KREVO
Exploring Chemistry

KREVO Mix Crystal

Liquid crystalline waterproofing admixture | Integral concrete protection | Reduced permeability

PRODUCT DESCRIPTION

KREVO Mix Crystal is a liquid, integral crystalline waterproofing admixture for concrete and cement mortars. Reactive ingredients interact with moisture and cement hydration products to form insoluble crystalline deposits within capillaries, pores and fine cracks. This reduces water permeability and capillary absorption and can promote the sealing of fine cracks in the presence of moisture.

ADVANTAGES

- Integral waterproofing action throughout the concrete matrix.
- Reduces water permeability and penetration under hydrostatic pressure.
- Crystalline reaction can help seal fine cracks in the presence of moisture.
- Liquid admixture suitable for integration into concrete batching operations.
- Suitable for hot-climate works with proper concrete placement and curing.

TYPICAL USES

Basements and foundations • Water tanks and reservoirs • Sewage and water-treatment plants • Dams, canals and tunnels • Harbour and sea-defence structures • Retaining walls • Precast and cast-in-place concrete • Cement mortars and plasters

PRODUCT INFORMATION

PARAMETER	SPECIFICATION
Generic type	Liquid crystalline waterproofing admixture
Appearance / colour	Clear to cloudy liquid
Composition	Active liquid chemicals for integral crystalline action
Density at +25 °C	Approximately 1.09 kg/L
Total chloride ion content	Nil (test reference: EN 934-2)
Packaging	200 L drums; 1,000 L bulk containers / tank supply
Shelf life	6 months from production under proper storage
Storage conditions	Keep sealed, dry and protected at +5 °C to +50 °C

TECHNICAL & APPLICATION PROPERTIES

PARAMETER / TEST	TYPICAL VALUE / GUIDANCE
Recommended dosage	1.0–2.5% by mass of cementitious binder
Ready-mix starting dosage	Approximately 6–7 kg/m^3; verify by trial mixes
Reference w/c ratio	Less than 0.50 for watertight concrete design
Mixing after addition	At least 5 minutes for uniform distribution
Effect on setting	Usually minor at suggested dosage; trial to confirm
Fine crack sealing	Up to 0.5 mm as performance target; verify by testing
Exposure / service	Watertight concrete, basements, reservoirs and marine works
Reference category	Crystalline PRAH-type admixture (ACI 212.3R guidance)

Application & Mixing Guidance

KREVO Mix Crystal | Dosage guidance, batching, concrete performance and curing

CRYSTALLINE WATERPROOFING & MIX DESIGN

CONTROL ITEM	TYPICAL TARGET	CHECK METHOD	ACTION
Dosage range	1–2.5% binder	Mix calculation	Approve trials
Typical quantity	6–7 kg/m^3	Batch record	Check binder
Water / cement	<0.50	Approved mix	Avoid excess
Dispersion	≥5 min mixing	Batch sequence	Confirm uniform
Setting / slump	Within design	Trial batches	Adjust design

The liquid admixture is incorporated into concrete during mixing. Its reactive chemistry is intended to produce insoluble crystalline deposits in capillary pathways. Use a sound watertight concrete design, generally with a water/cement ratio below 0.50, adequate compaction and effective curing.

TYPICAL BATCHING & APPLICATION SEQUENCE

STAGE	PROCEDURE / GUIDANCE
1 | Mix design	Define binder content, water/cement ratio and required waterproofing performance.
2 | Dose calculation	Start at 1–2.5% binder or about 6–7 kg/m^3, subject to approved trials.
3 | Liquid batching	Meter into central or truck mixer using an approved admixture addition sequence.
4 | Mixing & placing	Mix at least 5 minutes after addition; place and compact consistently.
5 | Curing / QC	Cure properly, record batches and verify permeability against requirements.

CEMENT & ADMIXTURE COMPATIBILITY

The system is intended for Portland-cement concretes and mixes containing supplementary cementitious materials such as fly ash, GGBS and silica fume. Compatibility with water reducers, superplasticisers, air entrainers and other admixtures must be checked by trial mixes before production use.

DOSAGE, SETTING & DISPENSING

A reference dosage range is 1.0–2.5% by mass of cementitious binder; for many ready-mix concretes a starting quantity of approximately 6–7 kg/m^3 is used. The optimum quantity depends on binder content, aggregate, water demand, climatic conditions and required performance. Trial mixes are essential.

INSTALLATION CONTROL	REQUIREMENT / GUIDANCE
Dosage / trial design	1–2.5% by binder mass; ~6–7 kg/m^3 typical starting point.
Physical properties	Liquid, density ~1.09 kg/L; chloride content reported nil.
Mixing / setting	At least 5 min after addition; confirm slump and set by trials.
Concrete / curing	Sound low-permeability mix; control water/cement and cure properly.
Storage / shelf life	Sealed at +5 °C to +50 °C; 6 months under stated conditions.

Batch the liquid at the ready-mix plant or in a central / truck mixer using approved admixture-dosing equipment. Mix for at least five minutes after addition to achieve an even distribution. Monitor workability and setting characteristics, particularly with blended binders or multiple admixtures.

CONCRETE QUALITY & CURING

Use recognised good concreting practice for proportioning, transport, placement, compaction and curing. Limit free water and avoid segregation. Cure promptly and adequately, especially in hot, windy or dry conditions. Integral crystalline protection does not replace proper joint detailing, waterstops or crack-control design.

Installation & Product Support

KREVO Mix Crystal | Dosing procedure, site controls, limitations, safety and product support

BATCHING & MIXING PROCEDURE

- Approve the concrete mix design and specify the required watertightness performance.
- Calculate liquid admixture dosage from binder content or approved kg/m^3 target.
- Meter the liquid accurately and mix for at least five minutes after its addition.
- Check homogeneity, slump/workability and setting against approved control mixes.

PLACEMENT & QUALITY CHECKS

- Check the concrete batch records, water/cement ratio and total binder content.
- Place and compact concrete to avoid honeycombing, segregation and cold joints.
- Cure promptly and continuously according to the approved project requirements.
- Perform agreed concrete watertightness and admixture compatibility testing.

LIMITATIONS & SERVICE NOTES

- A waterproof concrete design and correctly installed joints remain essential.
- Do not assume that the admixture will seal moving or large structural cracks.
- Fine-crack sealing capability depends on water exposure and actual concrete quality.
- Trial mix when using alternative cement, SCMs or chemical admixtures.
- Avoid excessive added water and verify suitability for each project exposure.

HEALTH, SAFETY & ENVIRONMENT

Use appropriate gloves, eye protection and site PPE when handling liquid chemical admixtures. Avoid direct contact and accidental discharge to drains or watercourses. Store in properly sealed containers, protected from contamination and extreme temperatures. Follow the current Safety Data Sheet and local handling and disposal requirements.

QUALITY & PRODUCT INFORMATION

Admixture efficiency is affected by concrete quality, binder chemistry, dosage, batching sequence, water/cement ratio and curing. Confirm product identity, batch documentation and KREVO-specific test results before making project compliance or watertightness claims. The stated dose and fine-crack performance are typical targets requiring verification.

KREVO | GLOBAL CONTACTS

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