

Ceramic Repair Putty HT

High-Temperature, Ceramic-Reinforced Epoxy Repair Putty

Description

Advanced FRP Systems' **Ceramic Repair Putty HT** is a 100% solids, high-temperature resistant epoxy repair putty. This product features an engineered blend of ceramic particles, precisely sized to pack together as tightly as possible providing one of the most abrasion resistant repair products on the market. The chemically resistant epoxy backbone provides outstanding chemical resistance and high temperature resistance. **Ceramic Repair Putty HT** is specifically designed to handle thermal cycling and high temperature abrasion to provide a long-term, maintenance-free solution.

Product Advantages

- Amine Blush resistant formulation
- Outstanding adhesion to concrete, steel, masonry, ceramics and composites
- Dry heat resistance up to 425 °F
- Coefficient of Linear Thermal Expansion close to Steel
- Zero VOC, 100% Solids system
- Can be applied up to ½ inch thickness

Suggested Application

Designed for the most extreme wear conditions. **Ceramic Repair Putty HT** should be used to repair and rebuild worn and highly abraded surfaces. With excellent adhesion to ceramic, metals and concrete substrates and suitable for immersion or dry abrasion even at elevated temperatures, **Ceramic Repair Putty HT** can be used to rebuild, repair, and resurface a wide range of substrates.

Performance Data

	Test Method	Results
Abrasion Resistance	ASTM D4060; CS17 wheel, 1 Kg	4.7 mg loss/1000 cycles
Adhesion to Steel	ASTM D4541	2700 psi
Heat Distortion Temperature	ASTM D648	359 °F (182 °C)
Direct Impact Resistance	ASTM D2794	38 in lbs – Pass
Immersion Resistance	Fresh and Salt water; 1 year	No rust, no blistering, no loss of adhesion
Humidity Resistance	ASTM D4585; 10,000 hours	No rust, no blistering, no cracking, no loss of adhesion
Continuous Heat Resistance	ASTM D2485	425 °F (218 °C)
Excursion Heat Resistance		475 °F (246 °C)

Product Characteristics

Finish: High Gloss

Color: Grey

Volume Solids: 100%

Mix Ratio (by wt.): 3.7:1

Mix Ratio (by vol.): 2.8:1

Density: 2.08 g/mL

Approx. Coverage: 20 sqft/gallon at 80 mils

Maximum Film Build: 500 mils; Recommended 75 - 500 mils

Working Time: 20 minutes at 75 °F

Application Temperatures: 45 -105 °F

Ceramic Repair Putty HT is sold in 10 x 1 kg or 4 x ½ gallon packs units. Other unit sizes may be available.

Sold FOB Weymouth, MA

Cure Schedule

Cures for Application	50 °F (10 °C)	75 °F (24 °C)	100 °F (38 °C)
Dry to Touch	8 hours	4 hours	3 hours
Dry Hard	12 hours	6 hours	5 hours
Overcoat Window	8 - 48 hours	4 - 24 hours	3 - 18 hours
Cures for Service	50 °F (10 °C)	75 °F (24 °C)	100 °F (38 °C)
Atmospheric	8 hours	4 hours	3 hours
Abrasive Service	12 hours	6 hours	5 hours
Full Chemical Resistance	72 hours	48 hours	36 hours

Contact Advanced FRP Systems for elevated temperature post-cure information. Elevated temperature cures will increase chemical resistance and reduce return to service time.

Application Information

All Advanced FRP Systems products should be installed by a certified applicator or with direct oversight by Advanced FRP Systems, Inc. This data sheet provides general application guidelines for Ceramic Repair Putty HT.

Contact Advanced FRP Systems for more information if your project has detailed coating specifications.

Ensure air and substrate temperatures are between 45-105 °F and relative humidity is below 95%. Follow surface preparation guidelines below prior to coating.

Pour all of Part A – Hardener into Part B – Base and mix with low speed power agitator for 2-3 minutes. Using a paint stick or spatula, thoroughly scrape sides and bottom of unit. Mix with power agitator for an additional 2 minutes. Do not dilute Advanced FRP products.

Ceramic Repair Putty HT has the consistency of a thick putty or spackling compound. It should be applied with a trowel, notched trowel, or a plastic applicator.

Stripe coating of all crevices, weld seems, corners and sharp angles is an essential part of good coating practices and should be done for all immersion services. Heavily pitted areas should be filled with **Ceramic Repair Putty HT** or other Advanced FRP resurfacing material prior to coating.

Ceramic Repair Putty HT is designed to be applied up to 500 mils in a single coat. It can be worked into deep pits and gouges, can be used to bury weld seems, and resurface worn or corroded concrete.

After the coating system has cured, the dry film thickness should be measured by non-destructive dry film thickness gauges to verify minimum application thickness. The coating system should be free of all pinholes and holidays which can be tested through high voltage spark testing. The cured film should be essentially free of runs, sags, inclusions, and other defects. All coating deficiencies should be repaired and allowed to cure prior to return to service.

Surface Preparation

Steel (Immersion Service): Remove all oil and grease from surface with an SSPC-SP 1 Solvent Wipe prior to blasting. Abrasive Blast to an SSPC-SP 10 Near white metal blast with a sharp angular profile of 4+ mils (100+ microns).

Steel (Atmospheric Corrosion): Remove all oil and grease from surface with an SSPC-SP 1 Solvent Wipe. Minimum surface preparation of SSPC-SP 2 Hand Tool Cleaning must be performed. For enhanced performance, an SSPC-SP 6 Commercial Blast Cleaning with an angular surface profile of 2 – 3 mils (50 – 75 microns) should be used.

Concrete (Immersion/Secondary Containment): Refer to SSPC-SP 13/NACE No. 6, Section 4.3.1 or ICRI No. 310.2, CSP 1-3 for concrete preparation guidelines. Surface should be thoroughly cleaned and dry. Concrete and mortar must be cured at least 28



days @ 75 °F. Surface must be free of laitance, concrete dust, dirt, form release, curing aids and other foreign material. **Advanced FRP Sealer 200** should be applied prior to coating at 3-5 mils to increase adhesion and reduce outgassing.

Concrete (Atmospheric Corrosion): Refer to SSPC-SP 13/NACE No. 6, Section 4.3.1 or ICRI No. 310.2, CSP 1-3 for concrete preparation guidelines. **Advanced FRP Sealer 200** is not required but recommended for improved adhesion and aesthetics.

Previously Coated Surfaces: Consult with Advanced FRP to ensure previous coating is compatible. If compatible and previous coating is in good condition, remove all loose coating and foreign materials. Brush blast or grind all glossy areas to a uniform dull finish. Remove dust, oil and debris with SSPC-SP 1 Solvent Wipe prior to coating.

Storage and Shelf Life

Ceramic Repair Putty HT must be stored between 45 – 110 °F, out of direct sunlight. If stored in these conditions, the product will have a 24-month shelf life.

Safety Precautions

Please consult up-to-date Safety Data Sheets (SDS's) prior to use. An SDS should be available on site whenever Advanced FRP products are being used.

Warranty Information

Advanced FRP Systems, Inc. warrants that our products are free of manufacturing defects in accordance with applicable Advanced FRP quality control parameters. Liability for products proven defective, if any, is limited to replacement of defective product or refund of purchase price as determined by Advanced FRP Systems. Additional warranties and protection are available. Contact Advanced FRP for more information.

Disclaimer

The information and recommendations set forth upon this data sheet are based on years of laboratory and field analysis. This information is intended to be used as guidance only as many factors affect the performance of polymeric systems. Actual exposure conditions are the best test of suitability and Advanced FRP Systems will generally provide complimentary samples for field testing.

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