



## 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
Adhesive Tensile Shear	2,000 psi (13.8 MPa)
Brush Coat Thickness	10-20 mils (0.254-0.58 mm)
Coefficient of Thermal Expansion (x10-6)	27.5 in/in. °F (49.5 cm/cm. °C)
Compressive Strength	13,200 psi (91 MPa)
Coverage (0.015 in / 0.38mm)	7.6 ft <sup>2</sup> /lb (1.56 M <sup>2</sup> /kg)
Cured Hardness	86 D
Cured Shrinkage	0.0020 in/in (0.0020 cm/cm)
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 in <sup>3</sup> /lb (0.596 cm <sup>3</sup> /g)
Temperature Resistance	Wet: 302°F (150°C), Dry 350°F (177°C)

### Standard Tests

Adhesive Tensile Shear ASTM D 1002  
Compressive Strength ASTM D 695  
CTE ASTM D 696  
Cure Shrinkage ASTM D 2566  
Dielectric Constant ASTM D 150  
Flexural Strength ASTM D 790  
Hardness Shore D ASTM D 2240

### Uncured Properties @ 72°F (23°C)

Color	Blue or Red
Functional Cure	16 hrs
Mix Ratio by Volume	3.4:1
Mix Ratio by Weight	5.6:1
Mixed Viscosity	32,000 cP
Pot Life @ 75F	21 min
Recoat Time	4-6 hrs.
Density	12.77 lb/Gal (1.53 g/cm <sup>3</sup> )

- 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 3-5 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 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 (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°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:**

Brushable Ceramic Red is approved for use in meat and poultry plants.

**Chemical Resistance:**

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

**11760 (Red) 2 lb.**  
**11762 (Red) 12 lbs.**  
**11765 (Blue) 2 lb.**  
**11767 (Blue) 12 lbs.**

**Contacts:**

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

**Disclaimer:**

**Product Use:** The information herein is based upon good faith testing that ITW PP believes are reliable, but the accuracy or completeness of such information is not guaranteed. Many factors beyond ITW PP control and uniquely within user's knowledge and control can affect the use and performance of an ITW PP product in a particular application. Given the variety of influencers on performance, the data here is not intended to substitute end user testing. It is the end users sole responsible for evaluating any ITW PP product and determining whether it is fit for a particular purpose and suitable for user's design, production, and final application.

**Exclusion of Warranties:** As to the herein described materials and test results, there are no warranties which extend beyond the description on the face hereof. ITW PP makes no other warranties, express or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose. Since the use of the herein described involves many variables in methods of application, design, handling and/or use, the user, in accepting and using these materials, assumes all responsibility for the end result. ITW PP shall not otherwise be liable for loss of damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including negligence, warranty, or strict liability.