



# IKSA Construction Chemicals & Concrete Additives

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## HIDRAKON

Retarder for concrete, dry and wet mix shotcrete grouting and injection with improved control of hydration.

## DESCRIPTION

Hidrakon is a hydration control additive. It is added to the cement based mortar, sprayed concrete at the moment of mixing. It takes the hydration of the concrete under control from 2 hours up to 72 hours.

## STANDARDS

HIDRAKON conforms to ASTM C494 type B and EN 934-5 Table:3 Viscosity Control Additives. HIDRAKON is signed with the CE marking according to the technical requirements of the European Standard EN934-5:2007. Certification No: 1783-CPR-269

## APPLICATION

- In temporary and permanent rock support applications in tunnels and in mines.
- In applications of bevel stabilization,
- In repair applications of concrete buildings,
- In injection applications,.
- In backfill grouting applications
- Injection applications

## ADVENTAGES

HIDRAKON is added to sprayed concrete at the concrete plant at the moment of mixing.

- Depending the amount added, It takes the hydration of the concrete under control from 3 hours up to 72 hours.
- It enables the delivery of the concrete produced in the concrete center without a time schedule and without problems.
- Since the concrete will not be solidified in case there is a halt in the work, there is no need for cleaning the pumps and hoses.
- It enables the usage of the sprayed concrete produced completely without losses.
- It minimizes the risk of the program to divert from the schedule and it creates flexibility in programming.
- It enables the production of economic mixtures that are suitable for the conditions of the work site instead of expensive products in packages.

## METHOD OF APPLICATION

The dosage suggested to be able to control the hydration for about 3 to 72 hours is approximately 0.2%-2.0% of the cement weight. Tryouts in advance must be conducted depending on the cement type, mixture design, ambient temperature and waiting duration and the consumption must be determined.

### For Dry Mixing Sprayed Concrete

The aggregate and the cement must be mixed beforehand. The humidity ratio of the aggregate must be in the level of 3-6% in order to minimize the dust formation. HIDRAKON Stabilizer must be added to the mixture previously in the determined amount with the assistance of a measuring cup in the concrete center or in the transmixer and mixing must be continued for about 2-3 minutes. HIDRAKON stabilize mixes perfectly with fresh mortar or mortar that has waited for up to 30 minutes. A proportioning of the nozzles should be given to the mixing water with accelerator pump.

### For Wet Mix Sprayed Concrete

Half of the previously determined amount of concrete spraying equipment that has a dosage unit like other solidification accelerators for Wet. In case of delay in addition to the control was calculated hydration occurs with the purpose make a few more hours of continuing 0.5% - 1.0% HIDRAKON should be added. The dosage of the HIDRAKON Activator ranges in between 3%-10% of the cement weight. 3 up to 72 hours in order to provide the recommended dosage of cement hydration control weight of 0.3% - 2.0% between , the particular dosage adjustments should be made , depending on cement type, mix design to ambient temperature and the desired time period. Tests must be made with the local cement and aggregates in the worksite environment in order to determine the right dosage. Proportioning the accelerator with the help of compressed air with a pump is supplied from the nozzle like a normal socket accelerators.

Hidrakon compatibility tests should be done with cement.

## PHYSICAL PROPERTIES

Type	: Organic mixture
Appearance	: Pink
Density (ca.)	: 1,10 ± 0,02 kg/L
pH	: 1,50 – 2,50
Na <sub>2</sub> O equivalent	: ≤ 10% (EN 480-12)



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## PACKING

Hidrakon is provided of 30 kg plastic drums , 230 kg drums and 1100kg plastic tanks or bulk.

## STORAGE

Hidrakon storage temperatures min/max are +1°C and +50°C. The storage is to be done in places protected against freezing. In case the product have frozen, they must be mixed with a mechanical agitator at +20°C. Performance test should be applied before starting the application. Shelf life is 1 year.

## SAFETY

Hidrakon is an irritant liquid. Work clothes, protective gloves, goggles and masks in conformity with the rules on Work and Worker Health must be used during application. It not be allowed to get into contact with skin and eyes, in case there is a contact it must be washed with plenty of water right away and a doctor must be urgently consulted if swallowed. Food and beverages must not be allowed into application areas. It must be stored in places out of the reach of children. Please see Material Safety Data Sheets for detailed information.

Regarding the design, development, production and distribution of its products, İKSA is certified and applies the quality assurance system ISO 9001. In addition, İKSA Integrated Management System involves ISO 14001 and ISO 18001.