

OXISCREED EFS

Heavy duty 5mm thick, chemical and abrasion resistant epoxy floor screed

Description

Oxiscreed EFS is a solvent free combination of epoxy resin, modified amine hardener, filled with specially graded inert aggregates. It is supplied in pre-weighed units of four part system including colour pack, which are ready for on site mixing and application.

Oxiscreed EFS is laid by trowel as a durable, chemically resistant screed approximately 5 mm thick. The complete system also includes Oxiprime EFS a two-pack epoxy resin primer. The finished, cured floor has a slightly granular texture.

Advantages

- Long service life – exceptional resistance to abrasion and a wide range of chemicals.
- Safe working environment – good gripping surface to all types of traffic.
- Minimal disruption – 5mm thickness causes little interference with existing levels.
- Versatile application – food grade and other special versions available

Uses

Oxiscreed EFS provides an extremely high strength floor topping with exceptional resistance to attack from mechanical wear and chemical spillage. In addition to being Impervious its use facilitates a safe non-slip finish for personnel and vehicular traffic, and is ideally suited for :

- Heavy engineering plants and steel works.
- Electricity substations and battery rooms.
- Chemical handling and process areas.
- Oil refineries and plating factories.
- Dairies and soft drinks factories.

In areas where high degrees of cleanliness are required, the surface of Oxiscreed EFS can be sealed with Oxifloor FC200 or Oxifloor FC100.

Technical properties

Mechanical Characteristics

Compressive strength @ 7 days (ASTM C579)	: 85N/mm ²
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Flexural Strength @ 7 days (BS 6319, Pt. 3)	: 28 N/mm ²
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Tensile strength @ 7 days (BS 6319, pt. 7))	: 16 N/mm ²
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Abrasion resistance (ASTM D4060)	: 0.77 g/1000 cycles
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Bond strength to concrete	: > Cohesive strength of the concrete
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Identification characteristics Modified US MIL –D-3134	: No indentation from a height of 2.4 m
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Curing characteristics at	20°C	30°C
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Oxiscreed EFS

Pot life	: 45 mins	30mins
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Initial hardness	: 18 hrs.	16 hrs.
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Full cure	: 7days	5 days
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Oxiprime EFS

Pot life	
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Maximum overlay time	: 3 hrs.	1.5 hrs.
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VOC	: <0.01g/l
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Chemical resistance

Fully cured blocks of Oxiscreed EFS have been tested in a wide range of aggressive chemicals commonly found in industrial environments. Tests were performed by constant immersion over a set period, followed by visual inspection and testing for shore D hardness.

Acids

Hydrochloric acid 36%	: Resistant
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Sulphuric acid 10%	: Resistant
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Phosphoric acid 50%	: Resistant
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Nitric acid 30%	: Resistant
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Lactic Acid 22.5%	: Resistant
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Citric Acid 80%	: Resistant
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OXISCREED EFS



Alkalis (m/v)	
Sodium hydroxide 24%	: Resistant
Ammonia 35%	: Resistant
Solvents & Organics	
Butanol	: Resistant
White Spirit	: Resistant
Oil/grease/petrol	: Resistant
Xylene	: Resistant
Aqueous solutions	
Bleach	: Resistant
Saturated Sugar	: Resistant
Saturated Urea 10%	: Resistant

All the above properties have been determined by laboratory-controlled tests and are in excess of those expected in practice. Nevertheless, success in use will be determined but the implementation of good housekeeping practices.

Instruction for use

Surface Preparation

It is essential that Oxiscreed EFS is applied to sound, clean and dry surfaces in order that maximum bond strength is achieved between the substrate and the flooring system. All dust and debris should be removed prior to application of the product or its primer.

New Concrete floors

Should be at least 21 days old (at 20°C) with maximum moisture content not exceeding 5 %. Laitance deposits on new concrete floors are best removed by light grit blasting, mechanical scabbling or grinding.

Old concrete floors

Again, mechanical cleaning methods are strongly recommended on old concrete floors particularly where heavy contamination by oil and grease has occurred or existing coatings are present. These may well have been absorbed several millimetres into the concrete. To ensure adhesion, all contamination should be removed. Proprietary chemical degreaser may be used on small areas of light contamination only.

Steel Surfaces

Steel surfaces should be degreased, and grit blasted to SA2^{1/2} immediately prior to application.

Priming

All surfaces treated with Oxiscreed EFS should be primed with Oxiprime EFS, a solvent based epoxy resin primer designed for maximum absorption and adhesion to concrete substrates. Add the entire contents of the smaller 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 and avoid over application and puddling. On porous floors, the Oxiprime EFS will be absorbed very quickly leaving characteristic light-coloured dry patches. It is recommended that a second priming coat is applied in these areas. While still wet, dress the surface with ½ Kg/m² of Antislip Quartz No. 3 to provide a key for the application of Oxiscreed EFS. Ensure that the primer is touch dry prior to commencing application.

Mixing

It is important that Oxiscreed EFS is mixed correctly.

- Pour the entire colour pack into the base container and mix for 15 – 30 seconds.
- Add the entire contents of the hardener into the mix and stir for further 30 seconds.
- Gradually empty the filler (aggregate) into the mix of base, colour pack and hardener and continue mechanical mixing, using a suitable mixing paddle fitted to a slow speed forced action mixer, for a further 2-3 minutes, until all components are thoroughly blended.

Application

The mixed Oxiscreed EFS should be spread to uniform thickness on the primed surface using either a garden rake or the edge of a plastic 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. Screeding rods are useful to maintain a minimum compacted thickness of

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5mm.

Once mixed, the material must be used within the specified pot life (see under “properties”). After this time, any unused material will have stiffened and should be discarded.

Expansion joints

Expansion joints in the existing substrate should be continued through the Oxiscreed EFS topping, and filled to the required level with a suitable sealant from the Al Majara range incorporating the appropriate movement accommodation factor (MAF).

Coving

Oxiscreed EFS can be used to form a perimeter edge coving. Skilled applicators can also form stairs and nosing.

Sealing

Although Oxiscreed EFS is impervious at 5mm thick, in constantly wet operation areas or where a high degree of cleanliness is required Oxiscreed EFS can be sealed with Oxifloor FC200 or Oxifloor FC100. The Oxiscreed EFS must have reached initial cure and high spots such as trowel marks rubbed down.

Cleaning

All tools and equipment should be cleaned with Oxisolvent 100 immediately after use.

Shelf life

Oxiscreed EFS and Oxiprime EFS have a shelf life of 12 months when stored in a dry place below 35°C in their original, unopened packs.

Storage conditions

Store under warehouse conditions below 35°C in the original, unopened packs. If stored at high temperature and/ or high humidity conditions, the shelf life will be reduced.

Estimating

Supply

Oxiscreed EFS	: 12 litre packs (including colour packs)
Antislip Quartz No.3	: 25Kg bags
Oxiprime EFS	: 1 and 4 litre packs
Oxisolvent 100	: 5 litre packs

Coverage

Oxiscreed EFS	: 2.4 m ² /pack at 5mm thickness(approximately)
Oxiprime EFS	: 5.0 m ² per litre

Note: the above coverage rates are given for guidance only as actual quantities used will vary depending upon the nature of substrate and conditions on site.

Health and Safety

Oxiscreed EFS and Oxiprime EFS should not come in contact with skin and eyes or be swallowed. Should accidental eye contamination occur with any of the above products, wash well with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately. Do not induce vomiting.

Information

Al Majara Polychem Industries LLC products are guaranteed against defective materials and are sold subject to standard terms and condition of sale, copies of which are available on request which are reasonable care it's taken compiling this technical data sheet, all recommendations regarding the use of product are made without guarantee since the conditions used are beyond the company' direct control. It is the customer responsibility to satisfy themselves that each product is fit for the purpose for which they indent to use it.

Quality Matters

All products originating from Al Majara Polychem Ind. LLC are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9000, ISO 14001 and OHSAS 18001.

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