Product Specification

PES-CHEM 577 CHEM SCREED

PES-Chem 577 Chem Screed is a chemical-resistant epoxy resin-based solvent-free, high-build trowel screed. The product has been designed to be applied to uneven concrete surfaces subject to chemical attack from strong industrial chemicals. The material can be applied at a wet film thickness of 3/8"- 1 1/4" (10-30mm). On curing the product will resist 98% sulphuric acid, 36% hydrochloric acid and 75% phosphoric acid.

Typical applications

Ideal for rebuilding problematic cementitious surfaces in chemical process areas such as floors, plinths, concrete structures, chemical boxes etc.

Characteristics

Appearance

Base Component:
Grey thixotropic liquid
Activator component:
Amber liquid
Aggregate:
Grey milled powder

Mixing Ratio

By weight: 4.7:1

Density

Base:	1.41
Activator:	1.02
Aggregate:	2.7
Mixed:	2.16

Solids content

100%

Sag Resistance

Nil at 787 mils (20mm)

Coverage

Trowel applications: 3.68 US gallon (13.9ltrs / 30kg) of fully mixed product will give the following coverage rates –
30ft² at 0.20" / 2.78m² at 5mm
14.95ft² at 0.4" / 1.39m² at 10mm
7.48ft² at 0.75 / 0.695m² at 20mm

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 / 10°C	50 minutes
68°F / 20°C	25 minutes
86°F / 30°C	12 minutes
104°F / 40°C	6 minutes

Minimum Overcoat

50°F / 10°C	12 hours
86°F / 20°C	6 hours
86°F / 30°C	3 hours
104°F/ 40°C	1.5 hours

Foot Traffic

50°F / 10°C	48 hours
68°F / 20°C	24 hours
86°F / 30°C	12 hours
104°F / 40°C	6 hours

Forklift Traffic

50°F / 10°C	96 hours
68°F / 20°C	48 hours
86°F / 30°C	24 hours
104°F / 40°C	12 hours

Storage life

5 years if unopened and stored in normal dry conditions
60-86°F (15-30°C)

Mechanical Properties

Abrasion Resistance

Taber CS17 Wheels/1 Kg load
0.53cc loss/1000 cycles
145mg loss/1000 cycles

Compressive strength

Tested to ASTM D 695
12500psi (880kg/cm²)

Flexural Strength

Tested to ASTM D790
7000psi (490kg/cm²)

Direct Pull off Adhesion

Tested to ASTM D4060 500psi (35kg/cm²)
Concrete failure

Impact Resistance

Tested to ASTM D256
1.8 joules

Shrinkage

Tested to ASTM C246
Nil

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Chemical Resistance

The product resists attack by a wide variety of low concentration industrial chemicals:

Typical Chemicals	*Maximum Temperature*
Acetic Acid 10%	30˚C /86°F
Ammonia Hydroxide 30%	45˚C /113°F
Benzene 100%	35˚C / 95°F
Butanol 100%	40˚C /104°F
Chromic Acid 10%	104°F / 40˚C
De-ionized Water	104°F / 40˚C
Ethanol 100%	113°F / 45˚C
Hydrobromic Acid 40%	86°F / 30˚C
Hydrochloric Acid 36%	95°F / 35˚C
Nitric Acid 10%	86°F / 30˚C
Phosphoric Acid 75%	113°F / 45˚C
Steam out	244°F /180˚C
Sulphuric Acid 98%	104°F / 40˚C
Toluene 100%	104°F /40˚C
Xylene 100%	104°F / 40˚C

For more detailed information refer to the PES Technical Center 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 always observed 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.

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