505 Damp Seal

Low viscosity, solvent free epoxy primer designed to seal green or damp concrete and improve adhesion in variable site conditions.

- Low viscosity formulation for green and damp concrete
- Tolerant of poor surface preparation and residual moisture
- Improves adhesion and performance of Resimac coating systems
- Cures at temperatures as low as 10°C (50°F)

2025 Product Sheet

Typical Applications

505 Damp Seal is a solvent free, low viscosity epoxy primer formulated to consolidate and seal green or wet concrete and cementitious surfaces. Its excellent surface tolerance allows it to bond even to damp or poorly prepared substrates, making it ideal for fast track or high humidity environments.

- Internal & external tank bases
- Damp or surface saturated areas
- Newly laid concrete
- Structural concrete

Characteristics

Appearance

Base	Pale yellow liquid
Activator	Amber liquid
Mixed	Pale amber liquid

Solids Content

100%

Volume Capacity

925cc/kg

Sag Resistance

Nil at 130 microns

Density

Base	1.15
Activator	1.02
Mixed	1.1

Mixing Ratio

By weight	1.85:1
By volume	1.65:1

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	
10°C/50°F	90 mins	10°C/50°F	16 hours	10°C/50°F	72 hours
20°C/68°F	45 mins	20°C/68°F	8 hours	20°C/68°F	36 hours
30°C/86°F	20 mins	30°C/86°F	4 hours	30°C/86°F	18 hours
40°C/104°F	12 mins	40°C/104°F	2 hours	40°C/104°F	9 hours

Coverage

4.5ltrs (1.2 US gallon) of fully mixed product will give the following coverage rates

30m² at 150 microns	322ft² at 6mil

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

Tensile Shear
Tested to ASTM D1002
on abrasive blasted mild steel with
75 micron profile
201kg/cm² (2860 psi)
on rusted steel
167kg/cm² (2375 psi)

Compressive Strength
Tested to ASTM D 695
629kg/cm² (8945psi)

Flexural Strength
Tested to ASTM D790
371kg/cm² (5275psi)

Hardness
Shore D to ASTM D2240 84

Adhesion
Pull off adhesion: Elcometer pull off adhesion tester.
Dry 525psi (cohesive in substrate)
37kg/cm²
Wet 475psi (cohesive in substrate)
33.4kg/cm²

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Heat Resistance

Suitable for use in immersed conditions at temperatures up to 60°C (140°F). Resistant to dry heat up to 150°C (302°F) dependent on load.

Details & Legal

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:
4.5ltrs (1.2 US gallon)

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.

Application Guide

A. Surface Preparation

Existing Concrete:

1. If the concrete surface is contaminated, pressure wash using clean water.
2. Clear any standing water from the surface of the concrete.

B. Product Preparation

New Concrete:

1. Allow new concrete to cure for a minimum of 7 days (dependant on thickness) and treat to remove any surface laitance.
2. Lightly scarify the surface taking care not to expose the aggregate.
3. Clean all dust and debris from the surface.

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 10°C (50°F).

C. Mixing

Mix the complete unit of material (4.5ltrs):

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 45 minutes at 20°C (68°F).

D. Application

Brush or roller application:

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.
3. The stripe coat must be approximately 100mm (4") wide, at 150 microns (6mil) wet film thickness.
4. Once the stripe coat has cured sufficiently and is capable of being overcoated, apply the mixed product to all surfaces at 150 microns (6mil) wet film thickness. Leave to cure for a minimum of 8 hours at 20°C (68°F).
5. Once cured, the coated surface must have a semi-gloss finish, any dull patches will be caused by excessive porosity in the concrete surface. Therefore a 2nd coat of 505 Damp Seal must be applied.
6. Apply a 2nd coat of material at 150 microns (6mil) wet film thickness.

Quick Application Guide

Step 1

Ensure you have:
1 x base unit
1 x activator unit
1 x spatula
1 x slow speed drill & paddle
1 x paint kettle or paint tray
1 x brush or medium pile roller

Step 2

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

Step 3

Mix thoroughly, taking to care to ensure any unmixed base component 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 150 microns (verified using wet film thickness gauge).

Step 5

Allow to cure for minimum of 8 hours. The primer should have a uniform semi-gloss finish, any dull patches are caused by excessive porosity. Any dull patches must be over coated with a 2nd coat at 150 microns WFT.

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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