resimac Ltd.

104 Metal Repair Fluid XF

Designed for industrial metal repairs, this epoxy fluid bonds to minimally prepared surfaces, withstands oil contamination, and cures quickly for efficient application.

- Bonds to minimally prepared metallic surfaces
- Adheres through oil and grease for reliable performance
- Rapid curing to minimise downtime

2025 Product Sheet

Typical Applications

104 Metal Repair Fluid XF is a two component epoxy coating designed for a wide range of industrial applications. Its formulation is particularly effective in situations with minimal surface preparation and contamination from oil, grease, or lubricants. The solvent free composition ensures safer handling and reduces environmental impact, making it ideal for industrial maintenance and repairs.

- Repair and resurfacing of oil contaminated transformers
- Damaged flanges
- Leaking tank seams
- Pipework repairs
- Anti-slip systems for metallic substrates

Characteristics

Appearance

Base	Black viscous fluid
Activator	White viscous fluid
Mixed	Mid grey viscous fluid

Density

Base	1.80
Activator	1.80
Mixed	1.80

Solids Content

100%

Mixing Ratio

By weight	1:1
By volume	1:1

Volume Capacity

555cc/kg

Storage Life

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

Sag Resistance

Nil at 3mm

Cure times

Useable Life	
10°C/50°F	10 mins
20°C/68°F	5 mins
30°C/86°F	2.5 mins
40°C/104°F	75 secs

Hard Dry	
10°C/50°F	2 hours
20°C/68°F	1 hour
30°C/86°F	30 mins
40°C/104°F	15 mins

Full Cure	
10°C/50°F	8 hours
20°C/68°F	4 hours
30°C/86°F	2 hours
40°C/104°F	1 hour

Overcoating time

The overcoating time should not exceed 4 hours. The applied material can be overcoated as soon as it is touch dry.

Coverage

200gm (0.44lb) of fully mixed product will give the following coverage rates:

0.111m² at 1mm	1.2ft² at 40mil
800gm (1.76lb)	
0.444m² at 1mm	4.75ft² at 40mil

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

Compressive Strength
Tested to ASTM D695
615kg/cm² (8750psi)

Corrosion Resistance
Tested to ASTM B117
Minimum 5000 hours

Flexural Strength
Tested to ASTM D790
655kg/cm² (9315psi)

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

Resistant to dry heat up to 130°C (266°F) dependent on load

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

Pull off Adhesion to ASTM D4541 on abrasive blasted mild steel with 75 micron profile 155kg/cm² (2205psi)

Heat Distortion
Tested to ASTM D648 at 264psi fibre stress:

20°C (68°F) Cure	43°C (109°F)
100°C (212°F) Cure	61°C (142°F)

Hardness
Tested to ASTM D2240
Shore A: 82

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.

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.

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.

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

Food Contact
USDA compliant for incidental food contact.

Title 21, Food and Drugs, Chapter I, U.S. Code of Federal Regulations, FDA, Subchapter B – Food for Human Consumption, Section 175.300 (Resinous and Polymeric Coatings).

Pack Sizes
This product is available in the following pack sizes:
200gm (0.44lb)
800gm (1.76lb)

Application Guide

A. Surface Preparation

Metallic Substrates: Hand tools

1. Wipe away any ponding oil or grease using a solvent wipe.
2. All surfaces must be cleaned using wire brush, metal file, coarse sandpaper etc.
3. Once abraded, the surface must be cleaned with solvent to ensure as much oil and grease is removed.

Metallic Substrates: Mechanical tools

1. Wipe away any ponding oil or grease using a solvent wipe.
2. All surfaces must be mechanically abraded using handheld grinders to *ISO 8501/4 ST3 (SSPC SP3).*
3. Once abraded, the surface must be cleaned with solvent to ensure as much oil and grease is removed.

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).

PLEASE NOTE: From the commencement of mixing, the material should be used within 5 minutes at 20°C (68°F).

C. Mixing

If part mixing the unit of material:

1. Using the spatula provided place 1 equal measure from the base & activator units onto the mixing board provided.
2. Ensure to clean the spatula thoroughly after measuring the base component and before measuring the activator component.
3. Mix the 2 components together until you have a streak free mix (mid grey) on the mixing board.
4. Ensure there is no unmixed material on the spatula or mixing board.

D. Application

Step 1

Using a spatula or applicator tool, apply the material to the prepared surface.

Step 2

Ensure the product is pressed into any holes, scars or cracks.

Step 3

Once the repair has been completed smooth off any imperfections using a gloved hand.

Quick Application Guide

Step 1

Ensure you have
1 x base unit
1 x activator unit
1 x spatula
1 applicator
1 x clean mixing area

Step 2

Take equal measures of base and activator material, clean the spatula between measures.

Step 3

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

Step 4

The material must be a consistent light grey. Wipe away any unmixed material from the mixing surface.

Step 5

Once the material is fully mixed use the applicator tool provided to apply the metal repair paste to the surface.

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

Information & Enquiries

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