Devcon®



TECHNICAL DATA SHEET – STAINLESS STEEL PUTTY (ST)

Revised: 05/2018

PRODUCT INFORMATION

STOCK NO.: 10271
PACKAGE SIZE: 500g

DESCRIPTION

Stainless Steel Putty is a steel filled epoxy putty used for rust-free maintenance and repair work.

RECOMMENDED APPLICATIONS

- Patches, repairs and rebuilds stainless steel equipment in areas where welding is not practical or impossible
- Repairs cracks, dents and breaks in equipment, machinery or castings
- Rebuilds shafts, trays and chutes
- Used for repairs in dairies and food processing operations and chemical plants
- Certified for portable water applications
- Chemically accepted for use in USDA inspected plants.

PRODUCT DATA

TYPICAL PHYSICAL PROPERTIES

COLOUR	Grey
MIX RATIO BY VOLUME	3.7:1
MIX RATIO BY WEIGHT	11:1
% SOLIDS BY VOLUME	100
POT LIFE AT 25°C / MINS	58
SPECIFIC VOLUME CC/KG	447
CURED SHRINKAGE CM/CM	0.001
SPECIFIC GRAVITY	2.24
TEMPERATURE RESISTANCE / °C	Dry 121°C
COVERAGE	894cm²/Kg @ 5mm
CURED HARDNESS / SHORE D	85 D
DIELECTRIC STRENGTH KV/MM	1.2
ADHESIVE TENSILE SHEAR / MPA	16
COMPRESSIVE STRENGTH MPA	58
COEFFICIENT OF THERMAL EXPANSION X10⁻⁶ CM/CM/°C	61
THICKNESS PER COAT / MM	As required
FUNCTIONAL CURE TIME / HOURS	16
RECOAT TIME / HOURS	4
MIXED VISCOSITY / CPS (WHERE APPLICABLE)	Putty

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

	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

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.

CURE

A 12.7mm thick section of Devcon Stainless Steel Putty will harden at 22ºC in 4 hours. The material will be fully cured in 16 hours at which time the material can be machined, drilled or painted. The actual cure time of epoxy is determined by the mass used and the room 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 grit-blasting or chemical means.
- Provide a “profile” on the metal surface by roughening the surface. This should be done ideally by grit blasting (8-40 mesh grit), grinding with a coarse wheel or an abrasive disc pad. An abrasive disc may be used provided white metal is revealed. Do not ’feather’ epoxy materials. Epoxy material must be ’locked in’ by defined edges and a good 3 - 5 mil 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 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.
- Under cold working conditions, heating the repair area to 38ºC - 43º C immediately before applying any of Devcon’s Metal-filled 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

Stainless Steel Putty (ST) 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 resin and mix thoroughly on a mixing board using a spatula. Do not mix in the containers.

APPLICATION

For best results, product should be kept and applied at room temperature. Stainless Steel Putty (ST) can be applied when temperatures are between 10ºC and 50ºC. Spread the putty over prepared surface with a putty knife. Press firmly to ensure maximum surface contact and avoid trapping air. To bridge large gaps or holes use fibreglass, sheet metal or wire mesh.

SHELF LIFE & STORAGE

A shelf life of 3 years from date of manufacture can be expected when stored at roomtemperature (22ºC) in their original containers.

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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 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 designpurposes.
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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