CERAMI-TECH FG
HIGH-PERFORMANCE CERAMIC-REINFROCED EPOXY COATING FOR ABRASION & EROSION PROTECTION

CERAMI-TECH FG is a premium-grade, solvent-free epoxy coating engineered with hardened ceramic fillers to deliver exceptional resistance against abrasion, erosion, and fluid-borne corrosion. Its brush-applied, high-build formulation creates a dense, long-lasting barrier that restores and protects metallic surfaces exposed to aggressive fluid flow environments.

Designed for ease of application, even on complex geometries, CERAMI-TECH FG offers excellent wetting properties for maximum adhesion and can be applied in a range of colours to suit operational and inspection requirements.

PRODUCT FEATURES

- **Outstanding Abrasion & Erosion Resistance** – Protects against high-velocity particulate and fluid wear.
- **Brushable High-Build Coating** – Easy to apply to complex shapes and intricate surface profiles.
- **Long-Term Asset Protection** – Extends the service life of pumps, valves, impellers, and other critical components.
- **Solvent-Free Formulation** – Low odour, safe for confined space applications.
- **Available in Multiple Colours** – Facilitates inspection and wear monitoring.

TYPICAL APPLICATIONS

CERAMI-TECH FG is ideal for resurfacing, repairing, and protecting metallic equipment operating in highly abrasive or erosive service conditions, such as:

- Worn or damaged impellers
- Pump and valve casings
- Separator housings
- Propellers and bow thrusters
- Rudders and water boxes
- Eroded pipework
- End plates and tube sheets

APPLICATION GUIDE

Phase 1: Surface Preparation

Metallic Substrates: Abrasive Blast Cleaning

1. Remove all oil, grease, and other contaminants using an appropriate cleaner such as MEK.
2. Abrasive blast clean all surfaces to SSPC-SP10 / NACE No. 2 (Near-White Metal Blast Cleaning) with a minimum surface profile of 3 mils using an angular abrasive.
3. After blasting, degrease and clean the prepared surface with MEK or a similar approved cleaner.
4. Apply CERAMI-TECH FG immediately after preparation, before any visible signs of oxidation ("gingering") occur.

Important: For salt-contaminated surfaces, pressure wash thoroughly with clean water and verify salt levels are within acceptable limits before application. Refer to the Surface Preparation & Pre-Application Guide for further details.

Phase 2: Product Preparation

Before mixing:

- Ensure the Base Component temperature is between 60–77°F.
- Confirm ambient and substrate temperatures are above 50°F and at least 6°F above the dew point.

Phase 3: Mixing

Full Unit Mixing (1kg / 3kg kits):

1. Pour the full contents of the Activator container into the Base container.
2. Scrape all remaining material from the Activator container to avoid ratio imbalance.
3. Using the spatula provided, thoroughly mix the two components until a streak-free, uniform colour is achieved.
4. Pay particular attention to the sides and base of the container to ensure complete blending.

Note: Once mixed, CERAMI-TECH FG has a usable life of 30 minutes at 68°F.

Phase 4: Application

1. Apply the mixed material using a short-bristle brush (approx. 1 inch bristle length).
2. Apply the first coat at a wet film thickness (WFT) of 10–14 mil.
3. Ensure thorough coverage, paying special attention to complex geometries, edges, corners, welds, and detailed areas – stippling with the brush may be required.
4. Allow the first coat to cure for approximately 2 hours at 68°F, or until it is hard enough to accept a second coat without disturbance.
5. Apply the second coat at the same target thickness of 10–14 mil.

APPLICATION AT A GLANCE

Step 1 – Gather Equipment

Ensure you have:
1 x Base Unit
1 x Activator Unit
1 x Spatula
1 x Short-bristle brush (trimmed to approx. 1 inch)

Step 2 – Combine Components

- Open the Activator container and pour the entire contents into the Base container.

Step 3 – Mix Thoroughly

- Using the spatula provided, mix both components together, ensuring any unmixed material from the edges and base of the container is incorporated.

Step 4 – Check Consistency

- Confirm the product is fully mixed by checking for colour uniformity. The final mix should be a consistent mid-grey with no streaks.

Step 5 – Apply Coating

- Using the short-bristle brush, apply the mixed product evenly to the prepared substrate, stippling into edges, corners, and detailed areas as required.

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TECHNICAL DATA & PERFORMANCE

Characteristics

Appearance

Base	Dark Grey, Light Grey, Red, or Blue Paste
Activator	Amber Liquid
Mixed	Dark Grey, Light Grey, Red, or Blue

Solids Content

100%

Volume Capacity

446cc/Kg

Sag Resistance

Nill at 15.8 mils

Density

Base	2.65
Activator	1.00
Mixed	2.24

Mixing Ratio

Component	Base	Activator
By Weight	8	1
By Volume	3	1

Shelf Life

5 years if unopened and stored in normal dry conditions 60-86°F

Coverage Rates

1KG of fully mixed product will give the following coverage rates -
19ft² at 10 mil
16ft² at 12 mil
14ft² at 14 mil

Please note that the coverage rates provided are theoretical and do not account for the profile or condition of the surface being repaired.

Cure Times

Useable Life

50°F	50 minutes
68°F	25 minutes
86°F	12.5 minutes
104°F	6 minutes

Minimum Overcoating Times

50°F	4 hours
68°F	2 hours
86°F	1 hour
104°F	30 minutes

Maximum Overcoating Times

50°F	12 hours
68°F	6 hours
86°F	3 hours
104°F	90 minutes

Full Cure

50°F	4 days
68°F	2 days
86°F	1 days
104°F	12 hours

Chemical Resistance

The product is resistant to a wide range of inorganic acids, alkalis, salts, and organic media. For more detailed information, please refer to the Unique Polymer Systems Technical Centre for advice.

Pack Sizes

This product is available in the following pack sizes:

1KG
3KG

Mechanical Properties

Abrasion Resistance Taber CS17 Wheels / 1KG Load	20mm³ loss / 1,000 cycles
Compressive Strength ASTM D695	960kg/cm² (13,650 psi)
Corrosion Resistance ASTM B117	Minimum 5,000 hours
Flexural Strength ASTM D790	635kg/cm² (9,000 psi)
Hardness Shore A ASTM D2240	82
Tensile Shear Adhesion ASTM D1002 (Abrasive Blasted Mild Steel with 75-micron profile)	202kg/cm² (2,875 psi)
Pull Off Adhesion ASTM D4541 (Abrasive Blasted Mild Steel with 75-micron profile)	244kg/cm² (3,480 psi)
Heat Distortion ASTM D648 at 264psi Fibre Stress	68°F Cure – 118°F 212°F Cure – 203°F
Heat Resistance	Suitable for use in immersed conditions at temperature up to 158°F Resistant to dry heat up to 392°F dependent on load

Approvals

Approved by **BUREAU VERITAS** for Surface Protection and Cold Repair Products applied to Marine Vessels. Certificate No. 58535 / A0 BV.

Food Contact USDA compliant for incidental food contact

Title 21, Food and Drugs, Chapter 1, U.S. Code of Federal Regulations, FDA, Subchapter B – Food for Human Consumption, Section 175.300 (Resinous and Polymeric Coatings).

Technical Service

Complete technical assistance is available. Please contact Thortex America, INC with your requirements:
1-610-831-0222 I kclarke@thortex.com

The products that we supply are for professional use only, it is your responsibility to read the technical data sheets before you place an order and prior to application of the product

Quality

All THORTEX AMERICA, INC products are manufactured and supplied in accordance with an ISO 9001 registered Quality Management System.

Warranty

All THORTEX AMERICA, INC warrants that the performance of the supplied product will conform to the typical descriptions provided in the Technical Data Sheet.

Health & Safety

Please ensure good practices are followed at all times during the mixing and application of this product. Protective gloves and other recommended personal protective equipment must be worn. Before mixing and applying the material, please ensure you have read and fully understood all relevant information.

Legal Notice

The data provided in this Product Technical Data Sheet is for informational purposes only and is believed to be accurate at the time of issuance. However, we cannot assume responsibility for results obtained by others whose methods are beyond our control. It is the customer's responsibility to assess the suitability of the product for their intended use. THORTEX AMERICA, INC accepts no liability arising from the use of this information or the product described herein.