CERAMI-TECH EG
HIGH-PERFORMANCE EPOXY FILLER FOR ABRASION & EROSION RESISTANCE

CERAMI-TECH EG is a high build, solvent-free epoxy repair paste specifically engineered to rebuild and protect metal surfaces exposed to severe abrasion, erosion, and corrosion. Reinforced with advanced ceramic fillers, it forms a dense, durable surface that resists mechanical wear and extends equipment service life in the most demanding industrial environments.

Its heavy-duty formulation allows for single-pass application up to 1 inch thick, making it ideal for rapid rebuilding of heavily pitted or damaged areas without shrinkage or slump. Once cured, CERAMI-TECH EG offers exceptional hardness, compressive strength, and resistance to aggressive fluid flow, making it the preferred choice for both preventative maintenance and emergency repair.

PRODUCT FEATURES

- **Exceptional Abrasion & Erosion Resistance** – Ceramic reinforcement provides outstanding mechanical wear protection.
- **High Build Repair Capability** – Apply up to 1 inch in a single layer for rapid rebuilding of worn surfaces.
- **Solvent-Free & Low Odour** – Safe for use in enclosed or occupied environments with zero VOC emissions.
- **Excellent Adhesion to Metal** – Bonds strongly to correctly prepared steel, cast iron, and non-ferrous metals.
- **Extended Service Life** – Reduces downtime, increases reliability, and prevents recurring damage.

TYPICAL APPLICATIONS

CERAMI-TECH EG is suitable for a wide range of industrial equipment repair and protection applications, including:

- Rebuilding worn pump impellers and pump casings
- Repairing propellers, rudders, and bow thrusters in marine environments
- Restoring damaged valves and separator housings
- Filling and protecting corroded water boxes and eroded pipework
- Refurbishing end plates and tube sheets in heat exchangers

APPLICATION GUIDE

Phase 1: Surface Preparation

Metallic Substrates: Abrasive Blast Cleaning

1. Remove all oil and grease from the surface using a suitable solvent-based cleaner such as MEK.
2. Abrasive blast clean to SSPC-SP10 / NACE No. 2 (Near-White Metal Blast Cleaning) with a minimum blast profile of 3 mils using angular abrasive.
3. After blasting, degrease and clean the surface with MEK or similar cleaner to remove any dust or contaminants.
4. Coat the prepared surface immediately, before any oxidation (“gingering”) occurs.

Note: For salt-contaminated surfaces, pressure wash thoroughly with clean water and test for residual salts before application. Refer to the Thortex Surface Preparation & Pre-Application Guide for further details.

Phase 2: Product Preparation

Before mixing, ensure:

- Base component temperature is between 60–77°F.
- Ambient and surface temperature is above 41°F.

Phase 3: Mixing

Part Mixing (small repairs)

1. Using the spatula provided, place 3 equal measures of Base onto the supplied mixing board.
2. Clean the spatula thoroughly.
3. Add 1 equal measure of Activator alongside the Base.
4. Mix the two components together until a uniform mid-grey colour is achieved, ensuring no streaks remain.
5. Check that no unmixed material remains on the spatula or board.

Full Unit Mixing

6. Dispense the full contents of the Base and Activator units onto the mixing board.
7. Mix thoroughly until a uniform mid-grey colour is achieved.
8. Ensure no unmixed material is left on the spatula or board.
9. Pot Life: Once mixing begins, use the material within 30 minutes at 68°F.

Phase 4: Application

1. Using a spatula or suitable applicator tool, apply the mixed paste to the prepared substrate.
2. Press firmly into all voids, pits, cracks, and scars to ensure full contact and adhesion.
3. Once the repair is complete, smooth the surface using a gloved hand (dipped in clean water if required) to remove imperfections.

APPLICATION AT A GLANCE

Step 1 – Prepare Materials & Tools

Ensure you have:
1 x Base unit
1 x Activator unit
1 x Spatula
1 x Applicator tool
1 x Clean mixing area

Step 2 – Measure Components

- Take 3 equal measures of Base material, clean the spatula, then take 1 equal measure of Activator.

Step 3 – Mix Thoroughly

- Using the spatula provided, combine the components, ensuring any unmixed material around the edges is incorporated.

Step 4 – Check for Consistency

- Spread the mixture into a diamond pattern and check for any areas not showing a uniform mid-grey colour.

Step 5 – Apply to Surface

- Using the applicator tool provided, apply the fully mixed CERAMI-TECH EG to the prepared surface, pressing firmly into defects.

CERAMI-TECH EG
HIGH-PERFORMANCE EPOXY FILLER FOR ABRASION & EROSION RESISTANCE

TECHNICAL DATA & PERFORMANCE

Characteristics

Appearance

Base	Dark Grey Paste
Activator	Light Grey Paste
Mixed	Mid Grey Paste

Solids Content

100%

Volume Capacity

406cc/Kg

Sag Resistance

None at 1 inch

Density

Base	2.70
Activator	1.70
Mixed	2.46

Mixing Ratio

Component	Base	Activator
By Weight	5	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 -
4.3ft² at 40mil
2.2ft² at 80mil
1.45ft² at 1/8”

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	60 minutes
68°F	30 minutes
86°F	15 minutes
104°F	7.5 minutes

Minimum Machining 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	6 days
68°F	3 days
86°F	1.5 days
104°F	18 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

Mechanical Properties

Abrasion Resistance Taber CS17 Wheels / 1KG Load	20mm³ loss / 1,000 cycles
Compressive Strength ASTM D695	1,075kg/cm² (15,300 psi)
Corrosion Resistance ASTM B117	Minimum 5,000 hours
Flexural Strength ASTM D790	703kg/cm² (10,000 psi)
Hardness Shore A ASTM D2240	84
Tensile Shear Adhesion ASTM D1002 (Abrasive Blasted Mild Steel with 75-micron profile)	206kg/cm² (2,920 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	20°C (68°F) Cure – 58°C (136°F) 100°C (212°F) Cure – 98°C (208°F)
Heat Resistance	Suitable for use in immersed conditions at temperature up to 60°C (140°F) Resistant to dry heat up to 200°C (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.