

TECFLOOR[®] ES

3 - 5mm thick, Chemical & Abrasion Resistant, Epoxy Resin Screed



TECFLOOR[®] ES is a three part solvent-free combination of epoxy resin modified amine hardeners filled with specially graded and selected high crushing strength, chemically inert aggregates.

TECFLOOR[®] ES is laid by trowel at 3-5mm thickness depending on the requirement. The system includes Tecfloor[®] PR, two part primer. TECFLOOR[®] ES is supplied in pre-weighed units ready for onsite mixing and application. The finished cured floor has a slightly granular texture. An epoxy sealer coat like Tecfloor[®] EC Clear is recommended.

Uses

TECFLOOR[®] ES provides an extremely high strength epoxy screed with exceptional resistance to the surface mechanical wear and attack from chemical spillage. It has a safe nonslip finish for personnel and vehicular traffic.

Ideally suited for Laboratories, automobile showrooms, pharmaceuticals, dairies and breweries.

In areas where high degrees of cleanliness and chemical resistance are required, the surface of TECFLOOR[®] ES can be sealed with TECFLOOR[®] PR clear coat.

Benefits

- **Durable:** Exceptional resistance to abrasion and to a wide range of chemicals
- **Non-slip:** Good gripping surface to both vehicular and pedestrian traffic
- **Easily Laid:** Designed for easy laying to a fair finish
- **Seamless:** Eliminates potential sources of failure
- **Colour Range:** Available in specific colour combinations.

Technical Support

Thermax provides a technical advisory service supported by a team of specialists in the field.

Properties

Tecfloor [®] ES	@ 20°C	@ 30°C
Pot Life	50 minutes	30 minutes
Initial Hardness	18 hours	16 hours
Full Cure	7 days	6 days
Mixed Density	Approx. 1.9 gm/cc	

Tecfloor [®] PR	
Pot Life	30 minutes @ 30°C
Maximum Overlay Time	30 minutes @ 30°C

Mechanical Characteristics

Property	Test Method	Tecfloor [®] ES	Concrete
Compressive Strength, 1 day	BS 6319 Pt. 2	60 N/mm ²	20 N/mm ²
Flexural Strength	BS 6319 Pt. 3	16 N/mm ²	7 N/mm ²
Tensile Strength	BS 6319 Pt. 7	8 N/mm ²	3.5 N/mm ²
Abrasion Resistance (mg/cycle)	Taber Abrasion Test- Wt. Loss	2.7	4.19
Bond Strength to Concrete	Elcometer Pull-off Test	>3.0 N/mm ² than typical cohesive strength to concrete	

Instructions for Use

Surface Preparation

It is essential that TECFLOOR[®] ES is applied to sound, clean and dry surfaces in order that maximum bond strength is achieved between the substrate and the flooring system.

New Concrete Floors

Should be at least 28 days old moisture content should be less than 5%. Laitance deposits on new concrete floors are best removed by light grit-blasting, mechanical scabbling or grinding. On smaller areas through acid etching using etching agent may be considered. After etching the floor should be thoroughly washed with clean water and then allowed to dry.

Old Concrete Floors

Again mechanical cleaning methods are strongly recommended on old concrete floors particularly where heavy contaminations by oil and grease has occurred or existing coatings are present. This may well have been absorbed several mm. into the concrete. To ensure adhesion, all contamination should be removed.

All dust particles and debris should be removed prior to laying TECFLOOR[®] ES.

Steel Surfaces

Should be degreased and sand blasted immediately prior to application.

Priming

All surfaces to be treated with TECFLOOR[®] ES should be primed with Tecfloor[®] PR, a solvent free epoxy resin primer designed for maximum absorption and adhesion to concrete substrates. Add the entire contents of the hardener tin to the base tin and mix thoroughly. Once mixed, immediately apply the primer in a thin continuous film to the clean prepared surfaces. Work the primer into the surface using stiff brushes, avoid over application and puddling. On porous floors the Tecfloor[®] PR primer will be absorbed very quickly leaving characteristic light coloured dry patches. It is recommended that a second priming coat be applied.

Mixing

It is important that TECFLOOR[®] ES is mixed correctly.

A suitable forced action mixer such as a paddle fitted into a heavy duty, slow speed, electric hand drill and a similar equipment, is recommended for mixing.

The entire contents of hardener tin should be poured into the base container and mixed thoroughly until homogeneous.

It is recommended that the aggregates in the bag are blended well manually before adding to the mixed resin and hardener. Then add the aggregate slowly to the mixed resin and hardener, continue mechanical mixing for a further 2-3 minutes, until all the components are thoroughly blended. Once mixed, the materials must be used within the specified pot life (see under 'Properties'). After this time, unused materials will have stiffened and should be discarded.

Application

The mixed TECFLOOR[®] ES should be spread to uniform thickness on the primed surface using a steel trowel. The material should be tamped with a wooden float to ensure complete compaction and finally finished to a closed even texture using a steel trowel.

Expansion Joints

Expansion joints in the existing substrate should be continued through the TECFLOOR[®] ES epoxy screed.

Coving

TECFLOOR[®] ES can be used to form perimeter edge coving up to a height of 225 mm.

Sealing

Areas where high degree of cleanliness is required, TECFLOOR[®] ES may be sealed with Tecfloor[®] EC epoxy coatings. Epoxy coatings depending on the desired finish. For this, TECFLOOR[®] ES must be at least 1 day old and high spots such as cold joints and trowel marks rubbed down.

Cleaning

All tools and equipment should be cleaned immediately after use with Cleaning Solution.

Health and Safety Instructions

TECFLOOR[®] ES base and hardener components, Tecfloor[®] PR and Cleaning Sol should not come in contact with skin and eyes or be swallowed. Prolonged inhalation of solvent vapours should be avoided.

Since some people are sensitive to epoxy resins, hardeners and solvents, gloves, goggles and barrier creams should be used. Adequate ventilation should be avoided and if work is in enclosed areas, suitable breathing apparatus must be used.

If mixed resin comes in contact with skin, it must be removed before it hardens with a resin removing cream, followed by washing with soap and water. Solvent should not be used. Contamination of skin with any of the above component products should be removed immediately with soap and water.

Should accidental eye contamination occur with any of the above products, it should be washed well with plenty of clean water and medical advice sought. If swallowed, immediate medical attention is advised.

Fire

Tecfloor[®] PR and Cleaning Sol are flammable and should not be exposed to naked flames or other sources of ignition. Smoking is prohibited. Containers should be tightly sealed when not in use. Fire should be extinguished with Carbon dioxide or foam.

TECFLOOR[®] ES

Flash Points

Tecfloor[®] PR: 25°C
Cleaning Solution: 33°C

Storage

Tecfloor[®] PR and TECFLOOR[®] ES have a shelf life of 12 months when stored in a dry place below 35°C.

Packing

	Pack Size	Approximate Coverage Rate
TECFLOOR [®] PR	1 & 4 LTR	5.5-6.5 m ² /ltr
TECFLOOR [®] ES	8 LTR	1.6 m ² / pack @ 5mm thick

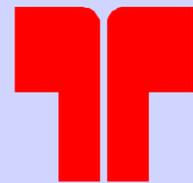
The above coverage rates are given for guidance only as actual quantities used will vary with nature of substrate and condition on site. Generally two coats of TECFLOOR[®] EC coatings is required sealer coat for a properly compacted TECFLOOR[®] ES screed. Quantity of TECFLOOR[®] EC is required to seal TECFLOOR[®] ES in two coat is approximately 800ml for 1m² area. Additional coat of TECFLOOR[®] EC coating shall be recommended, in case of excess absorption or if a glaze coat of high build finish is desired.

Other Segments:

- Concrete Admixtures • Surface Treatments • Grouts & Anchors • Repair & Rehabilitation
- Protective Coatings • Industrial Flooring • Waterproofing • Sealants • Adhesives

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