



SPRAYABLE CERAMIC PRODUCT BULLETIN

Product Description

A sprayable ceramic reinforced composite that can be sprayed in a manner similar to high solids paints.

Features and benefits

- Spray additive added to resin to spray 380 – 500 microns in one pass
- Able to spray using standard airless equipment
- Available in two colours for no holding finish
- Temperature resistance to 176°C

Recommended Applications

- Pumps, (centrifugal, vacuum)
- Paper machines
- Stacks
- Pump pads / steel frames
- Tanks – (caustic, acid, water)
- Water bases

Typical Physical Properties: Cured 7 days @ 24°C

Colour	Red or Blue
Mixed Viscosity	33600 cps
Flexural Strength	55 MPa
Cured Density	595 cm ³ / kg
Pot life at 24°C	40 minutes
Solids	95%
Minimum recoat time	4 – 8 hours
Maximum recoat time	16 – 24 hours with light sanding
Tack – Free time	4 hours
Compressive Strength ASTM D695	104.8 MPa
Adhesive Tensile Shear ASTM D1002	13.8 MPa
Cured Hardness Shore D ASTM D2240	87 D
Dielectric Strength, volts / mil ASTM D149	382
Coverage	10 m ² / 3.8 Ltr @ 400 microns
Temperature Resistance	Wet 65°C Dry 176°C

Chemical Resistance: 7 days room temperature cure (30 days immersion at 24°C)

5% bleach (sodium hypochlorite)	E	10% phosphoric acid	VG
5% trisodium phosphate	E	40% phosphoric acid	F
10% sulphuric acid	E	10% sodium hydroxide	E
50% sulphuric acid	F	50% sodium hydroxide	E
10% hydrochloric acid	E	5% alum (aluminium sulphate)	E
10% nitric acid	VG	Ferric chloride	E
40% nitric acid	F	10% acetic acid	U

KEY: E = Excellent, VG = Very Good F = Fair U = Unsatisfactory

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.

PLEASE CONSULT TECHNICAL SERVICE FOR OTHER CHEMICALS

The information enclosed in this Technical Bulletin is as up to date and correct as possible as at the time of issue. The data provided in this Technical Bulletin should be used as a guide only, as the performance of the product will vary depending on differing operating conditions and application methods.

The sale of any product described in this Technical Bulletin will be in accordance with ITW Polymers & Fluids Conditions of Sale, a copy of which is available on request. To the extent permitted by law, ITW Polymers & Fluids excludes all other warranties in relation to this product.

Surface Preparation

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

- First degrease the surface by using Devcon No 10 Cleaner. All oil, grease and dirt must be removed before applying any epoxy material.
- All surfaces must roughened, ideally by grit blasting (8 – 40 mesh grit), or by grinding with a coarse wheel or abrasive disc pad. An abrasive disc may be used provided white metal is revealed. This creates increased surface area for better adhesion. A 75 – 125 micron profile is desired for an application. Do Not “feather edge” epoxy material. Epoxy material must be “locked” in by defined edges and a good 75 – 125 micron profile.
- 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 to “sweat out” all the soluble salts. A test for chloride contamination should be performed prior to an epoxy application. The maximum soluble salts left on the substrate should be no more than 40 p.p.m. (parts per million).
- All abrasive preparation should be followed by chemical cleaning with Devcon No 10 Cleaner. This will help to removed all traces of sandblasting grit, oil, grease, dust or other foreign substances.
- Under cold working conditions, heating the repair area to 38°C – 43°C immediately before applying any of Devcon’s metal filled epoxies is recommended. This procedure dries off any moisture and assists the epoxy in achieving maximum adhesion to the substrate.
- All prepared surfaces should be repaired as soon as possible, to eliminate any changes or surface contaminants.
- Radius all edges to 3mm R and inside corners to 10mm R.

Mixing Mixture: Part C / Sprayable Thinner

- Add the Pint (570 ml) container of the sprayable additive to the resin portion of the product. Mix thoroughly for 1 – 3 minutes.
- Then add the hardener to the resin, making sure to scrape sides and bottom thoroughly for 1 – 3 minutes.
- Make sure the spray equipment is ready to go as your working time to spray will be 30 minutes.

Equipment:

- President Hydra – Spray 226 – 238 Airless
- Standard airless equipment can be used
- Spray tip 327 – 427 Note: Do not use filter. This may cause clogging.

Conditions:

- Air line pressure 550 kPa (80 psi)
- Regulator at the end of the gun 12402 kPa – 16536 kPa (1800 – 2400 psi)
- 10mm fluid line. Warning: When fluid hose begins to get warm (about 30 minutes) stop the diffuser seat, which is located at the end of the gun, just before the spray tip clogs.

Clean-up:

- Run MEK through lines, followed by Xylene, just as you feel the hose starts to get warm.

Application

For best results, Sprayable Ceramic should be kept and applied at room temperature. Sprayable Ceramic can be applied when temperatures are between 13°C – 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.

Cure:

Working time of Blue and Red is 40 minutes at 24°C. Sprayable Ceramic will achieve a tack free finish approximately 4 hours following application. Functional cure is achieved in about 24 hours at 24°C.

PRECAUTION

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

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.

ORDERING INFORMATION

Stock No.	Unit Size
DE107 (Grey)	3.8 Ltr
DE108 (Blue)	3.8 Ltr

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