

DELVO® CRETE

Cement Hydration Control System For Wet and Dry Shotcrete, Grouting and Cement Injection

Description of Product

DELVO® CRETE System is a two component hydration system and its first component is the **DELVO® CRETE Stabilizer**. It is added to sprayed concrete in the concrete power house at the moment of mixing. It takes the hydration of the concrete under control from 2 hours up to 72 hours. The other component **DELVO® CRETE Activator** is added in the nozzle. **DELVO® CRETE Activator** re-starts the hydration of the mixture the hydration of which had stopped. Furthermore it is also used as a solidification accelerator in sprayed concrete.

Fields of 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.

Advantages

- **DELVO® CRETE System** is added to sprayed concrete in the concrete power house at the moment of mixing.
- 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.

In addition to all these advantages when **DELVO® CRETE System** is compared with sprayed concrete;

- It reduces rebound and dust creation.
- It provides high conclusive resistance.

Technical Specifications

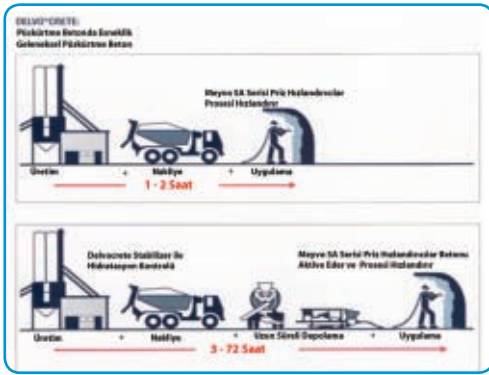
DELVO® CRETE Stabilizer	
Color	Pink
Density	1,10 ± 0,02 kg/liter
pH Value	< 2
Solubility in Water	Completely
Thermal Stability	+1°C
Chlorine Content % (EN 480-10)	< 0,1

The values above are given for +23°C and 50% relative humidity. High temperatures shorten durations, low temperatures extend them

DELVO® CRETE

DELVO® CRETE Activators		
Structure of the Material	MEYCO® SA 160	MEYCO® SA 162
Color	Aluminum Sulphate	Aluminum Hydroxide
Density	Beige	Transparent, Amber
pH Value	1.44 ± 0.03 kg/liter	1.38 ± 0.06 kg/liter
Viscosity	2,5 - 3	2.5 ± 1
Thermal Stability	500 - 1200 mPa.s	58 mPa.s ± 8 mPa.s
Chlorine Content	+5°C +40°C	+5°C +40°C
% (EN 480-10)	< 0.1	< 0.1

The values above are given for +23°C and 50% relative humidity. High temperatures shorten durations, low temperatures extend them.



Application Procedure

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% in order to minimize the dust formation. **DELVO® CRETE 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. **DELVO® CRETE Stabilizer** mixes perfectly with fresh mortar or mortar that has waited for up to 30 minutes.

For Wet Mix Sprayed Concrete

Half of the previously determined amount of

mixture water must be mixed with the cement and the aggregates. **DELVO® CRETE Stabilizer** must be added along with the other half of the mixture water as the mixing goes on. An additional **DELVO® CRETE Stabilizer** in the amount of 0.6% - 1.0% must be added to continue the hydration control for a few more hours in case unpredicted delays occur.

DELVO® CRETE Stabilizer Dosage

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.

Storage of the Mixture With Hydration Taken Under Control

Both the dry mixture and the wet mixture must be protected from the sunshine and frost in order to prevent the evaporation of water.

DELVO® CRETE Activators

There are two different types of **DELVO® CRETE Activators**. The choice must be made according to the cement type and the desired first and final resistances. Tests about the compatibility with the cement that will be used must be made before the choice is made. Please consult the **BASF - MEYCO** Group for further information.

Mixing

DELVO® CRETE Activator must be given to the mixture water through the nozzle with a pump that has a dose meter for Dry Mixing Sprayed Concrete.

DELVO® CRETE Activator is given through the nozzle together with pressurized air form a

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concrete spraying equipment that has a dosage unit like other solidification accelerators for Wet.

Mixing Sprayed Concrete

The dosage of the **DELVO® CRETE Activator** ranges in between 3% - 10% of the cement weight. Tests must be made with the local cement and aggregates in the worksite environment in order to determine the right dosage. Please consult the **BASF - MEYCO** Group for further information.

Package

DELVO® CRETE Stabilizer
220 kg barrel 1000
kg container

DELVO® CRETE Activators
300 kg barrel
1.400 kg container
Cast

Storage

The minimum storage temperature for **DELVO® CRETE Stabilizer** and **DELVO® CRETE Activators** is +5°C. In case the **DELVO® CRETE Stabilizer** or the Activators have frozen, they must be mixed with a mechanical agitator at +20°C. The maximum storage temperature for **DELVO® CRETE Stabilizer** and **DELVO® CRETE Activators** is +50°C.

At most three palettes must be put on top of one another in short term storages and delivery must be made with first - in first - out system. And in long term storages palettes must not be put on top of one another.

Shelf Life

The Shelf Life for **DELVO® CRETE Stabilizer** and **DELVO® CRETE Activators** is 6 months as of the production date under proper storage conditions. Opened packages may be used

throughout their Shelf Life by re - closing their covers.

Health and Safety Precautions

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.

Disclamier

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