

OPTEC[®] EC-972

Integral Permeability Reducer

Product Description

OPTEC[®] EC-972 is a liquid based water-repellent admixture which has been specially formulated for use in semi-dry mix designs, where the incidence of efflorescence is undesirable.

OPTEC[®] EC-972 has particular benefit when used in the production of concrete block paviors, tiles etc. when control of primary and secondary efflorescence and a reduction of the ingress of moisture is required.

OPTEC[®] EC-972 is formulated from a stable high performance aqueous silane oligomer dispersion, resulting in superior performance in all precast units. The silane forms a hydrophobic lining within the capillary pores, preventing or reducing water movement. OPTEC[®] EC-972 is manufactured under carefully controlled conditions, to produce a highly consistent product. OPTEC[®] EC-972 complies with EN 934-2.

Advantages

- Reduces primary efflorescence and improves surface finish and appearance
- Masonry units retain clean appearance
- Increased durability
- Reduces secondary efflorescence and gives water repellency
- Improved dispersion compared to powdered products
- Can be used with white cements and is effective in pigmented systems

Typical Properties

OPTEC [®] EC-900	
Appearance	White liquid
Air Entrainment	Minimal in semi-dry mixes
Chloride Content	0°C

Typical Uses

- High quality block paviors where aesthetic quality and appearance is of value
- Concrete brick presses
- Precast retaining wall units
- Concrete tile manufacture or for most cementitious systems involving low workability mixes and vibration intensive/press production methods

Method Of Use

OPTEC® EC-972 is supplied ready for use and should be added to the mix at the same time as the mixing water. OPTEC® EC-972 may be used in all zero or low slump concretes where control of efflorescence is beneficial. Dosage will vary depending on the desired properties. Efflorescence control can be achieved using addition rates as low as 500 mls per 100 kg of cement. However, if high temperature curing is utilised, a higher dosage may be required. Overdosing in semi-dry mixes will yield a more plastic mixture, and problems may be experienced with edge slumping of cast masonry units. A reduction in compressive strength may also be noticed.

Addition Rates

Range	500 - 1500 ml per 100 kg cementitious / powder
	0.50% - 1.50% (v/w) by wt. of cement
For best results it is recommended that OPTEC EC-972 performance is first assessed in preliminary tests using the actual mix constituents to determine the optimum dosage.	
For advice and assistance with trials we recommend that you consult GCP Applied Technologies.	

Compatibility

With Cements :

OPTEC® EC-972 can be used with all types of cements, including limestone cements. It is also effective in concretes containing fly ash or ground granulated blastfurnace slag. For use with special cements we recommend you to contact GCP Applied Technologies.

With Other Admixtures:

OPTEC® EC-972 should not be pre-mixed with other admixture prior to addition to the mix. The performance of the admixture may be affected by the presence of other chemicals, and we would recommend that GCP be consulted in such circumstances.

Dispensing

It is preferable that liquid admixtures for concrete should be introduced into the mixer by means of automatic dispensing equipment.

Packaging

OPTEC® EC-972 is supplied in 205 litre nonreturnable containers. Alternatively, bulk deliveries can be arranged.

Storage

OPTEC® EC-972 should be stored above 0°C and protected from frost, otherwise permanent damage may occur. In common with most emulsions, if OPTEC® EC-972 is allowed to freeze, the damage is irreversible and the product cannot be reconstituted.

Storage Life in Manufacturer 's Drums:

6 months from date of manufacture.

Storage Life in Bulk Storage:

6 months from date of delivery.

Health and Safety

For further information on Health and Safety matters regarding this product we recommend that you consult the relevant Safety Data Sheet from GCP Applied Technologies.

Technical Service

Our Technical Service department of GCP Applied Technologies is available to assist you in the correct use of our performance chemicals.

gcpat.uk | United Kingdom customer service: +44 (0) 1925 855330 Fax: 01925 855350

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GCP Applied Technologies (UK) Ltd, Gate St, Dukinfield SK16 4RU.

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Last Updated: 2025-05-13

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