



## TECHNICAL DATA SHEET – SPRAYABLE CERAMIC

Revised: 05/2018

### PRODUCT INFORMATION

**STOCK NO.:** 15411

**PACKAGE SIZE:** Blue 10kg

**STOCK NO.:** 15412

**PACKAGE SIZE:** Grey 10kg

### DESCRIPTION

Sprayable Ceramic is a reinforced composite that can be sprayed in a manner similar to high solid paints.

### RECOMMENDED APPLICATIONS

- Seal and protect new equipment exposed to erosion and corrosion
- Protect pump casings, impeller blades, gate valves, water boxes and fan blades
- Use it as a topcoat on repaired surfaces to provide an exceptionally smooth surface
- Tanks, chimneys, pumps, paper machines

### PRODUCT DATA

#### TYPICAL PHYSICAL PROPERTIES

|                                                             |                               |
|-------------------------------------------------------------|-------------------------------|
| COLOUR                                                      | Light Grey                    |
| MIX RATIO BY VOLUME                                         | 2.2: 1                        |
| MIX RATIO BY WEIGHT                                         | 2.6: 1                        |
| % SOLIDS BY VOLUME                                          | 100                           |
| POT LIFE AT 25°C / MINS                                     | 25-50                         |
| SPECIFIC VOLUME CC/KG                                       | 833                           |
| CURED SHRINKAGE CM/CM                                       | 0.002                         |
| DENSITY G/CM <sup>3</sup>                                   | 1.20                          |
| TEMPERATURE RESISTANCE / °C                                 | Dry 150°C                     |
| COVERAGE                                                    | 0.833m <sup>2</sup> /Kg @ 1mm |
| CURED HARDNESS / SHORE D                                    | 80                            |
| DIELECTRIC STRENGTH KV/MM                                   | 15                            |
| ADHESIVE TENSILE SHEAR / MPA                                | 14                            |
| COMPRESSIVE STRENGTH MPA                                    | 105                           |
| COEFFICIENT OF THERMAL EXPANSION X10 <sup>-6</sup> CM/CM/°C | 34.2                          |
| THICKNESS PER COAT / MM                                     | As Required                   |
| FUNCTIONAL CURE TIME /HOURS                                 | 16                            |
| RECOAT TIME /HOURS                                          | 4                             |
| MIXED VISCOSITY /CPS @ 21°C                                 | 9000                          |

### CHEMICAL RESISTANCE - 7 DAYS ROOM TEMPERATURE CURE (30 DAYS) - TESTING CARRIED OUT 30 DAYS IMMERSION AT 24°C

|                                 | POOR | FAIR | VERY GOOD | EXCELLENT |
|---------------------------------|------|------|-----------|-----------|
| AMMONIA                         |      |      |           | •         |
| CUTTING OIL                     |      |      |           | •         |
| ETHYL ALCOHOL                   |      |      |           | •         |
| GASOLINE (UNLEADED)             |      |      |           | •         |
| HYDROCHLORIC ACID 10%           |      |      |           | •         |
| METHYL ETHYL KETONE (MEK)       | •    |      |           |           |
| METHYLENE CHLORIDE              | •    |      |           |           |
| SODIUM HYPOCHLORITE 5% (BLEACH) |      |      |           | •         |
| SODIUM HYDROXIDE 10%            |      |      |           | •         |
| SULPHURIC ACID 10%              |      |      |           | •         |
| XYLENE                          |      |      |           | •         |

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.

Excellent = +/- 1% weight change, Very Good = +/- 1-10% weight change, Fair = +/- 10-20% weight change, Poor = > 20% weight change

### APPLICATION INFORMATION

#### CURE

Working time is 25-50 minutes at 22°C. Sprayable Ceramic will achieve a tack-free finish approximately 4 hours after application. Functional cure is achieved in about 16 hours at 22°C. Full properties are achieved within 5-7 days.

#### 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 MEK, Acetone, IPA or similar 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 a coarse profile to mechanically lock into and essential for successful application
- Metal that has been handling seawater 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 MEK, Acetone, IPA or similar should follow all abrasive preparation. This will help to remove all traces of sandblasting, grit, oil, grease, dust or other foreign substances.
- Material temperature to be in the range 20-30°C, substrate temperature between 10 & 40°C.

#### MIXING

Use only complete kits.

Add the hardener to the resin and mix thoroughly for 2 minutes with a jiffy mixer, or similar.

Ensure that a streak free mix is achieved.

#### EQUIPMENT

- Airless Spray Equipment offering at least 45:1 ratio with minimum tip pressure of 3000psi
- Line Diameter 5/8" (16mm) – line lengths should be kept to a minimum.
- Whip end swivel (from spray hose to gun)
- Spray hose whip end, 3/8" (9.4mm) internal diameter
- Airless spray gun – Graco model 510 or similar
- Spray Tip: Graco 525 to 527 (50°, 0.64mm to 50°, 0.69mm) or similar. Run all equipment with filters removed to avoid clogging and back pressure.

#### CLEAN-UP

Flush gun and all pump line parts with Xylene immediately after completion. Failure to do so will result in clogging of lines.

#### APPLICATION

- The wet end of the spray unit can be warmed to approx. 25° C prior to use. This will prevent the product cooling in contact resulting in an increase of viscosity.
- To aid cleaning the wet end should be masked off with tape before immersion.
- The material should be at room temperature ~21°C before spraying commences. Sufficient material for the complete job should be prepared (although not mixed) in advance. In addition sufficient personnel should be present to enable material to be mixed during the application.
- Ensure airborne contamination from surrounding areas is not present during application.
- Adequate temperature is crucial to ensure effective atomisation of this product. If workshop conditions are below 21°C it is advisable to pre-warm and insulate spray lines but NOT the main bulk of material.
- Remember that increasing product temperature too much will result in a notably reduced pot life.

### ITW PERFORMANCE POLYMERS

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### **SHELF LIFE**

A shelf life of 3 years from date of manufacture can be expected when stored at appropriate conditions.

### **PRECAUTION**

For complete safety and handling information, please refer to Material Safety Data Sheets 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.

### **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.

For product information visit [www.devconeurope.com](http://www.devconeurope.com) alternatively for technical assistance please call +353 61 771 500.