

CLASS CRYSTAL

LIQUID

Liquid Crystalline
Waterproofing Compound



BENZKIM



Product Overview

It is a reactive, liquid, concentrated crystalline waterproofing additive that, when incorporated into concrete, interacts with water, moisture, and free lime to generate needle-like crystals within the capillary voids and pores of the concrete.



Application Domains

- In all reinforced concrete structures that will be subjected to chemicals capable of damaging concrete, including water, moisture, sulfate, and chloride ions,
- In concrete for foundation and retaining walls,
In pile foundations,
- In wells, foundations, and retaining walls,
- In water reservoirs and treatment facilities,
- In potable water and wastewater storage facilities,
- In elevator shafts,



Technical Specifications

Intensity	~ 1.13 kg/L (20°C)
Chloride Ion Concentration	< %0,1
Capillary Water Uptake	$w < 0.1 \text{ kg/m}^2 \cdot \text{h}^{0.5}$
Working Hours	50 minutes
Corrosion Characteristics	It is non-corrosive.

The information presented in this technical data sheet is derived from experimental results. The responsibility for the proper application of our original product rests with the user. Our company is solely accountable for the product's quality. This data sheet supersedes the information provided in the previous version. Our company reserves the right to amend any information contained within this data sheet.



Advantages

- It inhibits the infiltration of water, moisture, and sulfate into the concrete by sealing capillary voids and cracks up to 0.5 mm. This protection safeguards the concrete against chemical and physical damage resulting from sulfate attacks and prevents the corrosion of reinforcement.
- As it provides volumetric insulation for the concrete, a protective layer is unnecessary.
- It enhances the compressive strength of concrete by occupying the capillary voids within the material.
- It continues to function under hydrostatic pressure.
- Due to its reactivity, it continues to interact with water molecules throughout the lifespan of the concrete, safeguarding both the concrete and the reinforcing steel from corrosion indefinitely.



Application Details

CLASS CRYSTAL LIQUID must be incorporated into the transit mixer immediately prior to concrete pouring, at a dosage of 2% of the cement content in the concrete. It should be blended promptly in the transit mixer at high speed for about 5 minutes. Subsequently, the concrete, now possessing waterproofing characteristics due to the addition of CLASS CRYSTAL LIQUID, should be poured. The working time of the mixture is approximately 50 minutes following its incorporation.



Consumption

The quantity of additive utilized in concrete design should not exceed 2% of the cement weight, with a maximum consumption limit of 7 kg per m³ of concrete for each concrete class.



PACKAGING

30 kg tin



Shelf life

In its unopened packaging, it can be stored for 12 months in a cool, dry location, shielded from sunlight, at temperatures ranging from +10°C to +25°C.