Technical Data Sheet

4/14/2018

Brushable Ceramic White

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

Intended 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
Applies easily with short-bristle brush or roller
Low viscosity, self-leveling liquid
Acceptable for use in meat and poultry plants
NSF® Approved (Certified to ANSI/NSF61)

Limitations: None

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	
Adhesive Tensile Shear	2,000 psi
Brush Coat Thickness	10-20 mils (.010 - .020 in.)
Coefficient of Thermal Expansion	27.5 [(in)x(in)x°F)]x10(-6)
Color	White
Compresive Strength	13,200 psi
Coverage/lb	7.6 sq.ft./lb. @ 15 mils(.015 i
Cured Hardness	84D
Cured Shrinkage	0.0020 in./in.
Dielectric Constant	3.87 @ 1 MHz
Flexural Strength	8,000 psi
Functional Cure	16 hrs.
Mix Ratio by Volume	5.6:1
Mix Ratio by Weight	8.5:1
Mixed Viscosity	40,000 cps
Pot Life @ 75F	21 min.
Recoat Time	4-6 hrs.
Salt Spray Resistance	5,000 hrs.
Solids by Volume	100
Specific Gravity	1.53 gm/cc
Specific Volume	16.5 in.(3)/lb.
Temperature Resistance	Wet 150°F

TESTS CONDUCTED

Coef. of Thermal Expansion ASTM D 696
Cure Shrinkage ASTM D 2566
Dielectric Strength, volts/mil ASTM D 149
Modulus of Elasticity ASTM D 638
Cured Hardness Shore D ASTM D 2240
Adhesive Tensile Shear ASTM D 1002
Compressive Strength ASTM D 695
Dielectric Constant ASTM D 150
Flexural Strength ASTM D 790
Thermal Conductivity ASTM C 177

Surface Preparation:

1. Thoroughly clean the surface with Devcon® Cleaner Blend 300 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 3-5mil, 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 40ppm).

3. Clean surface again with Devcon® Cleaner Blend 300 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. In cold working conditions, directly heat repair area to100-110°F 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.

LARGE SIZES (3 lb, 4 lb, 25 lb): Use a propeller-type Jiffy Mixer on an electric drill. Use model HS-1 for 3 lb and 4 lb kits. Use model ES for 25 lb kit. Mix until color is uniform and consistent.

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 APPLICATIONS
Applying epoxy at temperatures below 70°F lengthens functional cure and pot life times. Conversely, applying above 70°F shortens functional cure and pot life.

Storage:

Store at room temperature, 70 °F.

Compliances:

NSF-certified for potable water applications For NSF certification a cure time of 7 days is required.
Approved for use in meat and poultry processing plants

Chemical Resistance:

Chemical resistance is calculated with a 7 day, room temp. cure (30 days immersion) @ 75°F)

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

Sodium Hydroxide 10%	Excellent
Sodium Hydroxide 50%	Excellent
Sodium Hypochlorite	Very good
Sulfuric 10%	Very good
Sulfuric 50%	Fair
Toluene	Excellent
Xylene	Fair

Precautions:

Please refer to the appropriate safety data sheet (SDS) prior to using this product.

For technical assistance, please call 1-855-489-7262

FOR INDUSTRIAL USE ONLY

Warranty:

ITW Performance Polymers 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.

Disclaimer:

All information on this data sheet is based on laboratory testing and is not intended for design purposes. ITW Performance Polymers makes no representations or warranties of any kind concerning this data.

Order Information:

11770 2 lb.