



Brunel Close, Park Farm  
Wellingborough  
Northants  
NN8 6QX  
01933 675299  
01933 670800  
ISS 2.0 18/02/02

## BRUSHABLE CERAMIC

### PRODUCT DATA SHEET

A high performance, high density, ceramic filled, brushable epoxy to seal and protect new or repaired surfaces from cavitation, pitting, erosion and wear.

#### FEATURES

- . Low viscosity achieves 100% contact with prepared surfaces
- . Allows precision rebuilding of worn areas up to 3mm deep
- . Easily applied using a short bristle brush
- . Excellent chemical resistance
- . Temperature resistance to 177°C

#### RECOMMENDED APPLICATIONS

- . Seal and protect new equipment exposed to erosion and corrosion
- . Protect pump casings, impeller blades, gate valves, water boxes and fan blades
- . Rebuild heat exchangers, tube sheets and other circulation water equipment
- . Use it as a topcoat on repaired surfaces to provide an exceptionally smooth surface

#### PRODUCT DATA

##### Typical Properties

Colour.....	Blue
Mixed Viscosity.....	32,000 cps
% Solids by volume .....	100
Cured Density .....	1.53gm/cc
Pot Life @ 21°C.....	40 minutes
Compressive Strength ASTM D695.....	105N/mm <sup>2</sup>
Adhesive Tensile Shear ASTM D1002.....	14N/mm <sup>2</sup>
Cured Hardness Shore D ASTM D2240.....	90D
Dielectric Strength, volts/mil ASTM D149.....	382
Typical Brush Coat Thickness .....	0.25mm - 0.5mm
Coverage cm <sup>2</sup> /kg @ 5mm thickness.....	1192
Cure shrinkage, cm/cm ASTM D2566 .....	0.0022

#### Chemical Resistance 7 days room temperature cure (30 days immersion @ 21°C)

5% Bleach (Sodium Hypochlorite)	Excellent	10% Phosphoric Acid	Very Good
5% Trisodium Phosphate	Excellent	40% Phosphoric Acid	Fair
10% Sulfuric Acid	Excellent	10% Sodium Hydroxide	Excellent
50% Sulfuric Acid	Fair	50% Sodium Hydroxide	Excellent
10% Hydrochloric Acid	Excellent	5% Alum (Aluminium Sulphate)	Excellent
10% Nitric Acid	Very Good	Ferric Chloride	Excellent
40% Nitric Acid	Fair	10% Acetic Acid	Unsatisfactory

Please consult ITW Devcon for other chemicals.

Epoxies are very good in water, saturated salt solution, leaded gasoline, mineral spirits, ASTM#3 oil and propylene glycol. Epoxies are generally not recommended for long term exposure to concentrated acids and organic solvents



Brunel Close, Park Farm  
Wellingborough  
Northants  
NN8 6QX  
01933 675299  
01933 670800  
ISS 2.0 18/02/02

## **APPLICATION INFORMATION**

### **General Surface Preparation**

Proper surface preparation is essential to a successful application. The following procedures should be considered :

- All surfaces must be dry, clean and rough.
- If surface is oily or greasy, use Devcon Fast Cleaner 2000 Spray /Cleaner Blend 300 to degrease the surface.
- All surfaces must be roughened, ideally by grit blasting (3-16 mesh/cm grit size) or by grinding with a coarse wheel or disc. This creates increased surface area and "edges" to lock into, and essential for successful application
- Metal that has been handling sea water or other salt solutions should be grit blasted and high pressure water blasted and left overnight to allow any salts in the metal to 'sweat' to the surface. Repeat blasting may be required to 'sweat out' all the soluble salts. A test for chloride contamination should be performed prior to any epoxy application. The maximum soluble salts left on the substrate should be no more than 40 p.p.m. (parts per million).
- Chemical cleaning with Devcon Fast Cleaner 2000 Spray /Cleaner Blend 300 should follow all abrasive preparation. This will help to remove all traces of sandblasting, grit, oil, grease, dust or other foreign substances.
- Heating the repair area to 37°C - 40°C immediately before applying Brushable Ceramic is recommended. This procedure dries off any moisture, contamination or solvents and assists the Ceramic System in achieving maximum adhesion to the substrate.

### **Mixing:**

Mix ratio by weight: 5.6 parts resin to 1 part hardener

Mix ratio by volume: 3.4 parts resin to 1 part hardener

Brushable Ceramic is formulated to brush easily onto prepared surfaces with a short bristle brush. Add hardener to resin and mix thoroughly with a spatula or similar tool until a uniform, streak-free consistency is obtained, this should take about 4 minutes. Be sure to mix material from the bottom and sides of container. It is strongly recommended that full container units be mixed.

### **Application & Shelf Life:**

For best results, product should be kept and applied at room temperature. Brushable Ceramic can be applied when temperatures are between 15°C and 32°C. When temperatures are below 21°C, cure and pot life will be longer, and above room temperature cure and pot life will be shorter.

A shelf life of three years from date of manufacture can be expected when stored at room temperature (22°C) in their original containers.

### **Cure:**

Working time is 40 minutes at 21°C. Brushable Ceramic will achieve a tack-free finish approximately 2-3 hours after applying. Functional cure is achieved in about 24 hours at 21°C. Cure may be accelerated by using heat after the coating has been allowed to harden under ambient conditions. Material will fully cure at 65°C in 4 hours. Remember the maximum re-coat time between coats is 4-6 hours. Each coat should be 0.25mm-0.5mm thick. Two coats insure a pinhole free lining.

### **PRECAUTION**

For complete safety and handling information, please refer to Material Safety Data Sheets prior to using this product.



Brunel Close, Park Farm  
Wellingborough  
Northants  
NN8 6QX  
01933 675299  
01933 670800  
ISS 2.0 18/02/02

**ORDERING INFORMATION**

<u>Stock No</u>	<u>Unit Size</u>
11762	Brushable Ceramic Blue 500g
19550	Fast Cleaner 2000 Spray 500ml
19510	Cleaner Blend 300 250ml

Warranty: Devcon 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 Devcon makes no representations or warranties of any kind concerning this data.

**For technical assistance please call 01933 675299**