



Chemical Tank & Process Vessel Linings Systems

Introduction to Resimac Chemical Tank lining Systems

Resimac Tank Lining coatings offer outstanding chemical resistance to a wide range of industrial chemicals. The Resimac chemical protection coating range is based on the latest solvent free epoxy, epoxy novalac and polyurethane technology.

- High build capability
- Solvent free technology
- Proven to resist a wide range of chemicals
- Suitable for full immersion conditions
- Easy to apply
- Long term asset protection

Our coating range has been independently tested and is proven to resist immersion in chemicals such as 98% sulphuric acid, sodium hydroxide and sodium hypochlorite even at elevated temperatures.

Protect against strong industrial chemicals such as:

98% Sulphuric Acid
36% Hydrochloric Acid
75% Phosphoric acid
40% Sodium Hydroxide
Butanol
Ethanol
Hexane
MEK
Octane
Naphtha
Toluene
Xylene



Chemical Tank Lining Solutions

Immersion Conditions	Chemical Resistance	Typical Chemicals	Resimac Product	Product Description	Application
5-40 °C	Low concentration industrial chemicals	Brine Naphtha Phosphoric Acid 30% Sulphuric Acid 20%	Resichem 501 CRSG	2 component solvent free epoxy High build coating Applied in 2 coats at 250 microns per coat Surface tolerant Capable of curing at temperatures as low as 5 °C	Brush Medium Pile Roller Standard Airless Spray
5-40 °C	Low concentration industrial chemicals	Brine Naphtha Phosphoric Acid 30% Sulphuric Acid 20%	Resichem 501 CRXL (extended pot life)	2 component solvent free epoxy High build coating Applied in 2 coats at 250 microns per coat Extended pot life for warm climate applications	Brush Medium Pile Roller Standard Airless Spray
5-40 °C With solid content	Low concentration industrial chemicals	Black Liquor Hydrocarbons Sulphuric Acid 20%	Resichem 501 ARXL	2 component solvent free epoxy Filled with hardened ceramic particles Excellent abrasion resistance Applied in 2 coats at 400 microns per coat	Brush Medium Pile Roller Standard Airless Spray
5-40 °C	Chlorination Agents	Bleach Sodium Hypochlorite 15%	Resichem 507 DWPU	2 component solvent free polyurethane Flexible high build coating Applied in 2 coats at 400 microns per coat Apply by spray in a single coat at 1000 microns	Brush Medium Pile Roller Plural Feed Spray Rig
5-45 °C	Full concentration industrial chemicals	Hydrochloric Acid 36% Phosphoric Acid 75% Sulphuric Acid 98%	Resichem 511 UCEN	2 component solvent free epoxy novolac High build coating Applied in 2 coats at 500 microns per coat	Brush Medium Pile Roller Standard Airless Spray
50-110 °C	Full concentration industrial chemicals	Hydrochloric Acid 36% Phosphoric Acid 75% Sulphuric Acid 98%	Resichem 512 UCEN 90	2 component solvent free epoxy novolac High build coating Applied in a single coat at 1000-1250 microns by spray	Brush Plural Feed Spray Rig
50-90 °C	Full concentration industrial chemicals	Hydrochloric Acid 36% Phosphoric Acid 75% Sulphuric Acid 98%	Resichem 512 UCEN 90 XL	2 component solvent free epoxy novolac High build coating Applied in 2 coats at 500 microns per coat	Brush Medium Pile Roller Standard Airless Spray
50-90 °C With solid content	Full concentration industrial chemicals	Black Liquor Hydrocarbons Sulphuric Acid 20%	Resichem 513 AREN	2 component solvent free epoxy novolac Filled with hardened ceramic particles Excellent abrasion resistance Applied in 2 coats at 500 microns per coat	Brush Medium Pile Roller Plural feed Spray Rig

Immersion Conditions	5-40 °C
Chemical Resistance	Low concentration industrial chemicals
Product Name	Resichem 501 CRSG
Product Description	Solvent free high build epoxy coating
Application Method	Brush, roller or standard airless spray
Specification	2 x coats at 250 microns per coat
Surface Preparation	Metallic surfaces Mechanical abrasion to ST3 Abrasive blast clean SA2.5, 75 micron profile Concrete surfaces Mechanical abrasion or abrasive blast clean Prime with Resichem 503 SPEP
Cure times (20°C)	Pot life 30 mins Minimum overcoat 4 hours Immersion 3-5 days
Application temperature range	5°C – 40°C

<i>Typical Chemicals</i>	<i>Maximum Temperature</i>
<i>Brine</i>	40°C
<i>Crude Oil</i>	40°C
<i>De-ionised Water</i>	30°C
<i>Diesel</i>	40°C
<i>Hydrochloric Acid 20%</i>	40°C
<i>Naphtha</i>	40°C
<i>Phosphoric Acid 30%</i>	40°C
<i>Sodium Hydroxide 50%</i>	40°C
<i>Sulphuric acid 20%</i>	40°C



Solvent Recovery Tank

Chemicals	MEK, Toluene, Acetone
Operating Temperature	8°C—30°C
Location	UK



Chemical Sump

Chemicals	Water, Sodium Hydroxide
Operating Temperature	8°C—30°C
Location	UK

Immersion Conditions	5-40 °C
Chemical Resistance	Low concentration industrial chemicals
Product Name	Resichem 501 CRXL
Product Description	Extended pot life solvent free high build epoxy coating
Application Method	Brush, roller or standard airless spray
Specification	2 x coats at 250 microns per coat
Surface Preparation	Metallic surfaces Abrasive blast clean SA2.5, 75 micron profile Concrete surfaces Mechanical abrasion or abrasive blast clean Prime with Resichem 503 SPEP
Cure times (20°C)	Pot life 60 mins Minimum overcoat 10 hours Immersion 5-7 days
Application temperature range	10°C – 50°C

<i>Typical Chemicals</i>	<i>Maximum Temperature</i>
<i>Brine</i>	40°C
<i>Crude Oil</i>	40°C
<i>De-ionised Water</i>	30°C
<i>Diesel</i>	40°C
<i>Hydrochloric Acid 20%</i>	40°C
<i>Naphtha</i>	40°C
<i>Phosphoric Acid 30%</i>	40°C
<i>Sodium Hydroxide 50%</i>	40°C
<i>Sulphuric acid 20%</i>	40°C

Cooling Water Tank

Chemicals	Chlorinated Water
Operating Temperature	8°C—25°C
Location	USA



Waste Water Tank

Chemicals	Effluent
Operating Temperature	8°C—35°C
Location	Poland



Immersion Conditions	5-40 °C
Chemical Resistance	Low concentration industrial chemicals with solid content

Product Name	Resichem 501 ARXL
Product Description	Abrasion resistant solvent free high build epoxy coating
Application Method	Brush, roller or standard airless spray
Specification	2 x coats at 400 microns WFT per coat
Surface Preparation	<p>Metallic surfaces Abrasive blast clean SA2.5, 75 micron profile</p> <p>Concrete surfaces Mechanical abrasion or abrasive blast clean Prime with Resichem 503 SPEP</p>
Cure times (20°C)	<p>Pot life 60 mins</p> <p>Minimum overcoat 10 hours</p> <p>Immersion 5-7 days</p>
Application temperature range	10°C – 50°C

<i>Typical Chemicals</i>	<i>Maximum Temperature</i>
<i>Black Liquor</i>	40°C
<i>Crude Oil</i>	30°C
<i>Diesel</i>	40°C
<i>Hydrochloric Acid 20%</i>	40°C
<i>Hydrocarbons</i>	40°C
<i>Phosphoric Acid 30%</i>	40°C
<i>Sea Water</i>	40°C
<i>Sodium Hydroxide 50%</i>	40°C
<i>Sulphuric acid 20%</i>	40°C
<i>White Liquor</i>	40°C



Grinding Mill

Chemicals	Water, Sand
Operating Temperature	15°C– 35°C
Location	USA



Chemical Slurry Tank

Chemicals	HCL, Water, Sand
Operating Temperature	15°C– 35°C
Location	Italy



Immersion Conditions	5-40 °C
Chemical Resistance	Chlorination Agents

Product Name	Resichem 507 DWPU
Product Description	Solvent free high build polyurethane coating
Application Method	Brush, roller or heated plural feed spray rig
Specification	Brush or roller- 2 x coats at 400 microns WFT per coat Spray application-
Surface Preparation	Metallic surfaces Abrasive blast clean SA2.5, 75 micron profile Concrete surfaces Mechanical abrasion or abrasive blast clean Prime with Resichem 503 SPEP
Cure times (20°C)	Pot life 25 mins Minimum overcoat 6 hours Immersion 3-5 days
Application temperature range	10°C – 35°C

<i>Typical Chemicals</i>	<i>Maximum Temperature</i>
Chlorine (Wet)	30°C
Chloramine	35°C
Chlorine Dioxide (Wet)	35°C
Sodium Hypochlorite 15%	30°C

Swimming Pool Overflow

Chemicals	Water, Chlorine
Operating Temperature	25°C– 30°C
Location	UK



Effluent Tank

Chemicals	Water, Sodium Hypochlorite
Operating Temperature	15°C– 30°C
Location	UK

Immersion Conditions	5-45 °C
Chemical Resistance	High concentration industrial chemicals

Product Name	Resichem 511 UCEN
Product Description	Solvent free high build epoxy novolac coating
Application Method	Brush, roller or standard airless spray
Specification	2 x coats at 500 microns per coat
Surface Preparation	<p>Metallic surfaces Abrasive blast clean SA2.5, 75 micron profile</p> <p>Concrete surfaces Mechanical abrasion or abrasive blast clean Prime with Resichem 503 SPEP</p>
Cure times (20 °C)	<p>Pot life 25 mins</p> <p>Minimum overcoat 3 hours</p> <p>Immersion 4-7 days</p>
Application temperature range	10 °C – 40 °C

<i>Typical Chemicals</i>	<i>Maximum Temperature</i>
<i>Acetic Acid 10%</i>	30 °C
<i>Ammonia Hydroxide 30%</i>	45 °C
<i>Benzene 100%</i>	35 °C
<i>Butanol 100%</i>	40 °C
<i>Chromic Acid 10%</i>	40 °C
<i>De-ionised Water</i>	40 °C
<i>Ethanol 100%</i>	45 °C
<i>Hydrobromic Acid 40%</i>	30 °C
<i>Hydrochloric Acid 36%</i>	35 °C
<i>Nitric Acid 10%</i>	30 °C
<i>Phosphoric Acid 75%</i>	45 °C
<i>Steam out</i>	180 °C
<i>Sulphuric Acid 98%</i>	40 °C
<i>Toluene 100%</i>	40 °C
<i>Xylene 100%</i>	40 °C



De-ionised Water Tank

Chemicals	De-ionised water tank
Operating Temperature	40 °C
Location	Czech Republic



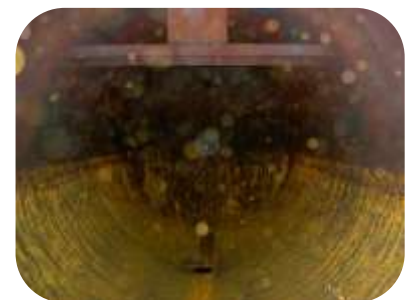
Immersion Conditions	50-110 °C
Chemical Resistance	High concentration industrial chemicals

Product Name	Resichem 512 UCEN 90
Product Description	Solvent free high build epoxy novolac coating
Application Method	Brush, applicator tool or heated plural feed spray rig
Specification	Brush or Applicator tool 2 x coats at 500 microns per coat Spray application 1 x coat at 1000-1250 microns
Surface Preparation	Metallic surfaces Abrasive blast clean SA2.5, 75 micron profile Concrete surfaces Mechanical abrasion or abrasive blast clean Prime with Resichem 503 SPEP
Cure times (20 °C)	Pot life 20 mins Minimum overcoat 3 hours Immersion 4-7 days
Application temperature range	10 °C – 40 °C

<i>Typical Chemicals</i>	<i>Maximum Temperature</i>
Acetic Acid 10%	50 °C
Ammonia Hydroxide 30%	80 °C
Benzene 100%	60 °C
Butanol 100%	50 °C
Chromic Acid 10%	75 °C
De-ionised Water	110 °C
Ethanol 100%	60 °C
Hydrocarbons with steam	110 °C
Hydrobromic Acid 40%	50 °C
Hydrochloric Acid 36%	75 °C
Nitric Acid 10%	50 °C
Phosphoric Acid 75%	90 °C
Steam out	220 °C
Sulphuric Acid 98%	75 °C
Toluene 100%	60 °C
Xylene 100%	60 °C

Chemical Sump

Chemicals	Sodium Hydroxide, HCL
Operating Temperature	85 °C
Location	Canada



De-ionised Water Tank

Chemicals	De-ionised water tank
Operating Temperature	105 °C
Location	Czech Republic

Immersion Conditions	50-90 °C
Chemical Resistance	Full concentration industrial chemicals

Product Name	Resichem 512 UCEN 90 XL
Product Description	Solvent free high build epoxy novolac coating
Application Method	Brush, roller or standard airless spray
Specification	2 x coats at 500 microns per coat
Surface Preparation	Metallic surfaces Abrasive blast clean SA2.5, 75 micron profile Concrete surfaces Mechanical abrasion or abrasive blast clean Prime with Resichem 503 SPEP
Cure times (20°C)	Pot life 45 mins Minimum overcoat 8 hours Immersion 4-7 days
Application temperature range	10°C – 40°C

<i>Typical Chemicals</i>	<i>Maximum Temperature</i>
Acetic Acid 10%	50°C
Ammonia Hydroxide 30%	80°C
Benzene 100%	60°C
Butanol 100%	50°C
Chromic Acid 10%	75°C
Ethanol 100%	60°C
Hydrocarbons with steam	90°C
Hydrobromic Acid 40%	50°C
Hydrochloric Acid 36%	75°C
Nitric Acid 10%	50°C
Phosphoric Acid 75%	90°C
Steam out	200°C
Sulphuric Acid 98%	75°C
Toluene 100%	60°C
Xylene 100%	60°C

Process Vessel

Chemicals	50% Sulphuric Acid
Operating Temperature	75°C
Location	Taiwan



Process Vessel

Chemicals	Water, HCL 36%
Operating Temperature	65°C
Location	Canada



Immersion Conditions	50-90 °C
Chemical Resistance	Full concentration industrial chemicals with solids content
Product Name	Resichem 513 AREN
Product Description	Abrasion resistant solvent free high build epoxy novolac coating
Application Method	Brush, roller or standard airless spray
Specification	2 x coats at 500 microns per coat
Surface Preparation	Metallic surfaces Abrasive blast clean SA2.5, 75 micron profile Concrete surfaces Mechanical abrasion or abrasive blast clean Prime with Resichem 503 SPEP
Cure times (20°C)	Pot life 45 mins Minimum overcoat 8 hours Immersion 4-7 days
Application temperature range	10°C – 40°C

<i>Typical Chemicals</i>	<i>Maximum Temperature</i>
Acetic Acid 10%	50°C
Ammonia Hydroxide 30%	80°C
Benzene 100%	60°C
Butanol 100%	50°C
Chromic Acid 10%	75°C
Ethanol 100%	60°C
Hydrocarbons with steam	90°C
Hydrobromic Acid 40%	50°C
Hydrochloric Acid 36%	75°C
Nitric Acid 10%	50°C
Phosphoric Acid 75%	90°C
Steam out	200°C
Sulphuric Acid 98%	75°C
Toluene 100%	60°C
Xylene 100%	60°C

Chemical Slurry Tank

Chemicals	50% Sulphuric Acid
Operating Temperature	65°C
Location	Italy



Chemical slurry tank

Chemicals	36% Hydrochloric Acid, sand
Operating Temperature	60°C
Location	Romania

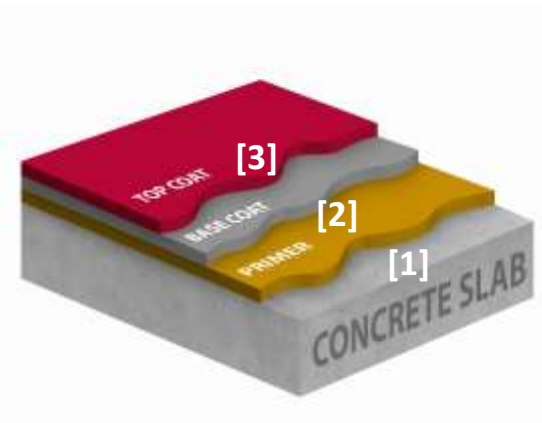
Resimac Chemical Tank Lining Film Thickness Guidelines

Resimac Product	Substrate	Preparation Standard	Method of Preparation	Primer Specification ResiChem 503 SPEP	Chemical top coat Application Method	Chemical Top Coat Specification WFT	Total Dry Film Thickness
501 CRSG	Metallic	SSPC-SP-3-ST3	Mechanical Grind	N/A	Brush, Roller or Spray*	2 x 250 microns per coat	500 microns
	Metallic	SSPC-SP-10 SA2.5	Blast Clean	N/A	Brush, Roller or Spray*	2 x 250 microns per coat	500 microns
	Concrete	SSPC-SP-13	Mech Grind or Blast Clean	1 x 150 microns	Brush, Roller or Spray*	2 x 250 microns per coat	500 microns
501 CRXL	Metallic	SSPC-SP-10 SA2.5	Blast Clean	N/A	Brush, Roller or Spray*	2 x 250 microns per coat	500 microns
	Concrete	SSPC-SP-13	Mech Grind or Blast Clean	1 x 150 microns	Brush, Roller or Spray*	2 x 250 microns per coat	500 microns
501 ARXL	Metallic	SSPC-SP-10 SA2.5	Abrasive Blast Clean	N/A	Brush, Roller or Spray*	2 x 400 microns per coat	800 microns
	Concrete	SSPC-SP-13	Mech Grind or Blast Clean	1 x 150 microns	Brush, Roller or Spray*	2 x 400 microns per coat	800 microns
507DWP/PU	Metallic	SSPC-SP-10 SA2.5	Abrasive Blast Clean	N/A	Brush or Roller	2 x 400 microns per coat	800 microns
	Metallic	SSPC-SP-10 SA2.5	Abrasive Blast Clean	N/A	Heated Plural Feed Spray	1 x 1000 microns per coat	1000 microns
	Concrete	SSPC-SP-13	Mech Grind or Blast Clean	1 x 150 microns	Brush or Roller	2 x 400 microns per coat	800 microns
511 UCEN	Concrete	SSPC-SP-13	Mech Grind or Blast Clean	1 x 150 microns	Heated Plural Feed Spray	1 x 1000 microns per coat	1000 microns
	Metallic	SSPC-SP-10 SA2.5	Abrasive Blast Clean	N/A	Brush, Roller or Spray*	2 x 500 microns per coat	1000 microns
	Concrete	SSPC-SP-13	Mech Grind or Blast Clean	1 x 150 microns	Brush, Roller or Spray*	2 x 500 microns per coat	1000 microns
512 UCEN 90	Metallic	SSPC-SP-10 SA2.5	Abrasive Blast Clean	N/A	Brush or Applicator tool	2 x 500 microns per coat	1000 microns
	Metallic	SSPC-SP-10 SA2.5	Abrasive Blast Clean	N/A	Heated Plural Feed Spray	1 x 1250 microns per coat	1000 microns
	Concrete	SSPC-SP-13	Mech Grind or Blast Clean	1 x 150 microns	Brush or Applicator tool	2 x 500 microns per coat	1000 microns
512 UCEN 90 XL	Concrete	SSPC-SP-13	Mech Grind or Blast Clean	1 x 150 microns	Heated Plural Feed Spray	1 x 1250 microns per coat	1000 microns
	Metallic	SSPC-SP-10 SA2.5	Abrasive Blast Clean	N/A	Brush, Roller or Spray*	2 x 500 microns per coat	1000 microns
	Concrete	SSPC-SP-13	Mech Grind or Blast Clean	1 x 150 microns	Brush, Roller or Spray*	2 x 500 microns per coat	1000 microns
513 AREN	Metallic	SSPC-SP-10 SA2.5	Abrasive Blast Clean	N/A	Brush, Roller or Spray*	2 x 500 microns per coat	1000 microns
	Concrete	SSPC-SP-13	Mech Grind or Blast Clean	1 x 150 microns	Brush, Roller or Spray*	2 x 500 microns per coat	1000 microns

* Spray application using standard airless spray—typical equipment used by Resimac is GRACO EXTREME 60:1

Application Guide for concrete surfaces

Surface Preparation	Standard SSPC-SP-13	Mechanical Abrade with abrasive discs Abrasive blast cleaning Use angled grit
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[1] If the concrete surface is contaminated, pressure wash with clean water

Allow the surface to dry and check the moisture content of the concrete, 8% content or less

Prime the concrete surface using Resichem 503 SPEP low viscosity epoxy primer

[2] Once the primer has cured apply the recommended Resimac chemical coating to the surface

Ensure the minimum wet film thicknesses & overcoating times are adhered too

[3] Once the base coat has cured and within the permitted overcoating times, apply a 2nd coat of the Resimac chemical coating

Application Guide for metallic surfaces

Surface Preparation	Standard SSPC-SP-3 ST3 SSPC-SP- 10 SA2.5 NACE 3	Mechanical Abrade with MBX Bristle Blaster Abrasive blast cleaning Use angled grit, minimum 75 micron profile
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[1] Metallic surfaces must be degreased using a solvent cleaner

Surfaces must be checked for salt contamination

Abrasive blast clean or mechanically abrade the surface

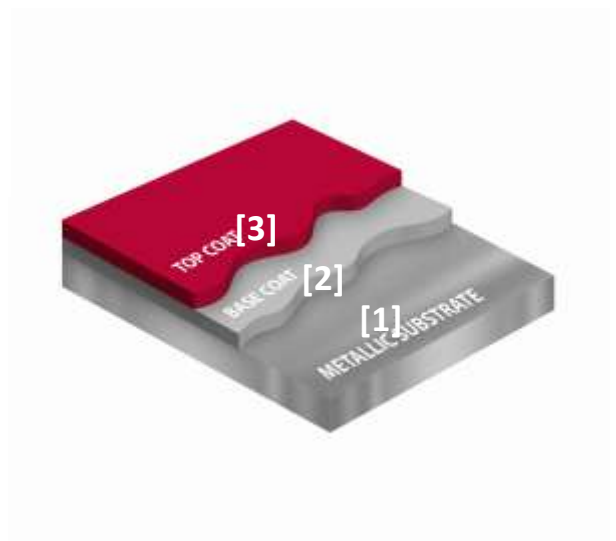
Degrease and clean down all surfaces prior to coating

[2] Apply the recommended Resimac chemical coating to the surface

Ensure the minimum wet film thicknesses & overcoating times are adhered too

[3] Once the base coat has cured and within the permitted overcoating times, apply a 2nd coat of the Resimac chemical coating

Perform a visual inspection then a pinhole test using a digital wet sponge tester



Reinforcement of Resimac chemical coatings on internal tank bases

Corrosion in the bottom of chemical and oil storage tanks can cause severe pitting and weaken the structure of the tank. The Resimac tank base reinforcement system eradicates the need to replace corroded and thinned internal tank base surfaces with welded steel plate or new concrete.

The Resimac reinforcement system is based on a hand applied GRP lay up system and can be applied to metallic or concrete substrates. The system is applied to the lower section of the tank wall and to all of the tank base substrate. Once cured, the system can be overcoated with any suitable Resimac chemical coating to give long term chemical protection to metallic & concrete tank base surfaces.

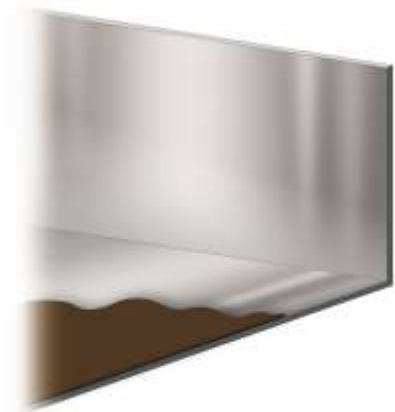
Rebuilding & Filling of the corroded internal tank base

Metallic Surfaces

Patch repairs (8m² or less)	101 Metal Repair Paste A 2 component high build solvent free epoxy repair paste The product can be applied at thicknesses up to 25mm
Larger surfaces (8m² or more)	302 Epoxy Repair Cement A 2 component solvent free epoxy repair paste Apply the product by trowel to large surface areas at thicknesses up to 20mm

Concrete Surfaces

Patch repairs (8m² or less)	570 Concrete Patch Repair XF A fast curing 3 component solvent free epoxy repair screed The product can be applied at thicknesses up to 25mm
Larger surfaces (8m² or more)	576 Quartz Screed A 3 component solvent free epoxy repair screed Apply by trowel at thicknesses up to 15- 20mm



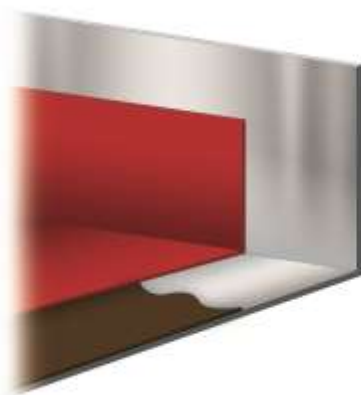
Base coat of resin prior to fabric embedment

Metallic Surfaces

Tank Base + 1mtr up the tank wall surface	Resichem 503 SPEP A 2 component low viscosity solvent free epoxy primer Apply by roller or spray to the tank wall and base at a wet film thickness of 500-750 microns
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Concrete Surfaces

Primer Coat Tank Base + 1mtr up the tank wall surface	Primer coat Resichem 503 SPEP A 2 component low viscosity solvent free epoxy primer Apply by roller or spray to the tank wall and base at a wet film thickness of 100-150 microns
Base Coat Tank Base + 1mtr up the tank wall surface	Base coat of Resichem 503 SPEP Apply by roller or spray to the tank wall and base at a wet film thickness of 500-750 microns



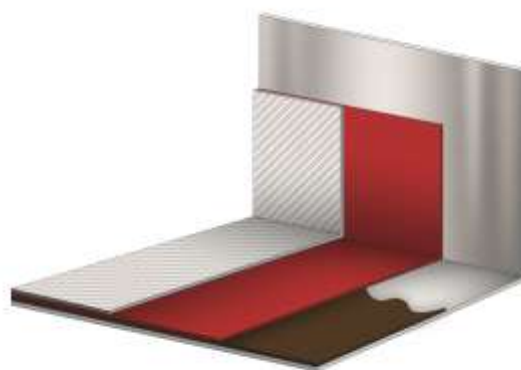
Embedment of glass fibre matting

Metallic Surfaces

Tank Base + 1mtr up the tank wall surface	Glass Fibre Matting 200gm woven glass fibre matting The matting is embedded into the wet resin surface of Resichem 503 SPEP
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Concrete Surfaces

Tank Base + 1mtr up the tank wall surface	Glass Fibre Matting 200gm woven glass fibre matting The matting is embedded into the wet resin surface of Resichem 503 SPEP
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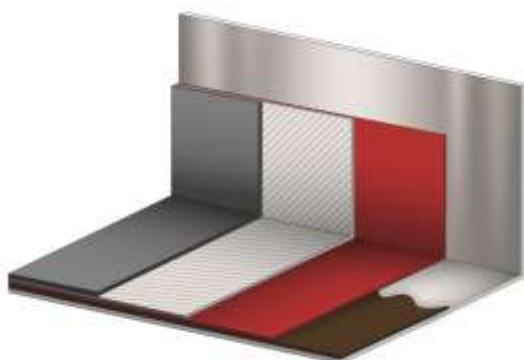
Top coat of Resimac Chemical Protection Coating

Metallic Surfaces

Tank Base + 1mtr up the tank wall surface	1st Coat Apply the recommended Resimac Chemical Protection Coating to the cured GRP surface Ensure all minimum WFT recommendations are met and the coating is applied within the guidelines set out in the product
	2nd Coat Once the 1st coat has cured and within the permitted overcoating time apply a 2nd coat of the recommended Resimac Chemical Protection Coating

Concrete Surfaces

Tank Base + 1mtr up the tank wall surface	1st Coat Depending on the chemical resistance required apply the chosen Resimac chemical coating to the cured GRP surface Apply the product by medium pile roller or spray at a thickness range of 250-600 microns WFT
	2nd Coat Once the 1st coat has cured and within the permitted overcoating time apply a 2nd coat of the recommended Resimac Chemical Protection Coating



Dry film thickness guide for Resimac tank base reinforcement system

503 SPEP with 200gm fabric	1mm	1mm	1mm	1mm	1mm	1mm	1mm	1mm
Resimac Chemical Coating	501 CRSG	501 CRXL	501 ARXL	507 DWPU	511 UCEN	512 UCEN 90	512 UCEN 90 XL	513 AREN
Top Coat 1 microns DFT	250	250	400	400	500	1250	500	500
Top Coat 2 microns DFT	250	250	400	400	500		500	500
Total DFT	1.5mm	1.5mm	1.8mm	1.8mm	2mm	2.25mm	2mm	2mm

Resimac Chemical Resistance Chart

CHEMICAL NAME	501	507	511	512	513	CHEMICAL NAME	501	507	511	512	513
Acetic Acid <10%	2	2	1	1	1	Carbon Tetrachloride	4	4	3	3	3
Acetic Acid <20%	3	3	2	2	2	Carbonic Acid	1	1	1	1	1
Acetic Acid >20%	4	4	2	2	2	Caster Oil	1	1	1	1	1
Acetone	3	4	2	2	2	Chlorine (Dry)	3	3	3	3	3
Alums	1	1	1	1	1	Chlorine (Wet)	4	3	4	4	4
Aluminium Chloride	1	1	1	1	1	Chlorobenzene	3	3	3	3	3
Aluminium Sulphate	1	1	1	1	1	Chloroform	3	3	3	3	3
Ammonium Carbonate	1	1	1	1	1	Copper Chloride	1	1	1	1	1
Ammonium Hydroxide <10%	1	1	1	1	1	Copper Nitrate	1	1	1	1	1
Ammonium Hydroxide 10-20%	2	2	1	1	1	Copper Sulphate	1	1	1	1	1
Ammonium Hydroxide 20% +	3	2	1	1	1	Cresylic Acid	4	3	2	2	2
Ammonium Phosphate	1	1	1	1	1	Crude Oil (Sweet)	1	1	1	1	1
Ammonium Nitrate	1	1	1	1	1	Crude Oil (Sour)	2	2	1	1	1
Amyl Acetate	2	2	2	2	2	Cyclohexane	2	2	2	2	2
Amyl Alcohol	2	2	2	2	2	Cyclohexanol	2	2	2	2	2
Aviation Fuel	1	1	1	1	1	Di-Acetone Alcohol	2	2	2	2	2
Barium Carbonate	1	1	1	1	1	Di-Butyl Ether	3	3	3	3	3
Barium Chloride	1	1	1	1	1	Di-Ethyl Amine	2	3	2	2	2
Barium Hydroxide	1	1	1	1	1	Diesel	1	1	1	1	1
Barium Sulphate	1	1	1	1	1	Ethyl Acetate	3	3	2	2	2
Barium Sulphide	1	1	1	1	1	Ethyl Alcohol	3	3	2	2	2
Beet	1	1	1	1	1	Ethylene Glycol	1	1	1	1	1
Beet Sugar Liquor	2	2	1	1	1	Ferric Chloride	1	1	1	1	1
Benzene	3	4	2	2	2	Ferric Sulphate	1	1	1	1	1
Benzoic Acid	3	3	1	1	1	Formic Acid	3	3	2	2	2
Bleach	2	1	1	1	1	Gasoline	1	1	1	1	1
Brake Fluid	1	2	1	1	1	Hexane	1	1	1	1	1
Brine	1	1	1	1	1	Hexanol	1	1	1	1	1
Bunker Oil	1	1	1	1	1	Hydrobromic Acid 0-10%	1	1	1	1	1
Butyl Acetate	2	3	2	2	2	Hydrobromic Acid 10-20%	1	1	1	1	1
Butyl Alcohol	2	3	2	2	2	Hydrochloric Acid 0-20%	1	1	1	1	1
Calcium Carbonate	1	1	1	1	1	Hydrochloric Acid 20-36%	3	3	1	1	1
Calcium Chloride	1	1	1	1	1	Hydrofluoric Acid 10%	3	3	1	1	1
Calcium hydroxide	1	1	1	1	1	Hydrofluoric Acid 10-20%	4	4	2	2	2
Calcium Hypochlorite	2	2	1	1	1	Hydraulic Oil	1	1	1	1	1
Calcium Sulphate	1	1	1	1	1	Iso Propyl Ether	3	3	3	3	3
Carbon Dioxide	1	1	1	1	1	Iso Octane	1	1	1	1	1
Carbon Monoxide	1	1	1	1	1	Kerosene	1	1	1	1	1

CHEMICAL NAME	501	507	511	512	513	CHEMICAL NAME	501	507	511	512	513
Lactic Acid	2	2	1	1	1	Potassium Iodide	1	1	1	1	1
Magnesium Chloride	1	1	1	1	1	Potassium Nitrate	1	1	1	1	1
Magnesium Hydroxide	1	1	1	1	1	Potassium Sulphate	1	1	1	1	1
Magnesium Sulphate	1	1	1	1	1	Potassium Sulphide	1	1	1	1	1
Maleic Acid	3	3	1	1	1	Propane	1	1	1	1	1
Mercury	1	1	1	1	1	Propanol	2	2	2	2	2
Methane	1	1	1	1	1	Propanol (Iso)	2	2	2	2	2
Methyl Acetate	3	3	1	1	1	Sewage	1	1	1	1	1
Methyl Alcohol	3	3	2	2	2	Sodium Bicarbonate	1	1	1	1	1
Methylene Chloride	4	4	4	4	4	Sodium Carbonate	1	1	1	1	1
Methyl Ethyl Ketone	3	3	1	1	1	Sodium Hydroxide	1	1	1	1	1
Molasses	1	1	1	1	1	Sodium Hypochlorite	3	1	2	2	2
Naptha	1	1	1	1	1	Sodium Nitrate	1	1	1	1	1
Natural Gas	1	1	1	1	1	Styrene	3	3	2	2	2
Nitric Acid 10%	1	1	1	1	1	Sulphuric Acid 0-20%	1	1	1	1	1
Nitric Acid 10-20%	3	3	1	1	1	Sulphuric Acid 98%	4	4	1	1	1
Nitric Acid 20% +	4	4	2	2	2	Sulphur Dioxide	1	1	1	1	1
Nitrous Acid (Dilute)	1	1	1	1	1	Tar	2	2	2	2	2
Octane	1	1	1	1	1	Tetrachloroethylene	3	3	3	3	3
Oleum	4	4	1	1	1	Toluene	3	3	1	1	1
Parafin	1	1	1	1	1	Tri-Butyl Phosphate	1	1	1	1	1
Parafin Wax	1	1	1	1	1	Trichloroethylene	3	3	3	3	3
Palm Oil	1	1	1	1	1	Urea	1	1	1	1	1
Petrol	1	1	1	1	1	Vinegar	1	1	1	1	1
Petroleum Oil	1	1	1	1	1	Water	1	1	1	1	1
Phenol 10%	3	3	2	2	2	Waxes	1	1	1	1	1
Phenol 100%	4	4	2	2	2	Whiskey	2	2	2	2	2
Phosphoric Acid 10-25%	1	1	1	1	1	White Spirit	1	1	1	1	1
Phosphoric Acid 75%	3	3	1	1	1	Xylene	2	2	1	1	1
Potassium Bromide	1	1	1	1	1	Zinc Chloride	1	1	1	1	1
Potassium Carbonate	1	1	1	1	1	Zinc Hydrosulphite	1	1	1	1	1
Potassium Chloride	1	1	1	1	1	Zinc Sulphate	1	1	1	1	1

Symbols

1. Suitable for continuous immersion at 20°C
2. Suitable for short term immersion (3 days maximum) at 20°C
3. Suitable for short term contact eg. quickly removed splashes or spills
4. Not suitable for contact

Chemical Tank Lining Product Characteristics

	501 CRSG	501 CRXL	501 ARXL	507 DWPU	511 UCEN	512 UCEN 90	512 UCEN 90 XL	513 AREN
Compressive strength Tested to ASTM D 695	649kg/ cm ² (9200psi)	649kg/ cm ² (9200psi)	680Kg/ cm ² (9650psi)	507kg/ cm ² (7200psi)	984kg/ cm ² (13,950psi)	592kg/ cm ² (8400psi)	901kg/ cm ² (12800psi)	790kg/ cm ² (11235psi)
Corrosion Resistance Tested to ASTM B117	5000 hours	5000 hours	5000 hours	5000 hours	5000 hours	5000 hours	5000 hours	2000 hours
Flexural Strength Tested to ASTM D790	522kg/cm ² (7400psi)	522kg/cm ² (7400psi)	518kg/cm ² (7350psi)	755kg/cm ² (10700psi)	208kg/cm ² (2950psi)	480kg/cm ² (6800psi)	810kg/cm ² (11500psi)	820kg/cm ² (11600psi)
Hardness Rockwell R to ASTM D785	80	80	80	80	85	85	85	85
Sag Resistance	400 microns	400 microns	400 microns	500 microns	500 microns	1000 micron	500 microns	650 microns
Tensile Shear Adhesion Tested to ASTM D1002	194kg/cm ² (2750psi)	194kg/cm ² (2750psi)	190kg/cm ² (2700psi)	169kg/cm ² (2400psi)	208kg/cm ² (2950psi)	188kg/cm ² (2650psi)	201kg/cm ² (2855psi)	196kg/cm ² (2790psi)
Abrasion Resistance Taber abrasion CS17 1000 cycles/ 1kg	0.22cc loss	0.22cc loss	0.09cc loss	0.14cc loss	0.18cc loss	0.15cc loss	0.15cc loss	0.08cc loss
Base density gm per cm ³	1.78	1.754	1.72	1.31	1.41	1.4	1.41	1.55
Activator density gm per cm ³	1.05	1.03	1.03	1.22	1.02	1.05	1.05	1.05
Mixed product density gm per cm ³	1.56	1.52	1.49	1.29	1.32	1.34	1.33	1.43
Dry heat resistance (°C)	200	200	200	120	200	170	200	200
Intermittent wet heat resistance (°C)	80	80	80	80	90	130	130	130
Immersion temperature resistance (°C)	60	60	60	70	60	110	90	90
Mixing ratio by volume	2.4:1	2:1	2:1	3:1	3:1	4:1	3.25:1	3.5:1
Mixing ratio by weight	4:1	3.5:1	3.4:1	3.25:1	4:1	5.34:1	4.35:1	5:1

Chemical Tank Lining Product Cure Times

	10 °C			20 °C			30 °C			40 °C		
	Pot life	Touch Dry	Hard dry	Pot life	Touch Dry	Hard dry	Pot life	Touch Dry	Hard dry	Pot life	Touch Dry	Hard dry
501 CRSG	60mins	8hrs	24hrs	30mins	4hrs	12hrs	15mins	2hrs	6hrs	7.5mins	60mins	3hrs
501 CRXL	120mins	20hrs	48hrs	60mins	10hrs	24hrs	30mins	5hrs	12hrs	15mins	2.5hrs	6hrs
501 ARXL	120mins	20hrs	48hrs	60mins	10hrs	24hrs	30mins	5hrs	12hrs	15mins	2.5hrs	6hrs
507 DWPU	40mins	8hrs	16hrs	20mins	4hrs	8hrs	10mins	2hrs	4hrs	5mins	60mins	4hrs
511 UCEN	50mins	12hrs	24hrs	25mins	6hrs	12hrs	12.5min	3hrs	6hrs	6mins	90mins	3hrs
512 UCEN 90	40mins	12hrs	24hrs	20mins	6hrs	12hrs	10mins	3hrs	6hrs	5mins	90mins	3hrs
512 UCEN 90 XL	90mins	24hrs	48hrs	45mins	8hrs	24hrs	22.5mins	4hrs	12hrs	11mins	2hrs	6hrs
513 AREN	90mins	20hrs	36hrs	45mins	8hrs	24hrs	22.5mins	4hrs	12hrs	11mins	2hrs	6hrs

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