

Hammerfast Crystal Liquid



Crystalline liquid concrete admixture

Description

Hammerfast Crystal Liquid is a capillary-active liquid concrete admixture that forms insoluble crystalline fibers within the capillary pores of concrete. These crystals block water pathways and provide permanent, integral waterproofing throughout the concrete mass.

Advantages

- Protects concrete against both positive and negative water pressure.
- Remains continuously active during curing and upon contact with water.
- Provides permanent sealing by filling capillary pores with insoluble nano-sized crystals.
- Non-toxic; suitable for use in potable water tanks.
- Vapor permeable, allowing the concrete to breathe.
- Liquid form enables easy dosing without lump formation (compared to powders).
- Reduces labor and application time.
- Ideal for waterproofing pile-supported raft foundations.
- Eliminates the need for additional waterproofing membranes.
- Removes the necessity for any other waterproofing application.
- Environmentally friendly and harmless to human health.

Application Areas

- In all concrete applications where crystalline capillary waterproofing is required.
- Retaining walls and foundation walls.
- Raft foundations and pile foundations (bored pile systems).
- Tunnels, subways, and culverts.
- Dams.
- Bored pile foundations.
- Precast concrete elements.
- Marine and hydraulic structures.
- Water tanks and reservoirs (suitable for potable water).
- Sewage and wastewater treatment plants.
- Basements and underground structures.
- Underground parking structures.
- Swimming pools.
- Elevator pits.

Application

- Add Hammerfast Crystal Liquid directly to the mixing water or into the concrete mix during batching at approximately 1% by weight of cement.
- If applied at the batching plant, add the product into the concrete mixing water; this mixture should be introduced into the concrete as the final component.
- Mix thoroughly to ensure uniform distribution throughout the concrete.
- Standard curing practices must be applied.
- Under normal conditions, no additional waterproofing treatment is required.

Consumption

1,0-1,5% by weight of cement.

The exact dosage should be determined by laboratory trials depending on the concrete mix design and performance requirements.

Technical Properties

Content / Composition	Special blend
Color and Appearance	Clear liquid
pH	12 – 13
Chloride Content	Chloride-free
Mixing Ratio	Ready to use
Compatibility	Suitable for all types of Portland cement
Density	1,05±0,05 g/cm ³
HS Code (GTIP)	3824.40.00.00.00

Note: Values measured at 23 ± 2 °C and 50 ± 5% relative humidity.

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Precautions

- The water/cement ratio must not exceed 0,55.
- The use of a set retarder is recommended when CEM II and CEM III type Portland cements are used.
- May be harmful in contact with skin.
- Do not apply in freezing conditions or when there is a risk of frost.
- Protect the applied surface from rain, frost, foot traffic, and high humidity until completely dry.
- Do not apply when the surface or ambient temperature is below +5 °C or above +35 °C.
- Crystalline sediment forming at the bottom of the container indicates that the storage temperature has dropped. Before use, store the product in a warm environment until the crystals dissolve, then mix and use.
- All technical data stated in this document are based on laboratory tests and practical experience. Actual performance may vary depending on site conditions, application methods, and materials used. Users should conduct suitability tests prior to application.

Storage and Shelf Life

The product can be stored for 12 months from the date of manufacture when kept in its original, unopened packaging in dry, moisture-free conditions, protected from direct sunlight, and stored between +10 °C and +35 °C. When not in use, the packaging must be tightly sealed, and pallets should not be stacked on top of each other.

Packaging

It is available in 30 kg plastic drums or 1000 kg IBC tanks.

- 1 Pallet = 27 jerrycans (30 kg)
1 IBC = 1000 kg

Tool Cleaning

All tools should be cleaned with warm water immediately after application.

Safety Precautions

- Keep out of reach of children.
- Do not eat or swallow.
- Keep away from foodstuffs.
- Do not inhale directly; avoid contact with the body.
- May cause allergic reactions.
- In case of contact with eyes, rinse immediately with plenty of water and seek medical attention.
- The use of gloves, safety goggles, and protective clothing is recommended during application.
- Wash hands thoroughly with plenty of water after use.
- For detailed safety information, refer to the Material Safety Data Sheet (MSDS).

Quality certificates

- ISO 9001
- ISO 14001
- CE

