Technical Data Sheet
Version 5. 07/2024

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

Features:
Excellent chemical resistance
Temperature resistance to 350°F (177°C)
Applies easily with short-bristle brush or roller
Low viscosity, self-leveling liquid
Brushable Ceramic Red (not Blue) is approved for use in meat and poultry plants

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)	
Color	Blue or Red
Hard Dry	6 hrs
Mix Ratio by Volume	3.4:1
Mix Ratio by Weight	5.6:1
Mixed Viscosity	32,000 cP
Pot Life	40 min
Recoat Time	1-6 hrs.
Density	12.77 lb/Gal (1.53 g/cm3)

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 contaminamination 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 the Hard Dry within 6 hours when should be checked for pinholes and voids following NACE SP0188 to asure 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°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: Brushable Ceramic Red is approved for use in meat and poultry plants.

Chemical Resistance: Chemical Resistance perfromed 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 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:

EMEA
11762 - Blue 500g
11763 - Blue 5Kg
11752 - Red 500g

US
11765 - Blue 2lb
11767 - Blue 12lb
11760 - Red 2lb

Contacts:

www.itwpp.com

ITW Performance Polymers (EMEA)
Bay 150, Shannon Industrial Estate
Shannon, County Clare, Ireland V14 DF82
TEL: +353 61 771 500
FAX: +353 61 471 285
Email: customerservice.shannon@itwpp.com

ITW Performance Polymers (US)
30 Endicott Street
Danvers, MA 01923 USA
TEL: 855 489 7262
FAX: 978 774 0516
Email: info@itwpp.com