



Sprayset HBL 42

Alkali-free, liquid shotcrete accelerator for high early strength development

Uses

Sprayset HBL 42 is an alkali-free admixture used in shotcrete and gunite where rapid setting is required. Setting time and hardening time can be regulated with various dosages of Sprayset HBL 42.

Sprayset HBL 42 is designed in particular for temporary and permanent shotcrete as in:

- Tunnels
- Mining
- Rock consolidation

Preparation

Shotcrete should always be applied against a damp substrate cleaned of loose particles. The dosage pump has to be thoroughly cleaned with water prior to use with different accelerators. A mixture of previously consumed accelerator of different brand will cause blockage in the pump. Assigned personnel have to be instructed accordingly.

Advantages

- Alkali-free, improved working environment
- Low dust emission due to liquid form
- Rapid set allows thick sections to be built-up
- Minimum rebound
- Excellent for overhead application
- Can be used for 'wet and dry' processes
- Non-flammable
- Wet and dry surface applicable
- Low effect on long term strength and durability
- Accurate dosage possible

Description

Sprayset HBL 42 is a low chloride, alkali-free accelerating admixture. It is supplied as a light yellow cloudy solution, which is introduced through the spraying nozzle or 4-5m behind the nozzle (injector).

Technical support

Fosroc provides a technical service for on-site assistance and advice on admixture selection, site trials and dispensing equipment. Technical data and guidance can be provided for admixtures, equipment, handling, mix designs and other products for fresh and hardened concrete.

Typical dosage

The dosage for Sprayset HBL 42 to meet a specific requirement must always be determined by trials using the materials and conditions that will be experienced on site. This allows optimisation of admixture dosage and mix design whilst providing a complete assessment of the concrete mix. A starting point for such trials is to use a dosage within the typical range of 5–10% by weight of cement. Cement and W/C ratio can influence the performance of Sprayset HBL 42. At lower W/C ratios, i.e. <0.45, the lower is the dosage of Sprayset HBL 42 and the higher is the final 28 day strength. Preferred W/C ratios are between 0.40 and 0.50.

Use at other dosages

Dosages outside the typical range quoted above may be used if necessary and suitable to meet particular specifications, provided that adequate supervision is available. Compliance with requirements must be assessed through trial mixes. Contact Fosroc for advice. Properties

Form:	Aqueous solution
Appearance:	Yellowish cloudy liquid
Specific gravity:	1.32 @ 20°C
pH value:	2 to 3
Solids content:	43 to 47%
Chloride content:	< 0.1%

Application instructions

Compatibility

Sprayset HBL 42 is compatible with other Fosroc admixtures for concrete. All admixtures should be added to the concrete separately and must not be mixed together prior to addition. The performance of concrete containing more than one admixture must be assessed by trial mixes to ensure that the desired combination of effects is obtained.

Typical stiffening times (depending on cement, W/C ratio, etc)

Dosage	Initial stiffening	Final stiffening
6%	< 3min	< 10min
8%	< 2min	< 8min
10%	Instant	< 5min

Measured at 20°C, tested in accordance with Austrian Concrete Norm, EFNARC etc.

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Dispensing

Sprayset HBL 42 is introduced to the nozzle or injector 4-5m behind the nozzle with any liquid dosage pump. Peristaltic dosage pumps are preferred over piston or membrane pumps for their accuracy and reliability. Sprayset HBL 42 can be added with most common shotcrete equipment and dosage pumps available.

Effects of overdosing

Over dosage of Sprayset HBL 42 should be avoided and is not recommended. In severe cases adverse effects can be, for example, hardening of concrete in the nozzle, poor long-term strength development, high rebound etc.

Packaging

Sprayset HBL 42 is supplied in 210 litre drums or in 1000 litre bulk containers.

Storage

Sprayset HBL 42 has a shelf life of 6 months provided that the temperature is kept within the range of 5°C to 40°C. Before using Sprayset HBL 42 after storage it is recommended to roll the drum on the ground or to mix the bulk tank up before adding to the system. Adding an air-hose for agitation is not recommended!

Precautions

Health and safety

Sprayset HBL 42 does not fall into the hazard classifications of current regulations. However it should not be swallowed or allowed to come into contact with skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately - do not induce vomiting.

For further information consult the Material Safety Data Sheet available for this product.

Cleaning and disposal

Spillage of Sprayset HBL 42 should be absorbed onto sand, earth or vermiculite and transferred to suitable containers for disposal.

Remnants should be hosed down with large quantities of water.

The disposal of waste material should be carried out in accordance with local legislation under guidance of the local waste regulatory authority.



Important note:

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Services, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification of information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation of information given by it.

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