

DELVO[®]CRETE Stabiliser 10

Cement hydration control system for wet or dry sprayed concrete and cement injection

Product Description

The DELVO[®]CRETE system is a unique non-chloride chemical system that controls the dynamics of cement hydration by suspending the hydration process and re-activating it hours or even days later without loss of quality of the hardened sprayed concrete.

DELVO[®]CRETE Stabiliser 10 is a liquid admixture. When dispensed into wet or dry sprayed concrete at the batching plant, it fully stabilises the hydration process by forming a protective barrier around the cement particles. Hydration control with DELVO[®]CRETE Stabiliser 10 works with all types of cement minerals (C₃S, S₃A, C₂S, C₄AF and gypsum).

In order to re-activate sprayed concrete mixes stabilised with DELVO[®]CRETE Stabiliser 10 and to accelerate the hydration process, MEYCO[®]SA160 is added at the spraying nozzle like a normal accelerator.

Fields of Application

The DELVO[®]CRETE system is suitable for all wet and dry sprayed concrete applications in:

- Tunnelling and mining
 - Temporary support
 - Permanent support
 - Final linings
- Temporary and final slope stabilisation.
- Repairs to concrete structures.

As well as for:

- Tunnel Grouting (Backfilling)
- Injection systems using cement

Features and Benefits

With the DELVO[®]CRETE system wet or dry concrete mixes remain fresh for up to 3 days. This provides considerable benefits in batching and utilisation of the sprayed concrete.

- Fully flexible delivery options for sprayed concrete mixes
- No cleaning of pumps or pipes during work interruptions
- Complete use of wet and dry mixes
- Reduced waste disposal
- Simpler and lower risk construction programme thanks to better scheduling and easier planning
- Time and cost saving in allocation of material, equipment and manpower
- Expensive bagged material can be replaced by economical jobsite mixes
- Considerable savings of overall construction costs

In addition to these benefits related to its function as a hydration control system, compared to normal sprayed concrete (wet or dry) DELVO[®]CRETE also provides:

- Considerable reduction of rebound and dust
- Much higher early strengths

Packaging

DELVO[®]CRETE Stabiliser 10 is packaged in 25 litre and 210 litre plastic drums.

DELVO[®]CRETE Stabiliser 10

*Technical data

Properties listed are only for guidance and are not a guarantee of performance

Form:	liquid
Colour:	red
Density at 25°C:	1.085
pH value:	<2.0
Solubility in water:	total
Thermal stability:	+1°C
Chloride content:	<0.1%
Physiological effect:	caustic

Application procedure

Dry-mix Sprayed concrete

Premix aggregates with cement. The moisture content should be between 3-6%, water must be added to reach the required percentage.

Slowly add - manually or with a dosing device - the necessary quantity of DELVO[®]CRETE Stabiliser 10 under constant mixing and continue to mix for 2-3 minutes. If evenly distributed over dry-mix material (e.g. by spraying), mixing time can be reduced.

The addition of DELVO[®]CRETE Stabiliser 10 to the freshly mixed concrete is ideal. However it is possible to add DELVO[®]CRETE Stabiliser 10 up until 30 minutes after mixing of the dry mix constituents.

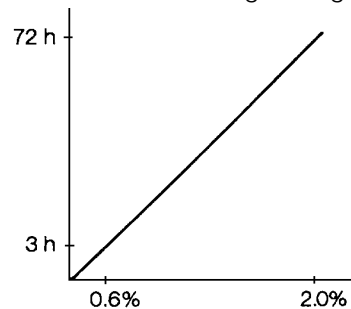
Wet-mix Sprayed concrete

Pre-mix aggregates with cement and one half of the mixing water, under continuous mixing add together DELVO[®]CRETE Stabiliser 10 and your high performance superplasticizers, with the second half of the mixing water, or after all the water has been added. Normal mixing time is sufficient. To avoid slump loss, the recommended minimum water content is 200 l/m³.

In the event of unexpected delays, an addition dosage of 0.6-1.0% of DELVO[®]CRETE Stabiliser 10 is possible to prolong open time further.

Consumption*

Recommended dosages range



Storage

Minimum storage temperature for DELVO[®]CRETE Stabiliser 10 is +1°C. If DELVO[®]CRETE Stabiliser 10 has frozen, thaw at +1°C (Stabilizer) and completely reconstitute with a mild mechanical agitation. Do not use pressurised air for agitation.

It is recommended that your local BASF representative is consulted prior to the use of any products that were frozen.

The maximum storage temperature for DELVO[®]CRETE Stabiliser 10 is +60°C. Performance tests should always be carried out prior to use.

If stored in tightly closed original container and under the above mentioned conditions, DELVO[®]CRETE Stabiliser 10 has a shelf life of at least 6 months.

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Typical mix design for a open time of 6 - 10 hours.

	wet-mix spraying	dry-mix spraying
Ordinary Portland Cement	400kg/m ³	350kg/m ³
Microsilica	30kg/m ³	40kg/m ³
Aggregates	1710kg	1780kg
Aggregate size	0--8mm	0--12mm
DELVO [®] CRETE Stabiliser 10	2.6kg	2.8kg
Glenium Superplasticiser	4.3 - 6.5kg	
MEYCO SA160	17 - 25kg	
MEYCO SA430		17 - 25kg
water / binder ratio	0.45	n/a

Safety precautions

DELVO[®]CRETE Stabiliser 10 is an irritant fluid. Contact with skin and eyes must be avoided. It is essential that safety glasses and rubber gloves are worn during handling. In case of contact with eyes or skin, flush immediately with plenty of water and seek medical advice.

For further information, see the Material Safety Data Sheet.

Note

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local BASF representative.

BASF reserves the right to have the true cause of any difficulty determined by accepted test methods.

Quality and care

All products originating from BASF's Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and OHSAS 18001.

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