



## 101 XHT Metal Repair Paste

A high build, epoxy repair paste designed for extreme heat applications. Resists high operating temperatures, retains strength at elevated conditions, and ensures durable metal restoration.

- Resistant to dry heat up to 240°C (464°F) and immersion up to 180°C (356°F)
- High build application up to 25mm without slumping
- Maintains strength at high temperatures for structural integrity

2025 Product Sheet

## Typical Applications

101 XHT Metal Repair Paste is a two component, solvent free epoxy novolac repair compound formulated for high temperature metal restoration. It resists extreme operating conditions, retaining its strength at temperatures up to 240°C (464°F) dry heat and 180°C (356°F) in immersion, ensuring long lasting performance.

- Cracked pump or valve casings
- Damaged flanges
- Leaking tank seams
- Rebuilding process vessels
- Cracked engine blocks
- Cold bonding steel plate
- Leaking & corroded pipework
- Resurfacing chemical tanks

## Characteristics

### Appearance

Base	Dark grey paste
Activator	Light grey paste
Mixed	Mid grey paste

### Solids Content

100%

### Volume Capacity

384.6cm<sup>3</sup>/kg (23.5in<sup>3</sup>/2.2lb)

### Sag Resistance

Nil at 25mm

### Density

Base	2.88
Activator	1.75
Mixed	2.6

### Mixing Ratio

By weight	5:1
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		Min Machining Time		Min Overcoating Time		Max Overcoating Time		Full Cure
10°C/50°F	60 mins	10°C/50°F	16 hours	10°C/50°F	8 hours	10°C/50°F	24 hours	
20°C/68°F	30 mins	20°C/68°F	8 hours	20°C/68°F	4 hours	20°C/68°F	24 hours	
30°C/86°F	15 mins	30°C/86°F	4 hours	30°C/86°F	2 hours	30°C/86°F	12 hours	
40°C/104°F	7.5 mins	40°C/104°F	2 hours	40°C/104°F	1 hour	40°C/104°F	6 hours	

Requires post curing at a minimum of 60°C (140°F) to achieve full mechanical properties.

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  
44mm<sup>3</sup> loss/1000 cycles

### Compressive Strength

Tested to ASTM D695  
10,500psi (72.35MPa)

### Flexural Strength

Tested to ASTM D790  
10,000psi (69.57MPa)

### Flexural Modulus

Tested to ASTM D790  
1,050,000psi (7235MPa)

### Heat Resistance

Resists immersion temperatures up to 180°C (356°F) when used with a Resimac overcoat system.  
Resistant to dry heat up to 240°C (464°F), dependent on load

### Adhesion

Pull off Adhesion to ASTM D4541-17 on abrasive blasted mild steel with 75 micron angular profile:  
1,830psi (12.7MPa)

### Tensile Strength

Tested to ASTM D638  
7040psi (48.5MPa)

### Tensile Modulus

Tested to ASTM D638  
621,900psi (4288MPa)

### Elongation at break

Tested to ASTM D638 1.49%

### Hardness

ASTM D2240, Shore D: 82

## Details & Legal

### 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.

### Quality

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

### Pack Sizes

This product is available in the following pack sizes:  
1kg (2.2lb)  
3kg (6.6lb)

### 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.

## Coverage

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

0.385m <sup>2</sup> at 1mm	4.1ft <sup>2</sup> at 40mil
0.19m <sup>2</sup> at 2mm	2.0ft <sup>2</sup> at 80mil
0.13m <sup>2</sup> at 3mm	1.4ft <sup>2</sup> at 1/8"

# 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, near white metal) 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).

## C. Mixing

If mixing a complete unit of material (1kg/3kg):

- 1 Dispense as much of the base and activator units onto a clean mixing surface.
- 2 Mix the 2 components together until you have a streak free mix (mid grey) on the mixing board.
- 3 Ensure there is no unmixed material on the spatula or mixing board.

*PLEASE NOTE: From the commencement of mixing, the material should be used within 30 minutes at 20°C (68°F).*

#### **If part mixing the unit of material:**

- 1** Using the spatula provided place 3 equal measures from the base unit onto the mixing board provided.
- 2** Clean the spatula thoroughly.
- 3** Then take 1 equal measure from the activator unit and place alongside the base measures.
- 4** Mix the 2 components together until you have a streak free mix (mid grey) on the mixing board.
- 5** Ensure there is no unmixed material on the spatula or mixing board.

## **D. Application**

- 1** Using a spatula or applicator tool, apply the material to the prepared surface.
- 2** Ensure the product is pressed into any holes, scars or cracks.
- 3** Once the repair has been completed smooth off any imperfections using a gloved hand.

**For Optimum Performance:** The applied material can be over coated as soon as it is touch dry; however, the over coating time should not exceed 24 hours.

Where the maximum overcoating time is exceeded The material should be allowed to harden before being abraded or flash blasted to remove surface contamination.

## Quick Application Guide



### Step 1

Ensure you have:

- 1 x base unit
- 1 x activator unit
- 1 x spatula
- 1 x applicator
- 1 x clean mixing area



### Step 2

Take 3 equal measures of base material, clean the spatula, then take 1 measure of the activator.



### 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 create a diamond pattern on the surface and look for any areas which are not mid grey in colour.



### Step 5

Once the material is fully mixed use the applicator tool provided to apply the 101 XHT 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

The data contained within this Product Specification is furnished for information only and is believed to be reliable at the time of issue. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the responsibility of the customer to determine the products suitability for use. Resimac accepts no liability arising out of the use of this information or the product described herein.

## Information & Enquiries

For more information and technical data please visit our website or contact us.

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