

TECHNICAL DATA SHEET – CERAMIC REPAIR PUTTY
A HIGH PERFORMANCE, TROWEL APPLIED, CERAMIC-FILLED EPOXY

Revised: 05/2018

ORDERING INFORMATION
STOCK NO.: 11042
PACKAGE SIZE: 1kg

DESCRIPTION
A high performance, trowel applied, ceramic-filled epoxy for rebuilding worn or damaged equipment.

RECOMMENDED APPLICATIONS
- Rebuild worn pump casings and suction plates
- Repair tube sheets, heat exchangers and other circulating water equipment
- Restore worn chutes and hoppers
- Repair and rebuild butterfly and gate valves

PRODUCT DATA

TYPICAL PHYSICAL PROPERTIES

COLOUR	Dark Blue
MIX RATIO BY VOLUME	4.3 : 1
MIX RATIO BY WEIGHT	7.0 : 1
% SOLIDS BY VOLUME	100
POT LIFE AT 25°C/ MINS	25
SPECIFIC VOLUME CC/KG	591
CURED SHRINKAGE CM/CM	0.002
DENSITY G/CM^3	1.69
TEMPERATURE RESISTANCE / °C	Wet 65°C Dry 175°C
COVERAGE	0.591m^2/Kg @ 1mm
CURED HARDNESS / SHORE D	90
DIELECTRIC STRENGTH KV/MM	14.5
ADHESIVE TENSILE SHEAR / MPA	13.75
COMPRESSIVE STRENGTH MPA	87.5
COEFFICIENT OF THERMAL EXPANSION X10^{-6} CM/CM/°C	16
THICKNESS PER COAT / MM	N/A
FUNCTIONAL CURE TIME /HOURS	16
RECOAT TIME /HOURS	2-4
MIXED VISCOSITY /CPS (WHERE APPLICABLE)	Putty

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				•

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

APPLICATION INFORMATION

SURFACE PREPARATION
- Thoroughly clean the surface with Devcon Cleaner Blend 300 to remove all oil, grease, and dirt.
- 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 mesh is revealed).
- Desired profile is 3-5mil, including defined edges (do not 'feather-edge" epoxy).
- Note: For metals exposed to sea water or other salt solution, grit-blast and high-pressurewater- 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 40ppm).
- Clean surface again with Cleaner Blend 300 to remove all traces of oil, grease, dust, or other foreign substances from the grit blasting.
- Repair surface as soon as possible to eliminate any changes or surface contaminants.
- WORKING CONDITIONS: Ideal application temperature is 12°C to 32°C. In cold working conditions, heat repair area to 37-43°C immediately prior to applying epoxy to dry off any moisture, contamination, or solvents, as well as to assist epoxy in achieving maximum adhesion properties.

MIXING
It is strongly recommended that full units be mixed, as ratios are pre-measured.
- Add hardener to resin
- 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.
- INTERMEDIATE SIZES (1, 2, 3 lb. units): Place resin and hardener on a flat, disposable surface such as cardboard, plywood, or plastic sheet). Use a trowel or wide-blade tool to mix the material as in Step 2 above.
- LARGE SIZES: (25 lb., 30 lb., 50 lb. buckets): Use a T-shaped mixing paddle or a propellertype Jiffy Mixer Model ES on an electric drill. Thoroughly fold putty by vigorously moving paddle/propeller up and down until a homogenous mix of resin and hardener is attained.

APPLICATION
Spread mixed material on repair area and work firmly into substrate to ensure maximum surface contact. Ceramic Repair Putty fully cures in 16 hours, at which time it can be machined, drilled, or painted.

FOR BRIDGING LARGE GAPS OR HOLES
Place fibreglass sheet, expanded metal or mechanical fasteners between repair area and Ceramic Repair Putty prior to application.

FOR VERTICAL SURFACE APPLICATIONS
Ceramic Repair Putty can be trowel applied up to 13mm (½inch) thick without sagging. Chemical immersion is possible after 24 hours.

FOR MAXIMUM PHYSICAL PROPERTIES
Cure at room temperature for 2.5 hours, then heat cure for 4 hours @ 93°C.

FOR ± 21°C APPLICATIONS
Applying epoxy at temperatures below 21°C lengthens functional cure and pot life times. Conversely, applying above 21°C shortens functional cure and pot life.

SHELF LIFE & STORAGE
A shelf life of 2 years from date of manufacture can be expected when stored at room temperature.

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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
alternatively for technical assistance please call +353 61 771 500.

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