

# Product Specification



## PES-CHEM 507 DWPU

PES-Chem 507 DWPU is a high build solvent-free polyurethane coating designed for the long-term protection of steel and concrete structures against corrosion and chemical attack.

The coating meets the requirements of BS6920-1:2014 as required by the Water Research Center for contact and immersion conditions in drinking water.

### Typical applications

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

### Characteristics

#### Appearance

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

#### Mixing Ratio

By weight: 3.25:1  
By volume: 3:1

#### Density

Base: 1.31  
Activator: 1.22  
Mixed: 1.29

#### Solids content

100%

#### Sag Resistance

Nil at 16 mils

#### Coverage

PES-Chem 507 DWPU must be applied as a 2-coat system to properly prepared surfaces.

At 13.8 mils PES-Chem 507 DWPU will have a theoretical coverage rate of 30.7ft<sup>2</sup> per ltr 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 40 minutes  
68°F 20 minutes  
86°F 10 minutes  
104°F 5 minutes

#### Minimum overcoating time

50°F 12 hours  
68°F 6 hours  
86°F 3 hours  
104°F 90 minutes

#### Maximum overcoating time

50°F 48 hours  
68°F 24 hours  
86°F 12 hours  
104°F 6 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

2 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 3 mil profile  
2400 psi (169 kg/cm<sup>2</sup>)

#### Impact Resistance

Tested to ASTM G14  
8.6 joules

#### Compressive strength

Tested to ASTM D 695  
7830psi (552kg/cm<sup>2</sup>)

#### Corrosion Resistance

Tested to ASTM B117  
Minimum 5000 hours

#### Flexural Strength

Tested to ASTM D790  
10700psi (755kg/cm<sup>2</sup>)

#### Hardness

Shore D to ASTM D2240  
80

#### Heat Resistance

Suitable for use in immersed conditions at temperatures up to 158°F. Resistant to dry heat up to 248°F dependent on load.

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## Chemical Resistance

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

<i>Typical Chemicals</i>	<i>Maximum Temperature</i>
<i>Chlorine (Wet)</i>	86°F
<i>Chloramine</i>	95°F
<i>Chlorine Dioxide (Wet)</i>	95°F
<i>Sodium Hypochlorite 15%</i>	86°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.