

HR SUPER 3000

PRODUCT INFORMATION

	<u>Stock No.</u> 16400	<u>Package Size</u> 500g of product 10ml of primer, 5ml of accelerator, 5cm X 1m glass fiber tape
Description	The HR-Super 3000 putty is a high performance epoxy ideal for repairing damaged equipment which is exposed to temperatures as high as 300°C (dry).	
Recommended Applications	<ul style="list-style-type: none"> • Stop leakage in pipes, valves, flanges and tanks • Machinery repair • Fill small or large holes in castings • Engine block and crankcase repair 	

PRODUCT DATA

Typical Physical Properties	Colour (mixed)	Grey	
	Mix Ratio by Volume	1 : 1	
	Mix Ratio by Weight	1 : 1	
	% Solids by Volume	100	
	Pot life at 25°C/ mins	5-10	
	Specific Volume CC/Kg	435	
	Cured Shrinkage cm/cm	N/A	
	Density g/cm ³	2.3	
	Temperature resistance / °C	Dry 300°C	
	Coverage	0.217m ² /0.5Kg Pack @ 1mm	
	Cured Hardness / Shore D	80	
	Dielectric Strength KV/mm	1.2	
	Adhesive Tensile Shear / MPa	12-15	
	Compressive Strength MPa	88-98	
	Coefficient of Thermal Expansion x10 ⁻⁶ cm/cm/°C	55	
	Thickness per Coat / mm	N/A	
	Functional Cure Time /Hours	6	
Recoat Time /Hours	N/A		
Mixed Viscosity /cps (where applicable)	Putty		
Chemical Resistance	7 days room temperature cure (30 days) - Testing carried out 30 days immersion at 24 °C		
	Ammonia	N/A	Methylene Chloride N/A
	Cutting Oil	N/A	Sodium Hypochlorite 5% (Bleach) N/A
	Ethyl Alcohol	N/A	Sodium Hydroxide 10% Poor
	Gasoline (Unleaded)	Excellent	Sulphuric Acid 10% Fair
	Hydrochloric Acid 10%	Fair	Xylene Excellent
	Methyl ethyl Ketone (MEK)	Fair	
	Excellent = +/- 1% weight change		
	Very Good = +/- 1-10% weight change		
	Fair = +/- 10-20% weight change		
Poor = > 20% weight change			

HR Super 3000

APPLICATION INFORMATION

Cure	<p>Devcon HR Super 3000 is best applied between 15 and 30°C, below 15°C pot life and cure time will be notably increased and above 30°C pot life and cure time will be notably reduced. A 3mm thick section will harden at 21°C in 10-20 minutes and functional cure will be achieved in 24 hours. If substrate temperature is outside of stated range it is possible to use infrared or other means of heating to raise the substrate temperature to be within the desired range.</p>
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 surface is oily or greasy use Devcon Fast Cleaner 2000 Spray/Cleaner Blend 300 to degrease the surface. • Remove all paint, rust and debris 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 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 Devcon Fast Cleaner 2000 Spray/Cleaner Blend 300 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 30°C - 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 the supplied Primer will keep metal surfaces from flash rusting. • The primer supplied is primarily designed for use where the substrate is likely to experience thermal shock in service. Priming must be done around 30 minutes before the application of the HR Super 3000 is planned to ensure it has adequately cured.
Mixing	<p>HR Super 3000 is formulated to be a dense mix that can be applied easily to overhead and vertical surfaces without running or sagging. Empty the Resin and hardener onto a mixing board and mix using the spatula provided. Do not try to mix in the containers. Where temperatures are below 15°C add the accelerator provided. Once mixed, immediately spread out the mass of material onto a suitable area before use to avoid a rapid exotherm and associated reduction in pot life.</p>
Application	<p>For best results, product should be kept and applied at room temperature. Spread the mixed 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 fiberglass tape provided.</p>

HR Super 3000

Shelf life & Storage	A 1 year shelf life from date of manufacture can be expected when stored at room temperature ~21°C in their original containers
Precaution	For complete safety and handling information, please refer to 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.
Disclaimer	<p>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.</p> <p>For product information visit www.devconeurope.com alternatively for technical assistance please call +44 (0) 870 458 7388 (UK) or +49 431 718830 (Germany)</p>