resimac Ltd.

501 ARXL – Abrasion Resistant Grade

Solvent free, high build abrasion resistant epoxy coating for protecting steel and concrete from wear, impact, and chemical exposure in demanding environments.

- High resistance to abrasion and impact
- Extended usable life for flexible application scheduling
- Suitable for exposure to aggressive fluids and chemicals
- Solvent free coating applied by brush or roller

2025 Product Sheet

Typical Applications

501 ARXL is a solvent free, high build epoxy coating reinforced with hardened ceramic particles for enhanced resistance to abrasion, impact, and chemical attack. Designed for use on metallic and concrete substrates, it provides durable protection in harsh industrial environments where mechanical wear and corrosion are common.

- Internal pipe surfaces
- Tank internals
- Chemical pits
- Process vessels
- Sumps
- Separators
- Chutes
- Hoppers
- Fans & fan housings
- Turbine blades & housings

Characteristics

Appearance

Base	Highly structured thixotropic liquid
Activator	Amber liquid
Mixed	Thixotropic liquid

Solids Content

100%

Volume Capacity

657cc/kg

Sag Resistance

Nil at 400 microns

Density

Base	1.72
Activator	1.03
Mixed	1.49

Mixing Ratio

By weight	3:3:1
By volume	2:1

Storage Life

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

Cure times

Usable Life		Min overcoating time		Max overcoating time		Full Cure	
10°C/50°F	120 mins	10°C/50°F	20 hours	10°C/50°F	72 hours	10°C/50°F	14 days
20°C/68°F	60 mins	20°C/68°F	10 hours	20°C/68°F	36 hours	20°C/68°F	7 days
30°C/86°F	30 mins	30°C/86°F	5 hour	30°C/86°F	18 hours	30°C/86°F	3.5 day
40°C/104°F	15 mins	40°C/104°F	2.5 hours	40°C/104°F	9 hours	40°C/104°F	42 hours

Coverage

3.6ltrs (0.9 US gallon) of fully mixed product will give the following coverage rates

9m² at 400 microns	96ft² at 16mil
17ltrs (4.5 US gallon):	
42.5m² at 400 microns	23.52ft² at 16mil

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
50mg/34mm³ loss/1000 cycles

Compressive Strength
Compressive strength tested to
ASTM D695 680kg/cm² (9650psi)

Corrosion Resistance
Tested to ASTM B117
Minimum 5000 hours

Flexural Strength
Tested to ASTM D790
518kg/cm² (7350psi)

Hardness
Shore D to ASTM D2240: 83

Adhesion
Tensile Shear to ASTM D1002 on abrasive blasted mild steel with 75 micron profile 190 kg/cm² (2700 psi)

Immersion Testing
Tested to ISO 2182-2
50˚C (122ºF) No blistering or corrosion after 6 months

Heat Resistance
Suitable for use in immersed conditions at temperatures up to 60ºC (140ºF)
Resistant to dry heat up to 200ºC (392ºF) dependent on load

Details & Legal

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

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:
3.6ltrs (0.9 US Gallon)
17ltrs (4.5 US Gallons)

Chemical Resistance
The product resists attack by a wide variety of inorganic acids, alkalis, salts and organic media including:

Black Liquor	40ºC (104ºF)
Crude Oil	30ºC (86ºF)
Diesel	40ºC (104ºF)
Hydrochloric Acid 20%	40ºC (104ºF)
Hydrocarbons	40ºC (104ºF)
Phosphoric Acid 30%	40ºC (104ºF)
Sea Water	40ºC (104ºF)
Sodium Hydroxide 50%	40ºC (104ºF)
Sulphuric acid 20%	40ºC (104ºF)
White Liquor	40ºC (104ºF)

Application Guide

A. Surface Preparation

Metallic Substrates: Abrasive blast cleaning

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.

Existing concrete preparation:

1. If the concrete surface is contaminated, pressure wash using clean water.
2. Once the concrete is dry, lightly abrasive blast or scarify taking care not to expose the aggregate.
3. Clean all dust and debris from the surface and prime with 503 SPEP (low viscosity epoxy primer).
4. Apply 503 SPEP at 150 microns (6mil) WFT, leave to cure for 3 hours 20°C (68°F) before overcoating.

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.

New/green concrete:

1. Allow new concrete to cure for a minimum of 21 days and treat to remove any surface laitance.
2. Check the moisture content of the concrete prior to coating (25% moisture content or below).
3. Clean all dust and debris from the surface and prime with 505 Damp Seal (low viscosity epoxy primer).
4. Apply 505 Damp Seal at 150 microns (6mil) WFT, leave to cure for 8 hours 20°C (68°F) before overcoating.

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 10°C (50°F).

   The ambient & surface temperatures are not less than 3°C (6°F) above the dew point.

C. Mixing

If mixing a complete unit of material (3.6ltrs/17ltrs):

1. Transfer the contents of the activator unit into the base container.
2. Using an electric paddle mixer, 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 60 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

Brush or Roller Applications:

1. Pour the mixed material into a paint kettle or paint tray (this will maximise the usable life).
2. Using a 50mm (2”) wide synthetic brush, stripe coat all edges, joints, corners and equipment with the mixed material. The stripe coat must be approximately 100mm (4”) wide, at 400 microns (16mil) wet film thickness.
3. Once the stripe coat has cured sufficiently and is capable of being overcoated, apply the 1st coat of mixed product to all surfaces at 400 microns (16mil) wet film thickness.
4. Once the 1st coat of material has cured sufficiently, approximately 8 hours at 20°C (68°F), apply a 2nd coat of material to all surfaces at 400 microns (16mil) wet film thickness.

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

Quick Application Guide

Brush or Roller Applications:

Step 1

Ensure you have:
1 x base unit
1 x activator unit
1 x spatula
1 x drill and paddle mixer
1 x medium pile roller
1 x brush

Step 2

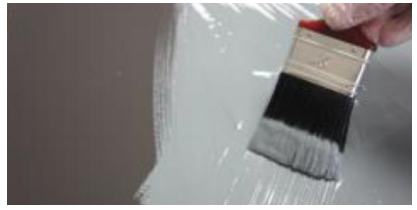
Pour the contents of the activator container into the base container.

Step 3

Mix thoroughly, taking to care to ensure any unmixed material is scraped down from the edges of the container using a spatula. Continue mixing until a streak free, uniform material is achieved.

Step 4

Apply to the correctly prepared substrate using a brush or medium pile roller to the required wet film thickness of 400 microns (16mil).



Step 5

Allow to cure for minimum of 8 hours 20°C (68°F)
or until touch dry and then apply the 2nd coat.

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

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

www.resimacsolutions.com

info@resimac.co.uk

+44 (0) 1845 577498

Resimac Ltd,
Unit B, Park Barn Estate,
Station Road,
Topcliffe,
Thirsk,
North Yorkshire,
Y07 3SE,
United kingdom