents of the hardener container to the resin container and mix thoroughly to produce a streak free material. Alternatively measure three volumes of resin component and one volume of hardener component into a clean container and mix until completely streak free.

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

### APPLICATION

Application should be carried out as soon as possible after the surface preparation is complete, and certainly within 4 hours otherwise flash blasting will be necessary before application.

The mixed material should be applied by brush to provide an even smooth coating to the prepared / filled surface.

Where **ThistleBond 'Flexibilised Fluid Ceramic Carbide Compound'** is being applied over **ThistleBond 'Flexibilised Ceramic Carbide Compound'** a maximum of 4 hours should be allowed between applications, however, when two coats of **ThistleBond 'Flexibilised Fluid Ceramic Carbide Compound'** are being applied the maximum overcoating time is 24 hours.

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

### Theoretical Coverage Rate

0.8 m<sup>2</sup>/kilo at 1 mm (18ft<sup>2</sup>/kilo at 20 mil)

Note: For immersion service conditions, two coats to achieve a minimum total thickness of 750 microns are recommended.

**PHYSICAL CONSTANTS**

<b>Mixing Ratio</b>	Resin	Hardener	
	3	1	By Volume
	3	1	By Weight

<b>Appearance</b>	Resin	Light Grey Thixotropic Liquid
	Hardener	Brown Liquid

<b>Drying &amp; Cure times at 20°C (68°F)</b>	Usable Life	20 minutes
	Touch Dry	2 hours
	Hard Dry	4 hours
	Full Cure	7 days

**Volume Solids** 100%

**V.O.C.** Nil

**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).

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

**Operating Temperature**

	<b>Maximum</b>	<b>Continuous</b>
Dry Heat	150°C (300°F)	80°C (176°F)
Wet Heat	80°C (175°F)	50°C (122°F)

**PHYSICAL PROPERTIES**

<b>Tensile Strength</b>	200 kg/cm <sup>2</sup> (2825 psi)
ASTMD412	
<b>Abrasion Resistance</b>	0.08 ml loss per 1000 cycles
ASTM D4060	1 kg load CS 17 Wheel
<b>Corrosion Resistance</b>	Unaffected after 5000 hours exposure
ASTMB117	
<b>Impact Resistance</b>	20 Joules (175 ins lbs)
ASTMD256	
<b>Flexibility</b>	30%
ASTMD522-4	

**HEALTH AND SAFETY**

As long as normal good practice is observed **ThistleBond 'Flexibilised Fluid Ceramic Carbide Compound'** can be safely used.

Protective gloves should be worn during use.

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

**PACKAGING**

Supplied in 1kg 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.



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FOR FURTHER INFORMATION PLEASE CONTACT