

# WET SURFACE REPAIR PUTTY (UW)

## PRODUCT INFORMATION

	<u>Stock No.</u> 11801	<u>Package Size</u> 500g
Description	A unique, non-rusting, high exothermic epoxy for repairing, patching and rebuilding equipment in chronically wet environments - even under water.	
Recommended Applications	<ul style="list-style-type: none"> <li>• Repairing and fitting pipes, valves, pumps, tanks and other equipment in marine environments, offshore drilling, water treatment plants and paper and pulp mills</li> <li>• Repairing concrete pipes and vessels in wet environments.</li> </ul>	

## PRODUCT DATA

Typical Physical Properties	Colour	Grey		
	Mix Ratio by Volume	1:1		
	Mix Ratio by Weight	1.4:1		
	% Solids by Volume	100		
	Pot life at 25°C/ mins	45		
	Specific Volume CC/Kg	642		
	Cured Shrinkage cm/cm	0.002		
	Specific Gravity	1.56		
	Temperature resistance / °C	Dry 93°C		
	Coverage	1284cm <sup>2</sup> /Kg @ 5mm		
	Cured Hardness / Shore D	82 D		
	Dielectric Strength KV/mm	5.9		
	Adhesive Tensile Shear / MPa	18		
	Compressive Strength MPa	39		
	Coefficient of Thermal Expansion x10 <sup>-6</sup> cm/cm/°C	32.4		
	Thickness per Coat / mm	As Required		
	Functional Cure Time /Hours	16		
Recoat Time /Hours	4			
Mixed Viscosity /cps (where applicable)	Putty			
Chemical Resistance	<b>7 days room temperature cure (30 days) - Testing carried out 30 days immersion at 21 °C</b>			
	Ammonia	Very Good	Methylene Chloride	Poor
	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%	Fair
	Hydrochloric Acid 10%	Fair	Xylene	Very Good
	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 Epoxy will harden at 21°C 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	<p>Proper surface preparation is essential to a successful application. The following procedures should be considered for dry applications:</p> <ul style="list-style-type: none"> <li>• All surfaces must be dry, clean and rough.</li> <li>• If surface is oily or greasy use Devcon Fast Cleaner 2000 / Cleaner Blend 300 to degrease the surface.</li> <li>• Remove all paint, rust and grime from the surface by abrasive blasting or other mechanical techniques.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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).</li> <li>• Chemical cleaning with Devcon 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.</li> <li>• Under cold working conditions, heating the repair area to 38°C - 43° 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.</li> <li>• 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.</li> </ul> <p>For underwater or submerged repairs consider the following:</p> <ul style="list-style-type: none"> <li>• Remove all dirt, barnacles, flaking paint and algae/seaweed from the substrate</li> <li>• Wipe area with a clean cloth to remove any film on the surface. You cannot degrease underwater, but wiping and turning a clean cloth will often remove any film on the surface.</li> <li>• Abrade the surface if possible (use mechanical means or a file to accomplish)</li> <li>• The oxidation can be removed by mechanical means such as water, grit-blasting or by chemical means.</li> <li>• Make the repair as soon as possible to avoid surface contamination.</li> </ul>
Mixing	Wet Surface Repair 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.

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Application	For best results, product should be kept and applied at room temperature. Wet Surface Repair 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 Bronze 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, expanded metal or other mechanical fasteners. Apply a minimum of 1.6mm.
Shelf life & Storage	A shelf life of 3 years 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 (MSDS) prior to using this product.
Warranty	ITW Devcon 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	<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 <a href="http://www.devconeurope.com">www.devconeurope.com</a> alternatively for technical assistance please call +44 (0) 870 458 7388 (UK) or +49 431 718830 (Germany)</p>