BRUSHABLE CERAMIC BLUE OR RED

DESCRIPTION

A brushable, high performance ceramic-filled epoxy for sealing, protecting and repairing surfaces subject to erosion, corrosion and wear.

INTENDED USE

Industrial Use: Protect pump casings, impeller blades, gate valves, water boxes, and fan blades; rebuild heat exchangers, tube sheets, and other water circulating equipment; top coat on repaired surfaces; seal and protect new equipment exposed to erosion and corrosion.

PRODUCT FEATURES

- Excellent chemical resistance
- Temperature resistance to 350°F (177°C)
- Applies easily with short-bristle brush or roller
- Low viscosity, self-leveling liquid

LIMITATIONS

Suitability of product is determined by the end user for their application and process.

TYPICAL PHYSICAL PROPERTIES

Technical data should be considered representative or typical only and should not be used for specification purposes.

Cured 7 Days @ 75°F (24°C)	Typical Values	Standard Tests
Adhesive Tensile Shear	2,000 psi (13.8 MPa)	Adhesive Tensile Shear ASTM D 1002
Brush Coat Thickness	10-20 mils (0.254-0.58 mm)	Compressive Strength ASTM D 695
Coefficient of Thermal Expansion (x10-6)	27.5 in/in.°F (49.5 cm/cm.°C)	CTE ASTM D 696
Compressive Strength	13,200 psi (91 MPa)	Cure Shrinkage ASTM D 2566
Coverage (0.015 in / 0.38mm)	7.6 ft2/lb (1.56 M2/kg)	Dielectric Constant ASTM D 150
Cured Hardness	86 D	Flexural Strength ASTM D 790
Cured Shrinkage	0.0020 in/in (0.0020 cm/cm)	Hardness Shore D ASTM D 2240
Dielectric Constant	3.87 @ 1 MHz	
Flexural Strength	8,000 psi (55 MPa)	
Salt Spray Resistance	5,000 hrs	
Solids by Volume	100%	
Specific Volume	16.5 in3/lb (0.596 cm3/g)	
Temperature Resistance	Wet: 302°F (150°C), Dry 350°F (177°C)	

Uncured Properties @ 72°F (23°C)	Typical Values
Color	Blue or Red
Functional Cure	16 hours
Mix Ratio by Volume	3.4:1
Mix Ratio by Weight	5.6:1
Mixed Viscosity	32,000 cP
Pot Life @ 75F	40 min
Recoat Time	4 – 6 hrs.
Density	12.77 lb/Gal (1.53 g/cm3)

SURFACE PREPARATION

1. Thoroughly clean the surface with a solvent such as Isopropanol Alcohol or Acetone to remove all oil, grease and dirt.
2. Grit blast surface area with 8-40 mesh grit, or grind with a coarse wheel or abrasive disc pad, to create increased surface area for better adhesion (Caution: An abrasive disc pad can only be used provided white metal is revealed).

Desired profile is 3-5 mil, including defined edges (do not “feather-edge” epoxy).

Note: For metals exposed to sea water or other salt solution, grit-blast and high-pressure-water-blast the area, then leave overnight to allow any salts in the metal to “sweat” to the surface. Repeat blasting to “sweat out” all soluble salts. Perform chloride contamination test to determine soluble salt content (should be no more than 40 ppm).

3. Clean surface again with a solvent such as Isopropanol Alcohol or Acetone to remove all traces of oil, grease, dust or other foreign substances from the grit blasting.
4. Repair surface as soon as possible to eliminate any changes or surface contaminants.

WORKING CONDITIONS: Ideal application temperature is 55°F to 90°F (13- 32°C). In cold working conditions, directly heat repair area to 100-110°F (38-43°C) prior to applying epoxy and maintain at this temperature during product cure to dry off any moisture, contamination or solvents, as well as to achieve maximum performance properties.

MIXING INSTRUCTIONS

---- It is strongly recommended that full units be mixed, as ratios are pre-measured. ----

1. Add hardener to resin
2. Mix thoroughly with screwdriver or similar tool (continuously scrape material away from sides and bottom of container) until a uniform, streak-free consistency is obtained.

CONTAINER SIZES (3 lb, 4 lb, 25 lb / 0.5 Kg, 1.8 Kg, 11.4 Kg): To mix, use a propeller-type Jiffy Mixer on an electric drill. Use model HS-1 for the (3 and 4 lb / 0.5 & 1.8 Kg) kits and e model ES for 25 lb / 11.4 Kg kits. Mix until color is uniform.

Note: Keep propeller below liquid line, as additional air can be added to mixture, resulting in air bubbles on the surface of the finished product.

APPLICATION INSTRUCTIONS

Apply two thin coats (8-15 mils) of Brushable Ceramic to ensure a lack of pinholes or holidays on the substrate (a low voltage, holiday detector will ensure a pinhole-free coating). Brushable Ceramic fully cures in 16 hours, at which time it can be machined, drilled or painted.

FOR GREATER THICKNESS

Use Brushable Ceramic as a coating in combination with Ceramic Repair Putty. For proper wear and adhesion, maximum thickness should not exceed 40 mils.

FOR ± 70°F (21°C) APPLICATIONS

Applying epoxy at temperatures below 70°F0 (21°C) lengthens functional cure and pot life times. Conversely, applying above 70°F shortens functional cure and pot life.

STORAGE

Shelf life 3 yrs from manufacture. See package label. Store at room temperature, 70°F (21°C).

COMPLIANCES

None.

CHEMICAL RESISTANCE

Chemical Resistance performed with 7 day, room temp. cure (30 days immersion) @ 300°F (150°C)

Benzene	Excellent
Gasoline (Unleaded)	Excellent
Hydrochloric 10%	Very good
Kerosene	Excellent
Mineral Spirits	Excellent
Nitric 50%	Poor
Phosphoric 10%	Fair
Potassium Hydroxide 40%	Very Good

Sodium Hydroxide 10%	Excellent
Sodium Hydroxide 50%	Very Good
Sodium Hypochlorite 10%	Excellent
Sulfuric 10%	Excellent
Sulfuric 50%	Fair
Toluene	Excellent
Xylene	Excellent
Crude Oil	Excellent

PRECAUTIONS

FOR INDUSTRIAL USE ONLY: Please refer to the appropriate **S**afety **D**ata **S**heet prior to using this product.

WARRANTY

ITW Polymers & Fluids will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control, we can accept no liability for the results obtained.

ORDER INFORMATION

Item No.	**Package Size**
D11760 (Red)	2 lb. (1kg)
D11765 (Blue)	2 lb. (1kg)

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