CERAMI-TECH HD
HIGH-BUILD EPOXY PASTE FOR SLIDING ABRASION RESISTANCE

CERAMI-TECH HD is a high-performance, solvent-free epoxy repair and protection system reinforced with precision-graded ceramic beads (8 – 47 mils). This advanced formulation is engineered to withstand sliding abrasion and erosive particle flow, delivering long-term durability in aggressive processing environments.

Designed for high-build application of up to 0.6 inch in a single layer without slumping, CERAMI-TECH HD provides exceptional resistance to small-to-medium particle wear. Its ceramic reinforcement creates a dense, hard-wearing surface barrier, protecting metallic substrates from material loss, extending service life, and reducing maintenance downtime.

PRODUCT FEATURES & BENEFITS

- **Superior Abrasion Resistance** – Withstands continuous sliding abrasion from small-to-medium particle flow.
- **High-Build Application** – Applies in thick layers up to 0.6 inch without sagging or slumping.
- **Ceramic Reinforced** – Contains hard ceramic beads for maximum wear protection.
- **Solvent-Free Formulation** – Safe to apply in confined or enclosed environments.
- **Long-Term Protection** – Reduces equipment wear, extending asset life and lowering repair costs.

TYPICAL APPLICATIONS

CERAMI-TECH HD is ideal for protecting and repairing equipment subject to erosive and abrasive service conditions, including:

- Internal pipe surfaces and bends
- Chutes and hoppers handling abrasive slurries
- Eroded pump and valve casings
- Separator housings and process vessels
- High-wear material handling zones

APPLICATION GUIDE

Phase 1: Surface Preparation

Metallic Substrates: Mechanical Abrasion

1. Remove all oil, grease, and surface contaminants using a suitable cleaner such as MEK.
2. Abrasive blast to SSPC-SP10 / NACE No. 2 (Near-White Metal Blast Cleaning) with a minimum angular surface profile of 3 mils.
3. After blasting, degrease and clean with MEK or similar solvent.
4. Apply CERAMI-TECH HD immediately after preparation to prevent flash rusting or oxidation.

⚠ Note: For salt-contaminated substrates, pressure wash with clean water and test for residual contamination. Refer to the THORTEX Surface Preparation & Pre-Application Guide for details.

Phase 2: Product Preparation

Before mixing:

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

Phase 3: Product Mixing

Full Unit Mixing (1.5kg / 5kg):

1. Dispense the full contents of the Base and Activator onto a clean plastic mixing surface.
2. Using the spatula provided, blend the components until a uniform, streak-free colour is achieved.
3. Take care to scrape material from both the spatula and mixing surface to avoid unmixed sections.
4. Use all mixed material within 50 minutes at 68°F.

Part Unit Mixing:

5. Place 3 equal measures of Base onto a clean mixing surface using the spatula.
6. Clean the spatula thoroughly.
7. Add 1 equal measure of Activator alongside the Base.
8. Mix until a streak-free, consistent colour is achieved before application.

Phase 4: Product Application

1. Apply the mixed material directly onto the prepared substrate using a spatula or applicator tool.
2. Press firmly to ensure the product is worked into pits, voids, or irregularities.
3. Profile and smooth the repair surface to the desired finish.
4. CERAMI-TECH HD can be applied as a single coat at a thickness of up to ⅝ inch without slumping.
5. For areas requiring thicker protection, apply in multiple layers, ensuring each layer cures before overcoating.

APPLICATION AT A GLANCE

Step 1 – Gather Equipment
Ensure you have:
1 × Base unit
1 × Activator unit
1 × Mixing board
1 × Spatula
1 × Applicator tool

Step 2 – Measure Components
Using the spatula, take 3 equal measures of Base and place on the mixing board. Clean the spatula, then add 1 equal measure of Activator alongside the Base.

Step 3 – Mix Thoroughly
Blend the two components together using the spatula, ensuring any unmixed material around the edges of the board is incorporated.

Step 4 – Check Consistency
Spread the mixed material into a diamond pattern on the mixing board to confirm a streak-free, uniform colour with no unmixed sections.

Step 5 – Apply Material
Using the applicator tool, apply the mixed ceramic paste directly onto the prepared substrate, pressing firmly into voids and smoothing to the desired profile.

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TECHNICAL DATA & PERFORMANCE

Characteristics

Appearance

Base	Mid Grey, Red
Activator	Dark Grey
Mixed	Mid Grey, Red

Solids Content

100%

Volume Capacity

584cc/Kg

Slump Resistance

Nill at 0.6 inch

Density

Base	2.10
Activator	1.40
Mixed	1.96

Mixing Ratio

Component	Base	Activator
By Weight	4.5	1
By Volume	3	1

Shelf Life

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

Coverage Rates

5KG of fully mixed product will give the following coverage rates -
15.70ft² at 80mil
7.85ft² at 160mil
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	100 minutes
68°F	50 minutes
86°F	25 minutes
104°F	12.5 minutes

Minimum Overcoating Times

50°F	8 hours
68°F	4 hours
86°F	2 hours
104°F	1 hour

Maximum Overcoating Times

50°F	16 hours
68°F	8 hours
86°F	4 hours
104°F	2 hours

Full Cure

50°F	8 days
68°F	4 days
86°F	2 days
104°F	24 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 THORTEX Technical Centre for advice.

Pack Sizes

This product is available in the following pack sizes:

1.5KG
5KG

Mechanical Properties

Abrasion Resistance Taber CS17 Wheels / 1KG Load	66mm³ loss / 1,000 cycles
Compressive Strength ASTM D695	990kg/cm² (13,985 psi)
Corrosion Resistance ASTM B117	Minimum 5,000 hours
Flexural Strength ASTM D790	420kg/cm² (6,000 psi)
Hardness Shore A ASTM D2240	89
Impact Resistance ASTM D256	16 J/m
Tensile Shear Adhesion ASTM D1002 (Abrasive Blasted Mild Steel with 75-micron profile)	148kg/cm² (2,100 psi)
Pull Off Adhesion ASTM D4541 (Abrasive Blasted Mild Steel with 75-micron profile)	272kg/cm² (3,940 psi)
Heat Resistance Full Immersion Resistance Water / Hydrocarbon Immersion to 122°F	Pass – No Blisters
Dry Heat Resistance ASTM D2485	Pass 248°F

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.