

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, abrasion and chemical attack. Operating temperature ranges from 4°F – 140°F. The two component product is highly resistant to marine and industrial environments, buried conditions, ground water, effluents, salt water and a wide range of oils and chemicals.

Typical applications

Pipelines, tanks, chemical containment and bund areas, sheet and bearing piles and other land and marine structures.

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: 1.04
Mixed: 1.56

Solids content

100%

Sag Resistance

Nil at 16 Mil. (400 microns)

Useable Life

50° F 90 minutes
68° F 60 minutes
86° F 30 minutes

Coverage

The material should be applied by brush or roller in two coats at a target thickness of 10 mils per coat using a practical coverage rate of 37.5 sq. ft. per litre per coat.

The practical coverage rate for spraying is 16 sq. ft. per litre for a 20 mil coating.

Cure Times

At 68°F the applied materials should be allowed to harden for the times indicated below before being subjected to the conditions indicated. These times will be extended at lower temperatures and reduced at higher temperatures:

Movement without load or immersion	6 hours
Light loading	12 hours
Full loading/water immersion	4 days
Chemical Contact	7 days

Storage life

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

Mechanical Properties

Adhesion

Tensile Shear to ASTM D1002 on abrasive blasted mild steel with 3mil (75 micron) profile

2750 psi (194 kg/cm²)

Cathodic Disbondment

(British Gas CW6 and FW0028 Draft methods) Pass

Compressive strength

9200psi (649kg/cm²)

Corrosion Resistance

Tested to ASTM B117
Minimum 5000 hours

Flexibility

(British Gas FW0028 Draft method)

3% Strain at 68°F - PASS

2% Strain at 41°F - PASS

1% Strain at 32°F - PASS

Flexural Strength

Tested to ASTM D790
7400psi 522kg/cm²

Hardness

Shore D to ASTM ASTM D2240
80

Heat Resistance

Suitable for use in immersed conditions at temperatures up to 140°F (60°C). Resistant to dry heat up to 392°F (200°C) dependent on load.

Water Resistance

(British Gas CW6 and FW0028 Draft methods)
Pass at 122°F (50°C)

Chemical Resistance

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

- Aviation Fuel
- Brine
- Crude Oil
- Ethylene Glycol
- Hydrochloric Acid (20%)
- Hydraulic Oil
- Naphtha
- Petrol
- Sodium hydroxide
- Sulphuric acid (20%)

Quality

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

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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.