



Metal Repair Products

Introduction to Resimac

Resimac manufactures a wide range of metal repair materials which are ideal for repairs to worn or damaged mechanical components and process equipment surfaces.

Our metal repair product range is manufactured in the UK and exported to over 50 countries worldwide, we are able provide local solutions in North America, South America, Africa, Europe, Middle East and Asia using our approved contractor network.

Our Metal Repair products are used in a wide range of industries and through our extensive worldwide network of contractors we are able to offer onsite technical support, training, presentations & seminars backed by project method statements & specifications.

Oil & Gas

Power

Water

Chemical

Marine

Petrochemical

Paper & Pulp



Resimac Metal Repair Product Range

101 METAL REPAIR PASTE

Multi purpose solvent free epoxy repair paste for metallic surfaces	Apply up to 25mm without sagging	Rebuild damaged metallic surfaces	Usable life 30 mins	Dark grey
	No shrinkage	Bond metal to metal	Touch Dry 90 mins	
	Apply by spatula or applicator tool	Machine once hard dry	Machinable 2 hours Hard Dry 8 hours	

102 METAL REPAIR FLUID

Multi purpose solvent free epoxy repair fluid for metallic surfaces	Apply up to 3mm without sagging	Resurface worn metallic surfaces	Usable life 30 mins	Dark grey
	No shrinkage	Add aggregate to create anti-slip finish	Touch Dry 90 mins	
	Apply by brush or applicator tool		Hard Dry 8 hours	

103 METAL REPAIR STICK

Multi purpose fast curing solvent free epoxy repair putty in stick form	Fast curing, hard dry in 30 mins	Seal leaking surfaces	Usable life 5 mins	Mid grey
	Apply using a gloved hand	Bond metal to metal	Hard Dry 30 mins	

104 METAL REPAIR FLUID XF

Fast curing solvent free epoxy fluid for oily or manually prepared surfaces	Fast curing, hard dry in 60 mins	Seal leaking oily surfaces	Usable life 5 mins	Light grey
	Apply using applicator tool	Resurface worn or damaged metallic surfaces	Touch Dry 30 mins	
	Apply up to 3mm without sagging	Bond metal to metal	Hard Dry 60 mins	

105 AQUA STICK

Underwater solvent free epoxy repair stick	Apply using a gloved hand	Seal or plug leaking surfaces	Usable life 15 mins	Cream
	Fast curing, hard dry in 90 mins	Bond or repair underwater surfaces	Hard Dry 90 mins	

106 METAL REPAIR PASTE XF

Fast curing solvent free epoxy paste for manually prepared surfaces. Suitable for underwater repairs	Fast curing, hard dry in 60 mins	Rebuild or resurface damaged metallic substrates	Usable life 5 mins	Light grey
	Apply up to 20mm without sagging	Seal or repair underwater metallic surfaces	Touch Dry 30 mins	
	Apply by spatula or applicator tool		Hard Dry 60 mins	

107 METAL REPAIR PASTE XL

Multi purpose solvent free epoxy repair paste for metallic surfaces with a longer pot life for warmer climates	Extended working life for warmer climates	Rebuild damaged metallic surfaces	Usable life 60 mins	Dark grey
	No shrinkage	Bond metal to metal	Touch Dry 5 hours	
	Apply by spatula or applicator tool	Machine once hard dry	Machinable 8 hours Hard Dry 24 hours	

101 Metal Repair Paste

a two component solvent free epoxy metal repair paste. The product has been designed for use on a wide range of metallic surfaces

- Solvent free epoxy technology
- High build capability– 25mm without slump
- Fully machinable once cured
- Simple mixing ratio 3:1 by volume
- Suitable for metallic surfaces
- No shrinkage
- Excellent chemical resistance
- Superior adhesion to metallic surfaces



Damaged flange face repaired using 101 Metal Repair Paste



Corroded bow on large container vessel abrasive blast cleaned and filled using 101 Metal Repair Paste





Seal on a process vessel door had been badly corroded from chemical attack. The seal surface was re-formed using 101 Metal Repair Paste

The product can be used to rebuild damaged surfaces -

- **Cracked or holed pump housings**
- **Scored hydraulic rams**
- **Leaking tanks seams**
- **Damaged or worn flange faces**
- **Worn bearing housings**
- **Plate bonding**
- **Damaged keyways**
- **Damaged bearing supports**
- **Cracked engine blocks**
- **Worn engine liners**



Shaft on stone crusher damaged and worn. Surfaces were rebuilt using 101 Metal Repair Paste and machined on a lathe to bring the shaft surface back to the original factory finish

102 Metal Repair Fluid

is a two component solvent free epoxy fairing compound. The product has been designed to be applied to badly pitted surfaces up to 3mm in depth.

- Solvent free epoxy technology
- No shrinkage
- Brush applied
- Excellent adhesion to metallic substrates
- Anti slip system when used with aggregates



This material can be used to resurface damaged or worn surfaces -

- Conveyor belt rollers
- Anti slip coating for metal decks and stairs
- Resurfacing of corroded steel plates
- Filler for badly corroded tank bases



Conveyor belt roller prepared using needle guns and coated with 102 Metal Repair Fluid. Bauxite aggregate was incorporated into the wet resin to create an anti slip finish

103 Metal Repair Stick

is a single component solvent free epoxy repair putty in stick form which cures rapidly at room temperature after mixing.

- **Fast curing**
- **Hard dry in 30 minutes**
- **Bonds to metal & plastic surfaces**
- **Rapid mechanical strength**
- **No shrinkage**
- **Drill, tap, file or machine**



This material can be used to resurface damaged or worn surfaces -

- **Leaking pipes**
- **Holed pump/ valve casings**
- **Leaking tank seams**
- **Pipe flanges**
- **Ideal for emergency repairs**



Emergency repair to a cracked engine block. The crack was drilled at both ends and then filled using 103 Metal Repair Stick



104 Metal Repair Fluid XF

is a two component solvent free fast curing epoxy repair fluid. The product has been designed to be applied to manual or mechanically prepared surfaces.

- Solvent free epoxy technology
- Brush or applicator tool applied
- Apply to manually prepared surfaces
- Apply to oil contaminated surfaces
- Fast cure - hard dry in 60 minutes (20°C)



This material can be used to resurface damaged or worn surfaces -

- Leaking pipe joints
- Leaking tank seams
- Transformer repairs
- Leaking flange fittings
- Anti slip coating for metal decks and stairs
- Resurface corroded steel plates



Leaking pipe sockets on a diesel pipeline at a European oil refinery wrapped and sealed using 104 Metal Repair Fluid XF



Weeping transformer surfaces manually abraded and sealed using 104 Metal Repair Fluid XF



105 Aqua Stick

is a single component solvent free epoxy repair putty in stick form which is ideal for emergency repairs underwater. Just cut the required amount and knead in gloved hands for a rapid repair to metallic surfaces.

- **Rapid curing**
- **Hard dry in 45 minutes**
- **Bonds to metals underwater**
- **Rapid mechanical strength**
- **No shrinkage**
- **Drill, tap, file or machine**

Seal and repair damaged or worn metal, GRP or plastic surfaces underwater



106 Metal Repair Paste XF

a two component fast curing solvent free epoxy metal repair paste. The product has been designed for use on a wide range of metallic surfaces and can be used for underwater applications.

- Solvent free epoxy technology
- Fast curing—Hard dry 60 minutes
- High build capability— 20mm without slump
- Fully machinable once cured
- Simple mixing ratio 1:1 by volume
- Suitable for metallic surfaces
- No shrinkage
- Excellent chemical resistance
- Superior adhesion to metallic surfaces



Cold bond steel plate to seal leaking pipe surfaces



Emergency repair to seal a leaking flange face on a cooler box





Seal and rebuild damaged or worn surfaces underwater. 106 Metal Repair Paste XF can cure underwater at temperatures as low as 5° C

The product is ideal for emergency repairs to damaged or worn metallic surfaces such as -

- **Cracked or holed pump housings**
- **Scored hydraulic rams**
- **Leaking tanks seams**
- **Damaged or worn flange faces**
- **Worn bearing housings**
- **Plate bonding**
- **Damaged bearing supports**
- **Cracked engine blocks**



Base of a chemical storage tank had been badly corroded from chemical attack. Surfaces were mechanically prepared using handheld grinders. A pre-formed steel plate was then bonded onto the damaged surface using 106 Metal Repair Paste XF .

107 Metal Repair Paste XL

a two component solvent free epoxy metal repair paste with an extended working life making it ideal for repairs in warmer climates. The product has been designed for use on a wide range of metallic surfaces.

- Solvent free epoxy technology
- High build capability– 25mm without slump
- Fully machinable once cured
- Suitable for metallic surfaces
- No shrinkage
- Excellent chemical resistance
- Superior adhesion to metallic surfaces
- Extended working life of 60 minutes (20° C)



The product can be used to rebuild damaged surfaces such as -

- Cracked or holed pump housings
 - Scored hydraulic rams
 - Leaking tanks seams
- Damaged or worn flange faces
 - Worn bearing housings
 - Plate bonding
 - Damaged keyways
- Damaged bearing supports
 - Cracked engine blocks
 - Worn engine liners



Paper Pulper badly worn and was in urgent need of repair. Surfaces were abrasive blast cleaned and rebuilt using 107 Metal Repair Paste XL.

Typical Applications

	101	102	103	104	106	107
Base plate – cracked			■	■	■	■
Bearing housing – rebuild	■				■	■
Bearing support – rebuild	■				■	■
Bow thrusters – rebuild	■					■
Chutes – rebuild	■				■	■
Engine block - rebuild	■				■	
Evaporators – rebuild	■				■	
Flange repair	■		■	■	■	■
Heat exchanger end plate - rebuild	■					■
Hydraulic rams – scored	■		■	■	■	■
Hoppers – rebuild	■	■			■	■
Keyways – rebuild	■				■	■
Kort nozzles – rebuild	■					■
Pintle sleeves – rebuild	■					■
Pipe work internal	■	■	■	■	■	■
Process vessel – rebuild	■	■	■			■
Plate bonding	■				■	■
Propeller – rebuild/ resurface	■					■
Pump casing—holed	■		■		■	■
Pump casing—rebuild	■					■
Pump impeller – rebuild	■		■		■	■
Scrubber unit rebuild	■					■
Slug catchers repair	■					■
Sour gas treatment	■					■
Sump repair	■			■	■	■
Turbine blades	■	■	■			■
Tank seam	■			■	■	■
Tank base—internal	■		■	■	■	■
Tank Repairs	■			■	■	■

■ Product is suitable for this application

Metal Repair Products Testing and Product Characteristics

	101	102	104	106	107
Compressive strength <i>Tested to ASTM D 695</i>	1075kg/ cm ² (15,300psi)	1075kg/ cm ² (15,300psi)	615kg/ cm ² (8750psi)	615kg/ cm ² (8750psi)	1075kg/ cm ² (15,300psi)
Corrosion Resistance <i>Tested to ASTM B117</i>	5000 hours	5000 hours	5000 hours	5000 hours	5000 hours
Flexural Strength <i>Tested to ASTM D790</i>	703kg/cm ² (10,000psi)	703kg/cm ² (10,000psi)	655kg/cm ² (9315psi)	655kg/cm ² (9315psi)	703kg/cm ² (10,000psi)
Hardness <i>Rockwell R to ASTM D785</i>	100	100	85	85	100
Slump Resistance	25mm	3mm	3mm	20mm	20mm
Tensile Shear Adhesion <i>ed to ASTM D1002</i>	<i>Test-</i> 185kg/cm ² (2630psi)	185kg/cm ² (2630psi)	185kg/cm ² (2630psi)	185kg/cm ² (2630psi)	180kg/cm ² (2550 psi)
Volume Capacity <i>cc per kg</i>	406	440	555	555	388
Base density <i>gm per cm³</i>	2.70	2.70	1.80	1.80	2.70
Activator density <i>gm per cm³</i>	1.70	1.00	1.80	1.80	2.40
Mixed product density <i>gm per cm³</i>	2.46	2.50	1.80	1.80	2.58
Dry heat resistance (°C)	200	200	130	130	200
Intermittent wet heat resistance (°C)	120	120	80	80	120
Immersion temperature resistance (°C)	60	60	60	60	60
Mixing ratio by volume	3:1	3:1	1:1	1:1	3:2
Mixing ratio by weight	5:1	8:1	1:1	1:1	1.67:1

	10 °C			20 °C			30 °C			40 °C		
	Pot life	Machine	Hard dry	Pot life	Machine	Hard dry	Pot life	Machine	Hard dry	Pot life	Machine	Hard dry
101	60mins	4hrs	16hrs	30mins	2hrs	8hrs	15mins	1hrs	4hrs	7.5mins	30mins	2hrs
102	60mins	4hrs	16hrs	30mins	2hrs	8hrs	15mins	60mins	4hrs	7.5mins	30mins	2hrs
104	10mins	60mins	2hrs	5mins	30mins	60mins	2.5mins	15mins	30mins	75secs	7.5mins	15mins
106	10mins	60mins	2hrs	5mins	30mins	60mins	2.5mins	15mins	30mins	75secs	7.5mins	15mins
107	2hrs	8hrs	24hrs	60mins	4hrs	12hrs	30mins	2hrs	6hrs	15mins	1hrs	3hrs

Resimac Technical Support and Expertise



Formed in 2009 and based in the North of England, Resimac manufactures a wide range of solvent free epoxy and polyurethane coatings and engineering materials for the Marine, Chemical, Water, Power, Oil and Gas Industries.



We are able to offer expert technical advice onsite or online 24 hours a day, 7 days a week.



Contact us direct by email, telephone or by visiting our website.

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With over 50 contractors worldwide we are able to offer fast and effective solutions in many of the worlds major industrial areas.

Abrasion & Wear Protection
Chemical Protection
Corrosion Protection
High Temperature Protection
Impact Protection
Metal Repair
Pipe Repair and Pipe Wrapping
Thermal Protection
Underwater Repair & Protection

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