

Product Specification



PES-CHEM 501 CRSG

PES-Chem 501 CRSG is a high build solvent-free epoxy coating designed for the long-term protection of steel and concrete structures against corrosion and chemical attack.

The coating can be applied to mechanical or abrasive blast clean surfaces and will cure at temperatures as low as 41°F.

Typical applications

Pipelines, internal & external tank surfaces, chemical containment and bund areas, sheet and bearing piles, structural steel, chemical intake areas, process equipment.

Characteristics

Appearance

Base: Highly structured thixotropic liquid
Activator: Amber liquid
Mixed: Thixotropic liquid

Mixing Ratio

By weight: 4:1
By volume: 2.4:1

Density

Base: 1.78
Activator: 1.05
Mixed: 1.56

Solids content

100%

Sag Resistance

Nil at 16mil

Coverage

Brush or roller applications:

The material should be applied in two coats at a target thickness of 10mils per coat.

At 9mils PES 501 CRSG will have a theoretical coverage rate of 43ft² per liter per coat.

Cure Times

The applied material should be allowed to harden for the times indicated below before being subjected to the conditions indicated:

Usable life

50°F 60 minutes
68°F 30 minutes
86°F 15 minutes
104°F 7.5 minutes

Minimum overcoating time

50°F 8 hours
68°F 4 hours
86°F 2 hours
104°F 1 hour

Maximum overcoating time

50°F 72 hours
68°F 36 hours
86°F 18 hours
104°F 9 hours

Water/ sea water immersion

50°F 6 days
68°F 3 days
86°F 36 hours
104°F 18 hours

Chemical immersion

50°F 10 days
68°F 5 days
86°F 2.5 days
104°F 30 hours

Storage life

5 years if unopened and stored in normal dry conditions (59-86°F).

Mechanical Properties

Abrasion Resistance

Taber CS17 Wheels/1 Kg load
138mg loss/1000 cycles
0.22cc loss/1000 cycles

Adhesion

Tensile Shear to ASTM D1002 on abrasive blasted mild steel with 3mil profile
2750 psi (194 kg/cm²)

Impact Resistance

Tested to ASTM G14
2.0 joules

Cathodic Disbondment

Tested to ISO 21809-3:2016
28 days, 1.5v, 3% NaCl
73°F 2.3mm
149°F 5.1mm
203°F 7.7mm

Compressive strength

Tested to ASTM D 695
9200psi (649kg/cm²)

Corrosion Resistance

Tested to ASTM B117
Minimum 5000 hours

Flexural Strength

Tested to ASTM D790
7400psi (522kg/cm²)

Hardness

Shore D to ASTM D2240
80

Product Specification



Heat Resistance

Suitable for use in immersed conditions at temperatures up to 140°F. Resistant to dry heat up to 392°F dependent on load.

Chemical Resistance

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

<i>Typical Chemicals</i>	<i>Maximum Temperature</i>
<i>Brine</i>	104°F
<i>Crude Oil</i>	104°F
<i>De-ionised Water</i>	86°F
<i>Diesel</i>	104°F
<i>Hydrochloric Acid 20%</i>	104°F
<i>Naphtha</i>	104°F
<i>Phosphoric Acid 30%</i>	104°F
<i>Sodium Hydroxide 50%</i>	104°F
<i>Sulphuric acid 20%</i>	104°F

For more detailed information refer to the PES Technical Centre for advice.

Quality

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

Warranty

PES 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 the Technical Data Sheet for the material.

Health and 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 the detailed Material Safety Data Sheet.

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. PES accepts no liability arising out of the use of this information or the product described herein.