

ECF POL

Polymer additive for cement screeds

Product Data Sheet

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DESCRIPTION

ECF POL is a water based emulsion developed for addition to thin section cementitious screeds used in levelling and smoothing heavy duty industrial floors, and as an underlayment for a wide range of flooring requirements.

The use of ECF POL in screeds and toppings improves the resistance to water and water vapour. When left as a wearing surface ECF POL toppings have a lower tendency to dusting than conventional cement screeds and toppings.

ADVANTAGES

1. Low water : cement ratio
2. Faster access times for coating and screeding
3. Good base for under ECF CRETE, ECF SCREED ECF THANE.
4. Improved wearing characteristics
5. Resistance to dusting
6. Improved resistance to liquid spillages.

WHERE TO USE

ECF POL when added to cementitious mixes gives improved trowelling and substantially higher mechanical properties.

The addition of ECF POL enables applications at thinner sections than conventional sand cement systems with a lower water content yet achieving the same degree of workability, thereby reducing drying times and allowing earlier access.

ECF POL screeds can be applied from 10 - 50 mm and can be used to lay to falls. When laying to falls, the minimum depth should be observed, and where necessary a toe-in may be required to achieve the required minimum depth. Due consideration should be given to proper joint design at edges and interfaces with other materials.

ECF POL screed systems provide an excellent surface for the application of subsequent protective coatings.

GENERAL PROPERTIES

Density	960 - 1020 kg/m ²
Product type	Styrene Butadiene latex
Appearance	milky white liquid
Storage	protect from frost
Application Temperature	10 °C to 30 °C
Open Time/Workability @ 20deg.C	30 mins
Application Thickness	10- 50 mm
Open to Foot Traffic	48 hours
Open to Light Traffic	72 hours

Note: Drying and curing times are subject to temperature humidity and environmental conditions. Optimum curing will be achieved by application of a curing membrane after 1 hour, which should be left in place for 48 hrs

Storage Protect from Frost. when properly stored, unopened in dry conditions shelf life of 12 months.

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MATERIALS

It is important to ensure that the materials used are of suitable quality and consistency. Sharp sand, should be clean well washed and selected on the basis of mix design.

Portland cement should be fresh, free from lumps etc. Aggregates should be dust free and graded such that they are appropriate to the thickness of materials being laid.

Note: It is normally considered good practice that the maximum aggregate size should not exceed one third of the minimum thickness of the screed. Due to the wide variety of materials and sources available, contractors are strongly advised to ensure that all materials to be used are of the appropriate quality, and where necessary trials are undertaken to ensure that the required level of performance is achievable with specific materials.

ECF POL contains a defoaming agent, air entraining agents are therefore not recommended for use with this product.

Substrate preparation and specification.

The substrate should be sound and continuous, movement joints should be carried through the screed system, day work joints should be soundly bonded and sealed. The substrate should be mechanically strong enough to support the expected loads and should have suitable mechanical properties (compressive strength not less than 30 N/mm² and tensile not less than 1 N/mm².)

The surface should be mechanically prepared to provide a clean sound and dry surface, free from dust, dirt, oils and greases, surface laitence or other contamination. If the presence of waterproofing agents is suspected in the concrete then a water spot test should be undertaken.

PRIMING

Priming can be achieved in several ways depending on site conditions and requirements. High bond strengths can be achieved by use of **ECF PRIME WB**. Alternatively a slurry coat can be used. Normally this will be one coat of **ECF POL** and cement mixed one to one by volume, applied at a rate of approximately 3 m per litre of latex. (typical potlife for this material is 1-1.5 hrs.) Care should be taken to ensure that the primer is laid off smoothly and evenly and worked into the surface, avoiding leaving pools of material on the floor.

Equipment used should be cleaned with clean cold water periodically, and at the end of the application.

Only prime the areas to be screeded during that working period.

Extremely porous surfaces require an additional sealer coat of one part ECF POL to four parts water applied prior to the application of the primer.

MIX AND APPLICATION

Mix design is dependent on thickness and intended use, a typical mix for:

A leveling screed (parts by wt)

OPC	1
sands	3.5
ECF POL	0.2
water	as required

A heavy duty topping to be used as a wearing course

OPC	1
sands	1.75
washed granite	1.75
ECF POL	0.2
water	as required.

This equates to 10 litres of **ECF POL** per 50 kg cement. Improved strength can be achieved by increasing the **ECF POL** content to 15 litres per 50 kg, and offsetting the volume of water used.

This product contains a defoamer and is formulated for this to be effective in production and use of the product, however overmixing will result in air entrapment and bubbles forming in the bulk of the laid screed.

Mix to a smooth even consistency, free from lumps. When mixed the screed will have a working life of approximately 30 minutes, it is therefore important to ensure that mixing capability is consistent with the laying process.

Lay the Screed or topping direct into the wet primer, laying off with a rake etc, and compacting with a screed bar prior to finishing with steel float. Where large areas are involved, it is essential that this is done as the work proceeds, and that the application is planned to enable working in bays. Ideally these bays should align with the movement or other existing joints

USAGE

Usage is dependant on the aggregates selected. Based on the formulation above being applied to a smooth sealed surface, for an area of 100 m² at 10 mm thickness 2000 kg of mix requiring 85 kg of ECF POL will be required.

ECF POL based floors must be allowed to dry properly before laying sealed surface coatings or coverings.

HYGIENE

This product is formulated from materials, which are designed to achieve the highest levels of performance as safely as possible. However specific components require proper handling and suitable equipment. This information is given in the relevant safety data sheet.

In all cases spillage's or skin contamination should be cleared as soon as possible by dry wiping the affected area and then thoroughly washing with soap and water.

Consult Safety Data Sheet Ref:HSPL

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