

PLASTIC STEEL PUTTY (A)

PRODUCT INFORMATION

	<u>Stock No.</u>	<u>Package Size</u>
	10112	500g
	10115	1kg
	10117	10Kg
Description	The original metal filled epoxy putty for economical, dependable maintenance and repair work.	
Recommended Applications	<ul style="list-style-type: none"> Repairs cracks and breaks in equipment, machinery or castings Patches and rebuilds blow holes or pits in castings Rebuilds worn equipment, pumps and valve bodies Restores bearing journals and races 	

PRODUCT DATA

Typical Physical Properties	Colour	Grey		
	Mix Ratio by Volume	2.5:1		
	Mix Ratio by Weight	9:1		
	% Solids by Volume	100		
	Pot life at 25°C/ mins	45		
	Specific Volume CC/Kg	429		
	Cured Shrinkage cm/cm	0.0006		
	Specific Gravity	2.33		
	Temperature resistance / °C	Dry 121°C		
	Coverage	858cm ² /Kg @ 5mm		
	Cured Hardness / Shore D	85 D		
	Dielectric Strength KV/mm	1.18		
	Adhesive Tensile Shear / MPa	19		
	Compressive Strength MPa	57		
	Coefficient of Thermal Expansion x10 ⁻⁶ cm/cm/°C	86.4		
	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			
	Ammonia	Very Good	Methylene Chloride	Very Good
	Cutting Oil	Very Good	Sodium Hypochlorite 5% (Bleach)	Very Good
	Isopropyl Alcohol	Poor	Sodium Hydroxide 10%	Very Good
	Gasoline (Unleaded)	Very Good	Sulphuric Acid 10%	Very Good
	Hydrochloric Acid 10%	Very Good	Xylene	Fair
	Methyl ethyl Ketone (MEK)	Poor		
	Excellent = +/- 1% weight change			
	Very Good = +/- 1-10% weight change			
	Fair = +/- 10-20% weight change			
Poor = > 20% weight change				

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APPLICATION INFORMATION

Cure	A 12.7mm thick section of Devcon Plastic Steel Putty will harden at 22°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 mass used and the room temperature at time of repair.
Surface Preparation	<p>Proper surface preparation is essential to a successful application. The following procedures should be considered:</p> <ul style="list-style-type: none"> • All surfaces must be dry, clean and rough. • If the substrate 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. • Aluminum repairs: Oxidation of aluminum 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), or by grinding with a coarse wheel or abrasive disc pad. An abrasive disc may be used provided white metal is revealed. Do not 'feather edge' epoxy materials. Epoxy material must be 'locked in' by defined edges and a good 75 - 125 microns 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. A bristle test or similar can be used to evaluate the salt level. The maximum soluble salts left on the substrate should be no more than 40 p.p.m. (parts per million). • Chemical cleaning with MEK or similar solvent 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, optimum application can be achieved by heating the repair area to ~40° 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	Plastic Steel Putty (A) is formulated to be a dense mix that can be applied easily to overhead and vertical surfaces without running or sagging. For the 500g and 1Kg kits, empty the Resin and hardener onto a mixing board and mix using a spatula. Do not mix in the containers. For the 10Kg kit, add the hardener to the resin and mix using a T shaped mixer or Jiffy ES mixer attached to a power drill. Fold the material by vigorously moving the mixer up and down until a uniform mix has been achieved. Once mixed, immediately spread out the mass of material onto a suitable area before use to avoid a rapid exotherm and associated reduction in potlife.
Application	For best results, product should be kept and applied at room temperature. Plastic Steel Putty (A) can be applied when temperatures are between 10°C and 50°C. 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 room temperature (22°C) in their original containers
Precaution	For complete safety and handling information, please refer to Material Safety Data Sheets (MSDS) prior to using this product.

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Warranty

ITW Devcon will replace any material found to be defective. As 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 Devcon 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 771501 (Ireland) or +49 (0) 431 71791-0 (Germany).