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Repair Protect Upgrade



Corrosion Protection Products

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Introduction to Resimac

Resimac Corrosion Protection products are ideal for protecting metallic and concrete surfaces from weathering and UV degradation. Our product range covers a wide range of materials including water based flexible membranes, solvent based epoxy and polyurethane coatings and high build solvent free epoxy base coats.

Resimac products are manufactured in the UK and exported to over 40 countries worldwide, we are able provide local solutions in North America, South America, Africa, Europe, Middle East and Asia using our approved contractor network.

Resimac Corrosion Protection products are used in many industries and through our extensive worldwide network of contractors we are able to offer onsite technical support, training, presentations & seminars backed by project method statements & specifications.

Oil & Gas

Power

Water

Chemical

Marine

Petrochemical

Paper & Pulp















Resimac Corrosion Protection Product Range

spray applied

Concrete Primer	Resic	hem 503 SPEP	Solvent Free I	Ероху		
Low viscosity solvent free epoxy primer for concrete	Apply at 100-150 microns per coat	Mechanically prepared or scarified surfaces	Usable life 25-30 mins	Clear		
and cementitious surfaces	Brush, roller or standard airless	Apply to surfaces with 8% or	Minimum over coating 6 hours			
	spray applied	less moisture content	Maximum over coating 24 hours			
Damp Concrete Primer	Resici	hem 505 Damp Seal	Solvent Free Epoxy			
Low viscosity solvent free epoxy primer for damp	Apply at 100-150 microns per coat	Mechanically prepared or scarified surfaces	Usable life 45 mins	Amber		
concrete and cementitious surfaces	Brush, roller or standard airless	Apply to surfaces with 25% or	Minimum over coating 8 hours			
Surraces	spray applied	less moisture content	Maximum over coating 24 hours			
Base Coat for Steel or	Concrete Resic	hem 501 CRSG	Solvent Free	Ероху		
High build solvent free epoxy	Apply at 250-350 microns per	Mechanical surface	Usable life 20-25 mins	Light grey		
coating for steel or primed concrete surfaces	coat Brush, roller or standard airless	preparation ST2/ ST3 Abrasive blast cleaning surface	Minimum over coating 6 hours	Dark grey		
	spray applied	preparation ISO 8501/4 Standard SA2.5 (SSPC SP10/ NACE 2)	Maximum over coating 36 hours	Blue		
Base Coat for Steel or	Concrete Resic	hem 506 Aluprime	Solvent Based	d Epoxy		
Thin film solvent based epoxy	Apply at 100 microns per coat	Manually or Mechanical	Usable life 2 hours	Mid grey		
coating for steel or metallic surfaces	Brush, roller or standard airless spray applied	surface preparation ST2/ ST3 Hydroblasting NACE WJ4—	Minimum over coating 8 hours			
		WJ3	Maximum over coating 36 hours			
Base Coat Hot Steel Su	ırfaces Resic	hem 530 HA100	Solvent Free I	Ероху		
Single component heat activated epoxy novolac coating	Apply in multiple coats at 75- 125 microns per coat	Manually prepared surfaces using hand tools	Touch Dry	Red		
for application to hot process surfaces 100°C—240°C	Brush, roller or standard airless spray applied	Mechanical surface preparation ST2/ ST3	100°C 50 mins 120°C 25 mins 140°C 7 mins			
	. ,	Hydroblasting NACE WJ4—WJ3	160°C 90 secs 180°C 45 secs			
UV Stable Top Coat	Resic	hem 508 UVPU	Solvent Based	d PU		
Low viscosity solvent based	Apply at 75-125 microns per	Apply to surfaces primed using	Usable life 2 hours	Any RAL or BS		
polyurethane top coat with excellent UV stability	coat Brush, roller or standard airless	Resichem 503 SPEP, 505 Damp Seal, 501 CRSG or 506	Minimum over coating 1.5 hours	colour		
	spray applied	Aluprime	Maximum over coating 36 hours			
UV Stable Top Coat	Resic	hem 554 RB Membrane	Solvent Base	d Acrylic		
Single component solvent	Apply at 1mm per coat	Apply to directly to manually or	Shower Resistant	Light grey		
based rubberised acrylic top coat capable of curing at	Brush or roller applied	mechanical prepared surfaces	15 mins	Dark grey		
temperatures as low as 5°C		Apply to surfaces primed with 501 CRSG or 506 Aluprime	Touch Dry 1-2 hours	White		
UV Stable Top Coat	Resic	hem 555 Resinox	Water Based	Acrylic		
Single component water	Apply at 400-500 microns per	Apply directly to manually,	Usable life 30 mins	White		
based acrylic membrane with excellent elongation and	coat	mechanically or hydroblasted prepared surfaces	Minimum over coating	Light Grey		
flexibility	Brush, roller or standard airless	Apply to surface primed with	30 mins	(Can be tinted		

Apply to surface primed with 501 CRSG or 506 Alurpime

to BS/ RAL

colours)

Maximum over coating

Indefinite

Resimac Corrosion Protection Product Range

BS EN ISO 12944 Classification of Resimac Products

Corrosive Category	Examples of typical environments in rural, industrial & marine climates									
	Exterior	Interior								
C2 LOW	Atmospheres with low level of pollution. Mostly rural areas	Unheated buildings where condensation may occur, for example, depots, warehouses, sports halls								
C3 MEDIUM	Urban and Industrial atmospheres, moderate sulphur dioxide pollution, areas with low salinity.	Production rooms with high humidity and some air pollution, for example, breweries, food production								
C4 HIGH	Industrial areas and Coastal area with moderate salinity	Rooms and areas with high humidity, low risk of chemical vapour and splash, for example, swimming pools, chemical production								
C5-I VERY HIGH (INDUSTRIAL)	Industrial areas with high humidity and aggressive atmosphere	Buildings and areas with almost permanent condensation and with high pollution								
C5-M VERY HIGH (MARINE)	Coastal and offshore areas with high salinity	Buildings and areas with almost permanent condensation and with high pollution								

C2 Low Corrosive Environment

Low levels	of pollut	ion, rural area	s						
Surface Prep	Standard	Primer	No of Coats	DFT per coat (microns)	Top Coat	No of Coats	DFT per coat (microns)	Total DFT system	Expected Design Life to first maintenance
Manual	ST2	555 Resinox	1	250	555 Resinox	1	250	500	15 YEARS
Mechanical	ST3	555 Resinox	1	250	555 Resinox	1	250	500	20 YEARS
Mechanical	ST3	506 Aluprime	1	100	554 RB Membrane	2	150	400	20-25 YEARS
Mechanical	ST3	506 Aluprime	1	100	555 Resinox	2	250	600	25 YEARS +

C3 Medium Corrosive Environment

Urban & Industrial atmospheres, moderate sulphur dioxide

Surface Prep	Standard	Primer	No of Coats	DFT per coat (microns)	Top Coat	No of Coats	DFT per coat (microns)	Total DFT system	Expected Design Life to first maintenance
Mechanical	ST2-ST3	506 Aluprime	2	100	508 UVPU	1	100	300	20 YEARS
Mechanical	ST2-ST3	501 CRSG	1	350	508 UVPU	1	100	450	20-25 YEARS
Hydroblast	3000psi+	555 Resinox	1	300	555 Resinox	1	300	600	20 YEARS
Abrasive Blast	SA2.5	506 Aluprime	2	100	0 508 UVPU 1		100	300	25 YEARS
Abrasive Blast	SA 2.5	501 CRSG	1	350	508 UVPU	1	100	450	UP TO 30 YEARS

C4 High Corrosive Environment

Industrial & Coastal areas with moderate salinity

Surface Prep	Standard	Primer	No of Coats	DFT per coat (microns)	Top Coat	No of Coats	DFT per coat (microns)	Total DFT system	Expected Design Life to first maintenance
Mechanical	ST2-ST3	506 Aluprime	2	100	508 UVPU	1	100	300	17-20 YEARS
Mechanical	ST2-ST3	501 CRSG	1	350	508 UVPU	1	100	450	20 YEARS
Hydroblast	ST3	555 Resinox	1	300	555 Resinox	1	300	600	15-17 YEARS
Abrasive Blast	SA2.5	506 Aluprime	2	100	508 UVPU	1	100	300	20-25 YEARS
Abrasive Blast	SA 2.5	501 CRSG	1	350	508 UVPU	1	100	450	25-30 YEARS

C5 Very High Corrosive Environment

Industrial & Coastal areas with high humidity and aggressive atmospheres

Surface Prep	Standard	Primer	No of Coats	DFT per coat (microns)	Top Coat	No of Coats	DFT per coat (microns)	Total DFT system	Expected Design Life to first maintenance
Mechanical	ST2-ST3	506 Aluprime	2	100	508 UVPU	1	100	300	15 YEARS
Mechanical	ST2-ST3	501 CRSG	1	350	508 UVPU	1	100	450	15-17 YEARS
Hydroblast	ST3	555 Resinox	1	300	555 Resinox	1	300	600	10-15 YEARS
Abrasive Blast	SA2.5	506 Aluprime	2	100	508 UVPU	1	100	300	15-20 YEARS
Abrasive Blast	SA 2.5	501 CRSG	1	350	508 UVPU 1 100 450		450	20 YEARS	
Abrasive Blast	SA 2.5	501 CRSG	1	350	508 UVPU	2	100	550	25 YEARS

Application of 530 H100 to hot surfaces ranging from 100°C to 240°C

Surface Prep	Surface tem- perature	Product	No of Coats	DFT per coat (microns)	Total DFT system	Expected Design Life to first maintenance
Manual	100°C - 130°C	530HA100	4	100	400	5 YEARS
Manual	130°C - 160°C	530HA100	4	100	400	4 YEARS
Manual	160°C - 200°C	530HA100	4	100	400	3 YEARS
Manual	200°C - 240°C	530HA100	4	100	400	2 YEARS
Mechanical	100°C - 130°C	530HA100	3	100	300	8 YEARS
Mechanical	130°C - 160°C	530HA100	3	100	300	7 YEARS
Mechanical	160°C - 200°C	530HA100	3	100	300	6 YEARS
Mechanical	200°C - 240°C	530HA100	3	100	300	5 YEARS
Hydroblast	100°C - 130°C	530HA100	3	100	300	10 YEARS
Hydroblast	130°C - 160°C	530HA100	3	100	300	9 YEARS
Hydroblast	160°C - 200°C	530 HA100	3	100	300	8 YEARS
Hydroblast	200°C - 240°C	530HA100	3	100	300	7 YEARS

The information outlined in the tables above and on the opposite page are for use as a general guide only. Please speak to your local Resimac representative or contact Resimac direct on info@resimac.co.uk or telephone the technical department on +44 (0) 1845 577498 for more detailed information on our corrosion protection coatings.

Resichem 503 SPEP

Low viscosity primer for sealing concrete surfaces

a two component solvent free low viscosity epoxy primer designed to seal porous surfaces. The coating can be applied to cementitious surfaces with a moisture content of 8% or less.

- Solvent free epoxy technology
- Low viscosity penetrating primer
- Apply by brush, roller or standard airless spray
- Consolidates and seals porous surfaces
- Improves adhesion of epoxy or PU top coats
- Tolerant of less than ideal surface preparation
- Cures at low temperatures (5°C)
- Fast cure and extended working life grades available





Concrete surface primed using Resichem 503 SPEP prior to application of Resichem 501 CRSG





Concrete surface on a chemical containment area was mechanically abraded and sealed with Resichem 503 SPEP prior to being over coated with Resichem 501 CRSG







Resichem 505 Damp Seal

Primer for sealing concrete surfaces with a high moisture content, up to 25%

a two component solvent free epoxy primer designed to seal porous surfaces with excessive moisture content. The coating can be applied to cementitious surfaces with a moisture reading up to 25%.

- Solvent free epoxy technology
- Designed for damp surfaces
- Apply to concrete with high moisture content
- Seals and prevents further ingress of moisture
- Apply by brush, roller or standard airless spray
- Consolidates and seals porous surfaces
- Improves adhesion of epoxy or PU top coats
- Tolerant of less than ideal surface preparation

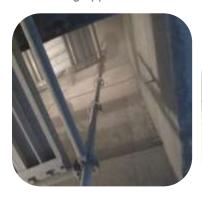








Concrete structure sealed with Resichem 505 Damp Seal prior to Resichem 501 CRSG being applied in 2 coats.





Resichem 501 CRSG

high build solvent free epoxy base coat for metallic & concrete surfaces

is a two component solvent free epoxy corrosion protection coating. The coating can be applied to mechanical, hydroblasted and abrasive blast cleaned surfaces.

- Solvent free epoxy technology
- Brush applied, roller or spray applied
- Apply at 300-500 microns WFT
- Compatible with acrylic and polyurethane top coats
- Excellent adhesion to metallic and primed concrete substrates
- Cures at low temperatures (5°C)

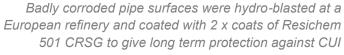








Bridge over UK rail line mechanically abraded and coated with 2 x coats of Resichem 501CRSG. Once cured Resichem 508 UVPU was applied to give a UV resistant finish









Resichem 501 CRSG

high build solvent free epoxy base coat for metallic & concrete surfaces







Structural steel underneath a water tank abrasive blast cleaned and coated with Resichem 501 CRSG

This material can be used to resurface and protect—

- Bridges
- Stairways
- External tank surfaces
- Structural steel
- Machinery
- External pipe surfaces
- Transformers
- Steel containers
- Pump & Valve casings



Diesel storage tank at a UK marina was badly corroded due to the corrosive environment. The external tank surfaces were mechanically abraded and protected using Resichem 501 CRSG.









Gantry crane in a chemical facility was mechanically abraded and coated with Resichem 501 CRSG

Resichem 506 Aluprime

thin film solvent based epoxy base coat for manual & mechanically prepared surfaces

is a two component solvent based low viscosity epoxy coating ideal for application to manual or mechanically prepared surfaces. The product can cure at temperatures as low as 5°C.

- Solvent based epoxy technology
- Brush, roller or spray applied
- Cures at low temperatures
- Compatible with acrylic and polyurethane top coats
- Tolerant of less than ideal surface preparation
- Provides long term protection in C1-C5 corrosive environments



This material can be used to resurface and protect—

- Bridges
- Stairways
- External tank surfaces
- Structural steel
- Machinery
- External pipe surfaces
- Transformers
- Steel containers
- Pump & Valve casings

Process Pipes at a chemical site required protection from external corrosion. All surfaces were mechanically abraded and coated with 506 Aluprime and 508 UVPU top coat







External pipe surfaces at a waste water treatment plant had become badly corroded. The surfaces of the pipes were mechanically abraded and protected with 2 x coats of 506 Aluprime



Resichem 554 RB Membrane solvent based rubberised acrylic top coat, UV Stable

is a single component solvent based rubberised acrylic top coat. The coating can be applied to primed metallic and concrete surfaces.

- Solvent based rubberised acrylic technology
- Single component
- Apply by brush or roller
- Cures at low temperatures (5°C)
- Flexible with excellent elongation
- Shower resistant after 15 minutes
- UV stable
- Provides long term protection in C1-C5 corrosive environments

This material can be used to resurface and protect—

- Bridges
- Stairways
- External tank surfaces
- Structural steel











Floating roof on crude oil tank hydro blasted at 1000psi, primed using 506 Aluprime and over coated with 554 RB membrane

Resichem 555 Resinox

water based acrylic membrane top coat, UV Stable

is a single component water based acrylic top coat. The coating can be applied to manually, mechanically, hydro-blasted and abrasive cleaned surfaces to provide long term corrosion protection



- Water based acrylic technology
- Single component
- Apply by brush, roller or standard airless spray
- Flexible with excellent elongation
- Touch dry in 60 minutes at 20°C
- Tolerant of less than ideal surface preparation
- No primer required on metallic surfaces
- UV stable
- Provides long term protection in corrosive environments



Petrol storage tank at European refinery hydroblasted and coated with 2 x coats of Resichem 555 Resinox







Large crane at fertiliser plant required a long term corrosion protection system. All surfaces were mechanically abraded and coated with 2 x coats of Resichem 55 Resinox







Resichem 555 Resinox

water based acrylic membrane top coat, UV Stable







Crude oil storage tank roof was cleaned with high pressure water at 1000psi. Resichem 555 Resinox was applied in 2 coats at 500 microns wet film thickness per coat.

This material can be used to resurface and protect—

- Bridges
- Stairways
- External tank surfaces
- Structural steel
- Containers
- Transformers
- Pylons



As part of a large coating contract 8 crude oil storage tanks were coated at a European oil refinery with Resichem 555 Resinox







Resichem 508 UVPU

solvent based polyurethane top coat, UV Stable

is a two component solvent based low viscosity polyurethane top coat for primed metallic and concrete surfaces. Resichem 508 UVPU is proven to offer long term asset protection with excellent UV stability.

- Solvent based polyurethane technology
- Two component
- Apply by brush, roller or standard airless spray
- Excellent flexibility once cured
- Apply to metallic surfaces primed with 506 Aluprime or 501 CRSG
- Apply to concrete surfaces primed with 503 SPEP and 505 Damp Seal
- UV stable
- Provides long term protection in C1-C5 corrosive environments
- Available in a wide range of RAL or BS colours



Training facility in the UK was refurbished using Resimac corrosion protection systems. All surfaces were mechanically abraded and primed with 506 Aluprime and top coated with 508 UVPU







Concrete surfaces of a subway were mechanically abraded, primed with 503 SPEP and top coated with 508 UVPU







Resichem 508 UVPU

solvent based polyurethane top coat, UV Stable







The external tank surfaces were mechanically abraded and primed using Resichem 501 CRSG, once cured a single coat of 508 UVPU was applied to give a UV stable finish to the tank surface

This material can be used to resurface and protect—

- Bridges
- Stairways
- External tank surfaces
- Structural steel
- Machinery
- External pipe surfaces
- Transformers
- Steel containers
- Pump & Valve casings





Grain silo required a 15 year + coating system to protect from further surface corrosion. The mechanically prepared surface was primed with 2 x coats of 506 Aluprime and top coated with 2 x coats of 508 UVPU

Resichem 530 HA100

Single component heat activated epoxy novolac for process surfaces ranging from 100°C-240°C

a single component heat activated epoxy novolac coating that has been designed to be applied to process surfaces ranging from 100°C-240°C. The product offers outstanding corrosion protection even to metallic surfaces with less than ideal surface preparation

- Solvent free epoxy novolac technology
- Fast curing at elevated temperatures
- Apply to surfaces ranging from 100°C-240°C
- Apply by brush, roller or standard airless spray
- No primer required on metallic surfaces
- Provides long term protection in C1-C5 corrosive environments

This material can be used to resurface and protect—

- Pipes
- Process equipment
- Valve and pump casings
- External tank surfaces





Nozzle on a hydrochloric acid storage tank operating at 115°C was rebuilt using 107 Metal Repair Paste XL and protected using 530H100



Resichem 530 HA100 applied to hot process pipes operating at 150-160°C using standard airless spray







Corrosion Protection Product Testing and Characteristics

	501	503	505	506	508	554	555	530
Compressive strength Tested to ASTM D 695	648kg/ cm² (9200psi)	629kg/ cm² (8945psi)	629kg/ cm² (8945psi)	N/A	N/A	N/A	N/A	N/A
Corrosion Resistance Tested to ASTM B117	5000 hours	5000 hours	5000 hours	5000 hours	5000 hours	5000 hours	5000 hours	1000 hours
UV Resistance Tested to ASTM G53	N/A	N/A	N/A	N/A	1000 hours	1000 hours	1000 hours	N/A
Elongation Tested to ASTM D412	N/A	N/A	N/A	N/A	N/A	200%	230%	N/A
Corrosion Weathering Tested to ASTM D4798	N/A	N/A	N/A	N/A	1500 hours	1500 hours	1500 hours	N/A
Flexural Strength Tested to ASTM D790	522kg/cm² (7400psi)	371kg/cm² (5275psi)	371kg/cm² (5275psi)	N/A	N/A	N/A	N/A	N/A
Hardness Rockwell R to ASTM D785	80	84	84	75	80	N/A	N/A	90
Sag Resistance	400 microns	150 microns	150 microns	150 microns	150 microns	1mm	750 microns	500 microns
Tensile Shear Adhesion Tested to ASTM D1002	194kg/cm² (2750psi)	201kg/cm² (2860si)	201kg/cm² (2860si)	195kg/cm² (2770psi)	180kg/cm² (2550 psi)	N/A	N/A	197kg/cm² (2800psi)
Solids %	100	100	100	80	55	50	55	100
Base density gm per cm³	1.78	1.12	1.15	1.15	1.514	N/A	N/A	N/A
Activator density gm per cm³	1.04	1.00	1.02	1.02	1.035	N/A	N/A	N/A
Mixed product density gm per cm ³	1.56	1.08	1.08	1.12	1.418	1.5	1.5	1.4
Dry heat resistance	200	150	150	130	130	90	90	240
Intermittent wet heat resistance	120	100	120	90	70	50	50	150
Immersion temperature resistance (°C)	60	60	60	40	50	N/A	N/A	60
Mixing ratio by volume	2.4:1	2:1	3:2	4:1	4:1	N/A	N/A	N/A
Mixing ratio by weight	4:1	2.24:1	1.65:1	4.5:1	4.5:1	N/A	N/A	N/A

Corrosion Protection Product Cure times

	10°C			20°C			30°C			40°C		
	Pot life	Minimum Overcoat	Maximum Overcoat									
501	60mins	8hrs	72hrs	30mins	4hrs	36hrs	15mins	2hrs	18hrs	7.5mins	1hr	9hrs
503	50mins	8hrs	48hrs	25mins	4hrs	24hrs	12.5mins	2hrs	12hrs	6mins	1hr	6hrs
505	90mins	16hrs	48hrs	45mins	8hrs	24hrs	22.5mins	4hrs	12hrs	11mins	4hrs	12hrs
506	4hrs	16hrs	48hrs	2hrs	8hrs	24hrs	1hr	4hrs	12hrs	30mins	4hrs	12hrs
508	1hr	3hrs	72hrs	30mins	90mins	36hrs	15mins	45mins	18hrs	7.5mins	45mins	18hrs
554	60mins	2hrs	5days	30mins	60mins	5days	15mins	30mins	5days	7.5mins	15mins	5days
555	DO	NOT	USE	30mins	1hr	5days	15mins	30mins	5days	7.5mins	30mins	5days

Corrosion Protection Product Coverage Rates

Product	Pack Size	75 mics	100 mics	125 mics	150 mics	200 mics	250 mics	300 mics	400 mics	500 mics
501	3.4ltr					17m²	13.6m ²	11.3m ²		
	16ltr					80m²	64m²	52.8m ²		
503	1ltr		10m²	8m²	6.6m²	5m²	4m²			
	4ltr		40m²	32m²	26.4m²	25m²	20m²			
	18ltr		180m²	144m²	118.8m²	90m²	72m²			
505	4.5ltr				29.9m²	22.5m ²	18m²			
506	5ltr	66.6m²	50m ²	40m²	33.3m²					
	20ltr	266.4m ²	200m²	160m²	133m²					
508	5ltr	66.6m²	50m ²	40m²	33.3m²					
530	4ltr	53.3m²	40m²	32m²	26.6m²	20m²	16m²	13.2m ²	10m²	
554	5ltr							16.65m ²	12.5m ²	10m²
	20ltr							66.6m ²	50m ²	40m²
555	20ltr							66.6m ²	50m ²	40m²

Please note that all coverage rates quoted are theoretical and do not take into account the condition of the surface being coated

Resimac Technical Support and Expertise



Formed in 2009 and based in the North of England, Resimac manufactures a wide range of solvent free epoxy and polyurethane coatings and engineering materials for the Marine, Chemical, Water, Power, Oil and Gas Industries.



Our work force has over 120 years experience in the coatings industry and we are able to offer expert technical advice onsite or online 24 hours a day, 7 days a week.



Contact us direct by email, telephone or by visiting our website.

Web: www.resimacsolutions.com

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With over 50 contractors worldwide we are able to offer fast and effective solutions in many of the worlds major industrial areas.



Abrasion & Wear Protection

Chemical Protection

Corrosion Protection

High Temperature Protection

Impact Protection

Metal Repair

Pipe Repair and Pipe Wrapping

Thermal Protection

Underwater Repair & Protection

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