

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:	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
Features:	<p>Excellent chemical resistance Temperature resistance to 350°F (177°C) Applies easily with short-bristle brush or roller Low viscosity, self-leveling liquid NSF® Approved (Certified to ANSI/NSF61)</p>
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
Adhesive Tensile Shear	2,000 psi (13.8 MPa)
Coefficient of Thermal Expansion (x10 ⁻⁶)	27.5 in/in.°F (49.5 cm/cm.°C)
Compressive Strength	13,200 psi (91MPa)
Cured Shrinkage	0.0020 in/in (0.0020 cm/cm)
Dielectric Constant	3.87 @ 1 MHz
Flexural Strength	8,000 psi (55 MPa)
Hardness	84 Shore D
Salt Spray Resistance	5,000 hrs
Solids by Volume	100
Temperature Resistance	Wet: 150°F (65°C); Dry: 350°F (176°C)

Standard Tests

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

Uncured Properties @ 72°F (23°C)

Color	White
Coverage (15 mil / 0.38 mm)	7.6 ft ² /lb (1.56 m ² /kg)
Hard Dry	6 hrs
Mix Ratio by Volume	5.6:1
Mix Ratio by Weight	8.5:1
Mixed Viscosity	40,000 cP
Pot Life @ 75°F (24°C)	40 min
Recoat Time	1-6 hrs.
Specific Gravity	12.77 lb/gal (1.53 g/cm ³)
Specific Volume	16.5 in ³ /lb. (0.596 cm ³ /g)

Surface Preparation:

1. Thoroughly clean the surface with Devcon® Cleaner Blend 300 or any appropriate non residual solvent cleaner eg. Acetone, MEK to remove all oil, grease and dirt.
2. Grit blast surface area following at least ISO 8501 SA 2 ½ (Very Thorough Blast Cleaning) and or SSPC-SP 10 (Near White Metal). When grit blasting is not possible the surface may be prepared following SSPC-SP 3 until at least "Condition A" is achieved.
The required surface profile depth is 3-5 mils (75-125µm).

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. The salt contamination level is recommended to not exceed 20mg/m² (2µg/cm²).

3. Clean surface again with Devcon® Cleaner Blend 300 or any appropriate non residual solvent cleaner eg. Acetone, MEK. To remove all traces of oil, grease, dust or other foreign substances from the substrate. Dust contamination level should not exceed Level 2 prior coating applications in accordance to ISO 8502-3.
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.

It's not recommended to apply the product when the temperature of the substrate is less than 5°F (3°C) above the Dewpoint, or the Relative Humidity is higher than 85%.

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 a spatula or similar tool (continuously scrape material away from sides and bottom of container) until a uniform, streak-free consistency is obtained.

Application Instructions: Brushable Ceramic is recommended to be applied in two coatings of each 12-20 mils (300-500µm). To ensure that the surface is completely covered and free from holidays or voids. It is recommended that after the application

of the second coating the surface should be checked to ensure that is free from voids and gaps, which if inside of the recoat window can be easily repaired by application of an extra coating over the faulty area.

INSPECTIONS AND REPAIR

Brushable Ceramic will reach Hard Dry within 6 hours when should be checked for pinholes and voids following NACE SP0188 to assure coating continuity using appropriated Holiday detector, with a voltage that should not exceed 4V/µm. For "Touch-Ups" and repairs outside of the recoating window it's recommended to reactivate the surface of the coating with a fallback area of 1in (2.5cm) of diameter, by sweep blasting or abrading to produce a gloss free surface and with a profile of 1-1.5mils (25-40µm).

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

Chemical Resistance: Chemical resistance is calculated with a 7 day, room temp. cure (30 days immersion) @ 75°F (24°C)

Benzene	Excellent	Sodium Hydroxide 10%	Excellent
Gasoline (Unleaded)	Excellent	Sodium Hydroxide 50%	Very good
Hydrochloric 10%	Very good	Sodium Hypochlorite 10%	Excellent
Kerosene	Excellent	Sulfuric 10%	Excellent
Mineral Spirits	Excellent	Sulfuric 50%	Fair
Nitric 50%	Poor	Toluene	Excellent
Phosphoric 10%	Fair	Xylene	Excellent
Potassium Hydroxide 40%	Very good	Crude Oil	Excellent

Precautions: **FOR INDUSTRIAL USE ONLY:** Please refer to the appropriate **Safety Data Sheet** prior to using this product.

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.

Order Information: 11770 - 2 lb. (0.91 Kg)

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