

TECFLOOR® EC 300

High Performance, Epoxy Resin Based Floor Coating



TECFLOOR® EC 300 is a two part solvent based, epoxy resin coating system supplied in pre-weighed packs ready for on-site mixing and use.

The cured film forms a hard but flexible coating with excellent adhesion to clean concrete, sand/cement and granolithic screeds, and certain metal surfaces. It cures to a semi-gloss, impervious finish which is easily cleaned. The product is available in a range of standard colours and is also available in a clear grade.

Uses

- To provide a hard wearing, easily cleaned, attractive floor coating in areas where high resistance to chemical attack is required.
- It is suitable for use in production assembly areas, workshops, dairies, soft drinks production and bottling plants, kitchens, showrooms etc.
- It is particularly suitable in wet working areas and where chemical spillage is likely, e.g. plating shops, processing plants, dye works etc.
- It can also be used as a final coating and sealer for epoxy floor screeds to provide a more durable and easily cleanable surface where high impact is desirable.

Benefits

- **Hard wearing-** Durable, low maintenance costs
- **High resistance-** Resistant to a wide range of industrial chemicals
- **Hygienic-** Impervious finish provides easily cleaned surface
- **Attractive-** Available in a range of colours to improve the working environment

Technical Support

Thermax offers a comprehensive range of high performance, high quality flooring, jointing and repair products for both new and existing floor surfaces. In addition, the company offers a technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, in locations all over the country.

Standards Compliance

TECFLOOR® EC 300 complies with BS 476, Part 7:1971 Class 1; spread of flame.

Design Criteria

TECFLOOR® EC 300 is designed for application in two coats to achieve a total dry film thickness of 150 microns/coat. Substrates should be dry and not suffer, or be likely to suffer, from rising dampness. If necessary, suitable damp-proof membranes should be installed to prevent this. Substrates should not have a relative humidity greater than 75% at the time of application.

Properties

The values given below are average figures achieved in laboratory tests at 35°C. Actual values obtained onsite may show minor variations from those quoted.

Mix Density	1.40-1.50 gm/cc
Adhesive Bond Strength with concrete (ASTMD 4541)	2 N/mm ² (concrete failure)
Shore D Hardness (ASTMD 2240)	85
Water Absorption (ASTMC 413:1996)	<1%
Pot Life @ 30°C	Up to 40 min
Tack Free Time	2-4 hrs
Time between Coats @ 25°C	8-12 hrs
Full Cure	7 days
Total Dry Film Thickness (2 coats)	300 microns

Note: After the pot life has expired, the material, although not hardened, increases in viscosity and the characteristics of the product change. Excess material should be discarded after this point.

Chemical Properties

TECFLOOR® EC 300 is resistant to a wide range of chemicals. Few of them are listed below. Specific data will be available upon request.

Citric Acid (10%)	Resistant
Hydrochloric Acid (10%)	Resistant
Lactic Acid (10%)	Resistant
Sulphuric Acid (10%)	Resistant

Good housekeeping is essential in areas where chemical spillage is likely to occur. It is especially important that such spillage should not be allowed to dry since very much higher concentrations of chemicals will then result.

Specification

Epoxy Floor Coating

The floor coating shall be TECFLOOR® EC 300, a two component epoxy suitable for application by spray, brush or lambs wool roller. The coating shall be applied in two coats to achieve a total dry film thickness of 300 microns.

Instructions for Use

Surface Preparation

It is essential that TECFLOOR® EC 300 is applied to cleaned and dry substrates in order to achieve maximum adhesion between the floor coating and substrate.

Because TECFLOOR® EC 300 is a relatively thin coating; the substrate must be fine textured. Any surface irregularities may show through causing excessive wear on high spots and changing the perceived colour of the coating.

New Concrete Floors

These should normally have been placed for at least 28 day and have a moisture content of less than 5%. Floors should be sound and free from contamination such as oil and grease, mortar and paint splashes or curing compound residues. Excessive laitance can be removed by the use of mechanical methods. Dust and other debris should then be removed by vacuum cleaning.

Old Concrete Floors

A sound, clean substrate is essential to achieve maximum adhesion. As for new concrete floors dry removal of laitance by use of mechanical methods is preferable. Oil and grease penetration should be removed by the use of a proprietary chemical degreaser or by hot compressed air treatment.

Any damaged areas or surface irregularities should be repaired using epoxy repair mortar.

Steel Substrates

Steel substrates should be grit blasted to surface quality SA 2½ (BS 4232: Second Quality) and primed with a single coat of TECFLOOR® PR.

Epoxy Screeds

TECFLOOR® EC 300 can be applied to epoxy resin screeds. High spots or trowel marks should be rubbed down and dust and other debris removed by vacuum cleaning.

Mixing

The base and hardener components of TECFLOOR® EC 300 must be thoroughly stirred before the two are mixed together. The entire contents of the hardener container should be poured into the base container and the two materials mixed thoroughly, for at least 3 minutes. The use of a heavy-duty slow speed, flameproof or air driven drill fitted with a Mixing Paddle is desirable. Mix these components in the quantities supplied taking care to ensure all containers are scraped clean. Do not add solvent thinners at any time.

Application

The mixed TECFLOOR® EC 300 must be applied to the prepared surface using airless spray, brush or lambs wool roller. Ensure that the area is completely coated and that 'ponding' of the material does not occur.

The second coat may be applied as soon as the first coat has initially dried (typically 8 to 12 hours). The time will be dependent on the type of surface and the ambient conditions.

Maintenance

The service life of a floor can be considerably extended by good housekeeping practices. Regular cleaning of TECFLOOR® EC 300 may be carried out using a rotary scrubbing machine with a water miscible cleaning agent or by hot water washing at temperatures up to 50°C.

Cleaning

TECFLOOR® EC 300 should be removed from tools and equipment with cleaning solution immediately

after use. Hardened material can only be removed mechanically.

Limitations

- TECFLOOR® EC 300 must not be applied onto surfaces known to or are likely to suffer from rising dampness or have a relative humidity greater than 75% as measured in accordance with BS 8203 Appendix A or by Protimeter thermohygrometer.
- Thermax does not recommend acid etching as a method of floor preparation. If it is used, the method should be approved by the project consultant.
- The durability of TECFLOOR® EC 300 in foot traffic areas is reduced in areas of very heavy traffic such as around workbenches, drinks machines etc. It is advisable to either:
 - a. Specify additional coats in such areas or,
 - b. Specify a higher build system such as TECFLOOR EC 500 in such areas.
- TECFLOOR® EC 300 should not be applied to asphalt floors or PVC tiles or sheet.
- In common with all epoxy materials some slight shade changes may be experienced over the long term when placed in adverse exposure conditions any such change in shade is not regarded as being detrimental to performance.
- TECFLOOR® EC 300 should not be installed at temperatures below 5°C.

Health and safety Instructions

TECFLOOR® EC 300, TECFLOOR® PR and cleaning Solution should not come into contact with skin and eyes or be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. Some people are sensitive to resins, hardeners and solvents. Wear suitable protective clothing, gloves, and eye protection. If working in confined areas, suitable respiratory protective equipment must be used. The use of barrier creams provide additional skin protection is advised.

In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent. In

case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately- **do not** induce vomiting.

Fire

TECFLOOR® EC 300 & cleaning solution are flammable. Keep away from sources of ignition. No smoking. In the event of fire, extinguish with CO₂ or foam. Do not use a water jet.

Flash Points

TECFLOOR EC 300	23°C
Cleaning Solution	33°C

Storage

Shelf life

TECFLOOR® EC 300 and cleaning solution have a shelf life of 12 months if kept in a dry store between 5°C and 30°C in the original, unopened packs.

Storage conditions

All products should be stored in accordance with local regulations.

Packing

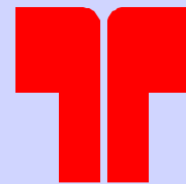
TECFLOOR® EC 300	:	4.5 ltr packs
TECFLOOR® PR	:	1&4 ltr packs
Cleaning Solution	:	5 ltr tins

Coverage

TECFLOOR® EC 300: 15m²/pack @300 microns WFT per coat (2 coat application recommended for 300 microns DFT)

TECFLOOR® PR: 5.5- 6.5 m²/ltr

Note: Coverage figures given are theoretical - due to wastage factors and the variety and nature of substrates, practical coverage figures may be reduced, this will vary with site and application conditions.



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

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