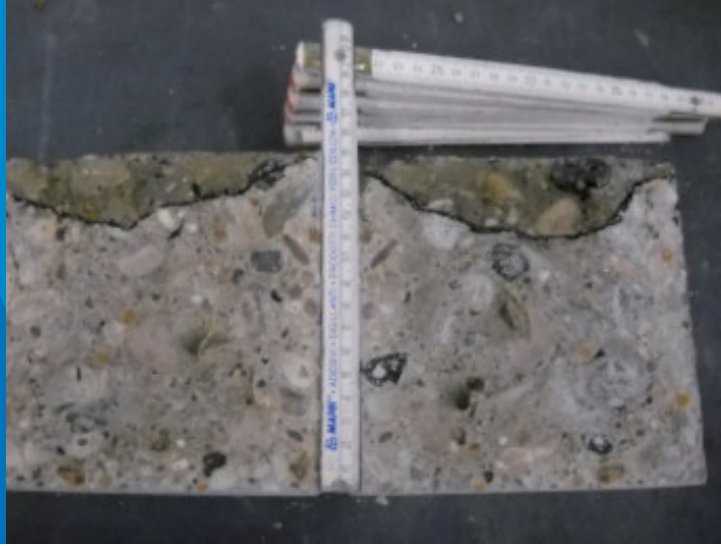


IDROCRETE KR 1000

Crystallizing admixture for waterproof concrete



DESCRIPTION

Idrocrete KR 1000 is a powder admixture made from special hydrophilic components which, when added to a concrete mix, reduces the permeability of hardened concrete.

Idrocrete KR 1000 is BBA certified as part of the “Mapei Idrocrete System”, agrément certificate 20/5754.

WHERE TO USE

Idrocrete KR 1000 may be used with any type of concrete when a reduction of permeability is required. Once **Idrocrete KR 1000** is added to the mix, it reacts with water during the entire service life of the concrete.

Idrocrete KR 1000 may be used to make concrete that is resistant to aggressive environments. The specified exposure class of the concrete must always be respected and the product cannot be used to make up for poorly designed concrete.

To have guaranteed results, **Idrocrete KR 1000** must only be used in concrete that has been correctly designed respecting two basic rules for the production of impermeable concrete, which are, a water/cement ratio of 0.45 and an adequate wet curing time.

Idrocrete KR 1000 may be successfully used to produce concrete for the following applications:

- dams;
- bridges;
- car parks;
- storage tanks;
- pipes and piles;
- retaining walls;
- tunnels;
- marine structures;
- basements and foundations;
- swimming pools;
- precast elements;
- “white tanks” (weiße Wanne).

TECHNICAL CHARACTERISTICS

Idrocrete KR 1000 is a mixture of active compounds which, in the presence of water, transform the by-products of the cement hydration into crystals reducing concrete porosity and micro-cracks.

Idrocrete KR 1000 reduces the permeability characteristics of concrete. Laboratory tests have shown that adding **Idrocrete KR 1000** to concrete reduces its level of capillary absorption and makes it more resistant to the hydrostatic pressure.

The crack bridging ability of **Idrocrete KR 1000** allows to close microcracks up to 0.4 mm.

APPLICATION METHOD

To ensure perfect homogenization of the product it is recommended adding **Idrocrete KR 1000** as follows:

- **Conveyor belt:** disperse the powder of **Idrocrete KR 1000** directly on the coarse aggregate conveyor belt during the loading phase.
- **Premixer:** add **Idrocrete KR 1000** along with the other concrete components and mix as in standard production.
- **Truck mixer:** add **Idrocrete KR 1000** into the drum of concrete mixer with a small amount of water and mix carefully before loading the concrete.
- **Slurry:** in the case of mixtures with low water content, it is advisable to prepare a slurry of water and **Idrocrete KR 1000**, to be added to the concrete to facilitate the dispersion of the product in the mix.

Account the added water in the mix design and consistency class.

COMPATIBILITY WITH OTHER PRODUCTS

Idrocrete KR 1000 is compatible with all cements compliant with EN 197-1 norm and MAPEI admixtures used in the production of high quality concrete, particularly:

- WR and HRWR admixtures from the **Mapeplast**, **Mapefluid** and **Dynamon** ranges;
- set-retarding admixtures from the **Mapetard** range to extend and maintain the workability of concrete;
- chloride-free, hardening-accelerator admixtures from the **Mapefast** range to achieve very high mechanical strength after short curing cycles, even in cold climates;
- viscosity-modifying admixtures from the **Viscostar** and **Viscofluid** ranges used to make self-compacting concrete;
- **Expacrete** expanding agent used in the production of shrinkage-compensated concrete;
- air-entraining admixtures from the **Mapeair AE** range used in the production of concrete resistant to freeze/thaw cycles;
- alkali-free accelerator for shotcrete from the **Mapequick AF** range;
- form-releasing agents from the **Mapeform**, **Mapeform Eco** and **DMA** ranges for stripping formwork from concrete;
- curing agents from the **Mapecure** range used to reduce the risk of plastic shrinkage cracks in concrete.

DOSAGE

Dosage by weight

Idrocrete KR1000 has a dosage of between 0.8 kg and 3 kg per 100 kg of cementitious material, depending on the required performance characteristics.

Different dosage rates to those recommended above must be tested beforehand on concrete by concrete trials and, in all cases, only after consulting MAPEI Technical Services Department.

In any case, we recommend to run preliminary laboratory tests prior to the industrial use of the product.

PACKAGING

Idrocrete KR 1000 is available in 20 kg and 4 kg water soluble bags.

STORAGE

Idrocrete KR 1000 maintains its properties for at least 12 months if kept sealed in its original packaging, protected from moisture.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.com.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

Consistency:	powder
Colour:	grey
Density (g/cm ³):	2.2 ± 0.1
Classification according to EN 934-2:	water resisting admixture, table 9
Chlorides soluble in water according to EN 480-10 (%):	< 0.1 (absent according to EN 934-2)
Alkali content (equivalent Na ₂ O) according to EN 480-12 (%):	≤ 15%

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.

The most up-to-date TDS can be downloaded from our website www.mapei.com.

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

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