



102 Metal Repair Fluid

A brushable, solvent free epoxy repair fluid designed to resurface and protect metallic surfaces. Provides high mechanical adhesion and can be used as an anti-slip metal coating.

- Brushable coating for resurfacing metallic surfaces
- Can be used as an anti-slip metal coating
- High mechanical adhesion to metal substrates

2025 Product Sheet



Typical Applications

102 Metal Repair Fluid is a two component, solvent free epoxy designed for resurfacing and protecting metallic surfaces. With high mechanical adhesion, it effectively fills areas of pitting, scarring, and corrosion damage on mechanically or abrasive blast cleaned surfaces. This brushable coating creates a durable protective layer, ensuring long term performance in industrial environments.

- Damaged flanges
- Damaged hulls on vessels
- Leaking tank seams
- Anti-slip flooring

Characteristics

Appearance

Base	Dark grey paste
Activator	Amber liquid
Mixed	Mid grey fluid

Solids Content

100%

Volume Capacity

440cc/kg

Sag Resistance

Nil at 3mm

Density

Base	2.70
Activator	1.00
Mixed	2.50

Mixing Ratio

By weight	8:1
By volume	3:1

Storage Life

5 years if unopened and stored in normal dry conditions, 15–30°C (59–86°F)

Cure times

Usable Life

10°C/50°F	60 mins
20°C/68°F	30 mins
30°C/86°F	15 mins
40°C/104°F	7.5 mins

Min Machining Time

10°C/50°F	4 hours
20°C/68°F	2 hours
30°C/86°F	1 hour
40°C/104°F	30 mins

Max Overcoating Time

10°C/50°F	12 hours
20°C/68°F	6 hours
30°C/86°F	3 hours
40°C/104°F	90 mins

Full Cure

10°C/50°F	6 days
20°C/68°F	3 days
30°C/86°F	1.5 days
40°C/104°F	18 hours

Coverage

1kg (2.2lb) of fully mixed product will give the following coverage rates:

0.440m ² at 1mm	4.73ft ² at 40mil
0.220m ² at 2mm	2.37ft ² at 80mil
0.146m ² at 3mm	1.57ft ² at 1/8"

Please note that the coverage rates quoted are theoretical and do not take into consideration the profile or condition of the surface being repaired.

Mechanical Properties

Abrasion Resistance

Taber CS17 Wheels/1kg load
22mm³ loss/1000 cycles

Compressive Strength

Tested to ASTM D695
1075kg/cm² (15300psi)

Corrosion Resistance

Tested to ASTM B117
Minimum 5000 hours

Flexural Strength

Tested to ASTM D790
703kg/cm² (10,000psi)

Heat Resistance

Suitable for use in immersed
conditions at temperatures up to
60°C (140°F)

Resistant to dry heat up to
200°C (392°F) dependent on load

Adhesion

Tensile Shear to ASTM D1002 on
abrasive blasted mild steel with 75
micron profile 185kg/cm² (2630 psi)

Pull off Adhesion to ASTM D4541 on
abrasive blasted mild steel with 75
micron profile 244kg/cm² (3480 psi)

Heat Distortion

Tested to ASTM D648 at 264psi fibre
stress:

20°C (68°F) Cure 58°C (135°F)

100°C (212°F) Cure 98°C (208°F)

Hardness

Tested to ASTM D2240
Shore A: 84

Details & Legal

Chemical Resistance

The product resists attack by a
wide variety of inorganic acids,
alkalis, salts and organic media. For
more detailed information refer to
the Resimac Technical Centre for
advice.

Quality

All Resimac Products are supplied
under the scope of the company's
fully documented quality system.

MIL-PRF-24176C Qualification

This Resimac product has been
approved under MIL-PRF-24176C for
Type I and II applications in cement,
epoxy, metal repair, and hull
smoothing.

Warranty

Resimac warrants that the
performance of the product
supplied will conform to the typical
descriptions quoted within this
specification provided material is
stored correctly and used
according to the procedures
detailed in this document.

Pack Sizes

This product is available in the
following pack sizes:
1kg (2.2lb)

Application Guide

A. Surface Preparation

Metallic Substrates: Mechanical abrasion

- 1 All oil and grease must be removed from the surface using an appropriate cleaner such as MEK.
- 2 All surfaces must be mechanically abraded using handheld grinders to *ISO 8501/4 ST3 (SSPC SP3 ST3)*.
- 3 Once abraded, the surface must be degreased and cleaned using MEK or similar type material.
- 4 All surfaces must be coated before gingering or oxidation occurs.

Metallic Substrates: Abrasive blast cleaning (Preferred method)

- 1 All oil and grease must be removed from the surface using an appropriate cleaner such as MEK.
- 2 All surfaces must be abrasive blasted to *ISO 8501/4 Standard SA2.5 (SSPC SP10/ NACE 2)* minimum blast profile of 75 microns (3mil) using an angular abrasive.
- 3 Once blast cleaned, the surface must be degreased and cleaned using MEK or similar type material.
- 4 All surfaces must be coated before gingering or oxidation occurs.

Health & Safety

Please ensure good practice is observed at all times during the mixing and application of this product. Protective gloves and other recommended personal protective equipment must be worn during the mixing and application of this product.

Before mixing and applying the material, please ensure you have read and fully understood all information.

B. Product Preparation

Prior to mixing, please ensure the following:

- 1** The base component is at a temperature between 15–25°C (60–77°F).
- 2** The ambient & surface temperature is above 5°C (41°F). Once these 2 checks have been met, please proceed with mixing the product.

C. Mixing

Mix the complete unit of material (1kg):

- 1** Transfer the contents of the Activator unit into the Base container.
- 2** Using the spatula provided, mix the 2 components until a uniform material free of any streaks is achieved.
- 3** From the commencement of mixing the whole of the material should be used within 30 minutes at 20°C (68°F).

PLEASE NOTE: For salt contaminated surfaces the substrate must be pressure washed with clean water and checked for salt contamination, please refer to the surface preparation and pre-application guide for further information.

D. Application

Fairing compound:

- 1 For filling badly pitted or scarred surfaces apply the material using a rubber float across the repair surface ensuring the product is pressed into any holes or cracks.
- 2 The maximum wet film thickness this material can be applied onto a vertical surfaces without sagging is 3mm (120mil/ 1/8").

Resurfacing:

- 1 For conveyor rollers, steps or ramps, apply the product to the surface at a wet film thickness of 500 microns (20mil) and then broadcast a suitable aggregate onto the surface (Aluminium oxide or equivalent).
- 2 Once cured brush off any excess aggregate.

Optimum Performance

After an initial curing period of at least 4 hours at 20°C (68°F), raising the cure temperature progressively to 60–100°C (140–212°F) for up to 8 hours will result in improved mechanical, thermal and chemical resistance properties.

Anti-slip system:

- 1 If applying as a resurfacing material to repair worn or damaged surfaces the application should be carried out in two coats.
- 2 The material must be applied at a target wet film thickness of 500 microns (20mil) per coat.
- 3 From the commencement of mixing the whole of the material should be used within 30 minutes at 20°C (68°F).

PLEASE NOTE: Where the maximum overcoating time is exceeded, the material should be allowed to harden before being abraded or flash blasted to remove surface contamination, as this can cause a coarse profile.

Overcoating Times

Minimum: The applied material can be overcoated as soon as it is touch dry.

Maximum: The overcoating time should not exceed 6 hours.

Quick Application Guide



Step 1

Ensure you have
1 x base unit
1 x activator unit
1 x spatula
1 x brush (with the bristles cut to 25mm length)



Step 2

Open the activator tin and pour contents into the base unit.



Step 3

Mix the two components using a spatula, ensure any unmixed material around the edges is mixed.



Step 4

To ensure the product is fully mixed check the material for any colour difference. The mixed material should be a consistent mix.



Step 5

Once the material is fully mixed use a 25mm bristled brush to apply the coating to the substrate.

About Resimac

A UK based manufacturer of epoxy and polyurethane coatings and repair materials.

From our head office in the heart of rural North Yorkshire, England we supply our range of Epoxy, Polyurethane & Silicone coatings and repair materials to the Oil & Gas, Petrochemical, Marine, Paper & Pulp, Water, Power Generation & Chemical Industries.

Legal Notice

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