Devcon®



TECHNICAL DATA SHEET – WEAR RESISTANT EPOXY PUTTY (WR-2)

Revised: 05/2018

PRODUCT INFORMATION

STOCK NO.: 11411
PACKAGE SIZE: 500g

DESCRIPTION

Smooth, non-rusting ceramic-filled epoxy putty used to repair and rebuild interfacing metallic, low-friction surfaces such as machine ways and flanges.

RECOMMENDED APPLICATIONS

- Repairs in tight spots where a fine flowing putty is required
- Bonds to steel, iron, aluminum, brass, bronze, concrete and some plastics
- Prevents wear on metal surfaces that are exposed to abrasion and erosion such as valves and pumps
- Ideal for repairing tracing guides
- Protecting flanges and elbows
- Lining pumps and wear faces

PRODUCT DATA

TYPICAL PHYSICAL PROPERTIES

COLOUR	Dark Grey
MIX RATIO BY VOLUME	4:1
MIX RATIO BY WEIGHT	9:1
% SOLIDS BY VOLUME	100
POT LIFE AT 25°C / MINUTES	60
SPECIFIC VOLUME CC/KG	570
CURED SHRINKAGE CM/CM	0.0005
SPECIFIC GRAVITY	1.75
TEMPERATURE RESISTANCE / °C	Dry 121°C
COVERAGE	1140cm²/Kg @ 5mm
CURED HARDNESS / SHORE D	85 D
DIELECTRIC STRENGTH KV/MM	15.7
ADHESIVE TENSILE SHEAR MPA	18
COMPRESSIVE STRENGTH MPA	68
COEFFICIENT OF THERMAL EXPANSION X10⁻⁶ CM/CM/°C	57.6
THICKNESS PER COAT / MM	As Required
FUNCTIONAL CURE TIME / HOURS	16
RECOAT TIME / HOURS	4
MIXED VISCOSITY / CPS (WHERE APPLICABLE)	Putty

TECHNICAL DATA SHEET – WEAR RESISTANT EPOXY PUTTY (WR-2)

CHEMICAL RESISTANCE - 7 DAYS ROOM TEMPERATURE CURE (30 DAYS) - TESTING CARRIED OUT 30 DAYS IMMERSION AT 21ºC

	POOR	FAIR	VERY GOOD	EXCELLENT
AMMONIA			•	
CUTTING OIL			•	
ISOPROPYL 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

CURE
A 12.7mm thick section of Devcon Epoxy will harden at 21ºC in 4 hours. The material will be fully cured in 16 hours. The actual cure time of epoxy is determined by the mass used and the temperature at the time of repair.

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.
- Remove all paint, rust and grime from the surface by abrasive blasting or other mechanical techniques.
- Aluminium repairs: Oxidation of Aluminium surfaces will reduce the adhesion of an epoxy to a surface. This film must be removed before repairing the surface, by mechanical means such as abrasive-blasting or chemical means.
- Provide a surface profile on the metal surface by roughening the surface. This should be done 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. 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 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 sub-strate 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.
- Under cold working conditions, heating the repair area to 30ºC-40º C immediately before applying any of Devcon Epoxies is recommended. This procedure dries off any moisture, contamination or solvents and assists the epoxy in achieving maximum adhesion to the substrate.
- Always try to make the repair as soon as possible after cleaning the substrate, to avoid oxidation or flash rusting. If this is not practical, a general application of FL-10 Primer will keep metal surfaces from flash rusting.

MIXING
Wear Resistant Epoxy Putty is formulated to be a dense mix that can be applied easily to overhead and vertical surfaces without running or sagging. Add the hardener to the resin and mix thoroughly on a mixing board using a spatula. Do not mix in the containers.

APPLICATION
Spread epoxy over prepared surface with a putty knife or similar tool. Press material firmly into all cracks and voids to ensure maximum surface contact and avoid trapping air.

SHELF LIFE & STORAGE
A shelf life of 3 years from date of manufacture can be expected when stored at room temperature (22ºC) in their original containers

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

WARRANTY
ITW Performance Polymers will replace any material found to be defective. As storage, handling and application of this material is beyond our control we canaccept 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.

ITW PERFORMANCE POLYMERS
Bay 150 | Shannon Industrial Estate | Shannon, County Clare | Ireland | T: +353 61 771500 | customerservice.shannon@itwpp.com | www.itwperformancepolymers.com