

## CERAMI-TECH F.G.

### Two Component Epoxy Ceramic Fluid Coating



**Thortex Cerami-Tech F.G.** is a high performance fluid grade engineering resurfacing compound designed for use in fluid flow environments.

The **Thortex Cerami-Tech F.G.** formulation uses a complex blend of epoxy resins and a polyamino-amide curing system reinforced with carbide and ceramic particles to produce a coating with a high level of abrasion and erosion resistance combined with optimum physical and mechanical strength.

**Thortex Cerami-Tech F.G.** offers outstanding protection against impingement, entrainment and erosion / corrosion conditions.

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

#### SURFACE PREPARATION

All dust and loose material should be scraped away. Oil and grease should be removed with **Thortex Universal Cleaner**. Surfaces should then be abrasive blast cleaned to a minimum Sa2½ BS7079 Part A1 : 1989 or equivalent with a blast profile of 75 microns (3 mil) corresponding to 'Medium' in BS7079 Part C3/ISO 8503/1. All loose abrasive dust and debris must be blown clear or vacuum cleaned away.

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.

On sections of repair which are not required to bond to the **Thortex Cerami-Tech F.G.** these surfaces should be treated with **Thortex Release Agent**.

#### MIXING

**Thortex Cerami-Tech F.G.** is a two component material comprising base and activator components which must be mixed together before use.

Mix the entire contents of the base and activator containers.

Alternatively measure three volumes of base component and one volume of activator into a clean container. The two components should be thoroughly mixed until completely streak free.

The mixed material should be used within 25 minutes of mixing at 20°C (68°F). This time will be reduced at higher temperatures and extended at lower temperatures.

#### APPLICATION

Application should not be carried out at temperatures below 5°C nor when relative humidity exceeds 85% or when the surface to be coated is less than 3°C above the dew point.

The mixed material should be applied to the prepared area using a clean brush or squeegee, application should be carried out as soon as possible after surface preparation is complete and certainly the same day, otherwise flash blasting will be necessary before application.

Where necessary **Thortex Reinforcement Tape** should be stippled into the mixed product and further material applied over the tape. For large areas the tape should be overlapped.

In areas where a second layer of **Thortex Cerami-Tech F.G.** is required, this application must be carried out within the initial set time for the first layer, otherwise the surface must be lightly abraded or flash blasted.

Machining of **Thortex Cerami-Tech F.G.** will cause excessive tool wear so care should be taken to finish the repair to the required size or dimensions. Formers treated with **Thortex Release Agent** can be used to minimise machining.

All equipment must be cleaned IMMEDIATELY after use with **Thortex Universal Cleaner**.

#### Theoretical Coverage Rate

1.76 m<sup>2</sup>/kilo at 250 microns dft (19 ft<sup>2</sup> per kilo at 10 mils)

#### Volume Capacity

440 cc (27 cu ins) per kilo

#### Recommended Film Thickness

Wet 250 microns (10 mils)

Dry 250 microns (10 mils)

**Note:** Normally applied as a two coat system to achieve a nominal film thickness of 500 microns.

Detailed working recommendations are available from the Technical Centre on request.

### PHYSICAL CONSTANTS

Mixing Ratio	Base	Activator	
	3	1	By volume
	8	1	By weight

Appearance	Base	Coloured Paste
	Activator	Amber Liquid

#### Drying & Cure

times at 20°C/68°F	Usable Life	25 minutes
	Initial Set	3 hours
	Machining Time	6 hours
	Full Mechanical	5 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 CFR21.175.300 for food contact.  
Canadian Food Inspection Agency - Accepted Product.

### PHYSICAL PROPERTIES

<b>Compressive Strength</b>	915 kg/per cm <sup>2</sup> (13000 psi)
ASTMD695	
<b>Tensile Shear Adhesion</b>	195 kg/per cm <sup>2</sup> (2800 psi)
ASTMD1002	
(Grit blasted steel)	
<b>Flexural Strength</b>	635 kg/per cm <sup>2</sup> (9000 psi)
ASTMD790	
<b>Rockwell Hardness</b>	100
ASTMD785	
<b>Abrasion Resistance</b>	0.065 ml loss per 1000 cycles
ASTM D4060	(CS17 wheel 1 kg load)
<b>Heat Distortion Temperature</b>	60°C (175°F)
ASTMD648	
<b>Corrosion Resistance</b>	5000 hours
ASTMB117	

### HEALTH AND SAFETY

As long as normal good practice is observed **Thortex Cerami-Tech F.G.** can be safely used.

Protective gloves should be worn.

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

### PACKAGING

Supplied in 1 kg and 3kg 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.



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FOR FURTHER INFORMATION PLEASE CONTACT