



STAINLESS STEEL PUTTY PRODUCT BULLETIN

Product Description

Stainless Steel Putty is a stainless steel filled, room temperature cured, epoxy for rebuilding and repairing stainless steel equipment. Makes non-rusting repairs in dairies and chemical plants.

Features and benefits

- Acceptable for use in meat and poultry plants
- Can be machined
- Resistant to most chemicals
- Certified for potable water application

Recommended Applications

- Repairs cracks, dents and breaks in stainless steel equipment, machinery or castings
- Rebuilds dairy equipment
- Repairs stainless steel holding tanks

Typical Physical Properties: Cured 7 days @ 24°C

Colour	Dark Grey
Mixed Viscosity	Putty
% Solids by Volume	100
Cured Density	2.23 gm / cc
Cured Shrinkage ASTM D2566	0.0010 cm/cm
Specific Volume	448 cm ³ / kg
Pot life at 24°C (0.5kg mass)	45 minutes
Compressive Strength ASTM D695	58 MPa
Adhesive Tensile Shear ASTM D1002	16.4 MPa
Cured Hardness Shore D ASTM D2240	85
Dielectric Strength, volts / mm ASTM D149	1181
Coverage	896 cm ² / kg @ 5mm
Temperature Resistance	Wet 49°C Dry 121°C

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

10% hydrochloric acid	F	Toluene	VG
Chlorinated solvent	VG	Ammonia	VG
10% sulphuric acid	VG	10% Sodium Hydroxide	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 anyone of Devcon Cleaner Blend 300 #19510. All oil, grease, and dirt must be removed before applying any epoxy material.
- All surfaces must be 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 any epoxy application. The maximum soluble salts left on the substrate should be no more than 40 ppm (parts per million).
- All abrasive preparation should be followed by chemical cleaning with Devcon Cleaner Blend 300. 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 38-43°C immediately before applying any of Devcon’s metal filled epoxy 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.

Mixing Mix Ratio – Resin to Hardener: Weight 11:1, Volume 3.75:1

Add hardener to resin. Mix thoroughly with a screwdriver or similar tool until a uniform, streak-free consistency is obtained, about 4 minutes. Be sure to mix material from bottom and sides of container. It is strongly recommended that full can units be mixed.

Application

For best results, product should be kept and applied at room temperature. Stainless Steel Putty can be applied when temperatures are between 13°C and 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. Spread Stainless Steel Putty over prepared surface with applicator (enclosed) or putty knife. Press firmly to ensure maximum surface contact and avoid entrapping air. To bridge large gaps or holes use fibreglass, expanded metal or other mechanical fasteners.

The exposed surface area to volume of the product should not exceed 90.6cm²/litre.

Cure

A 12mm thick section of Devcon Stainless Steel Putty will harden at 24°C 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 size of the mass of epoxy and the temperature. Stainless Steel Putty may be troweled on a vertical surface up to 6mm thick without sagging.

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
10270	454 g