

Fosroc Sprayset HBL 42



constructive solutions

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 by the dosages of Sprayset HBL 42.

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

- Tunnels
- Mining
- Rock consolidation
- Any wet / dry shotcrete applications

Preparation

Shotcrete should always be applied against a damp substrate cleaned of loose particles. The dosage pump has to be cleaned with plenty of water. 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, thus improving 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 alkali-free accelerating admixture. It is supplied as a Pale yellow liquid, which is introduced through the spraying nozzle or 4-7m 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 optimum dosage for Sprayset HBL 42 to meet specific requirements must always be determined by trials using the materials and conditions that will be experienced on site. This allows the optimisation of admixture dosage and mix design and provides 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. Desirable W/C ratio is between 0.40 and 0.45.

Use at other dosages

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

Properties

Form	: Liquid
Colour	: Pale Yellow
Sp Gr	: 1.24 to 1.30
pH	: 3 to 4
Viscosity	: 13 sec (Ford Cup)
Solubility	: Totally soluble in water
Alkali content (Na₂O equivalent)	: Max 1.0% in mass
Chloride Content	: <0.1%

Application instructions

Compatibility

Sprayset HBL 42 is compatible with 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 the desired combination of effects are obtained.

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

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

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Dispensing

Sprayset HBL 42 is introduced to the nozzle or turbo injector with any liquid dosage pumps. Peristaltic dosage pumps are preferred over piston or membrane pumps for their accuracy and reliability. Sprayset HBL 42 can be added with all common shotcrete equipment and dosage pumps available.

Effects of overdosing

Over dosage of Sprayset HBL 42 should be avoided and is not recommended. Most severe cases can occur like hardening of concrete in the nozzle, negative effects on long term strength development, rebound etc.

Packaging

Supply

Sprey HBL 42	: 200 litre drum or bulk supply
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Storage

Sprayset HBL 42 has a shelf life of 6 months provided that the temperature is kept within the range of 2°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.

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.

Cleaning and disposal

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

Remnants should be hosed down with large quantities of water.

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

Fire

Sprayset HBL 42 is non-flammable.

* Denotes the trademark of Fosroc International Limited

† See separate data sheet



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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 Service. **All Fosroc datasheets are updated on a regular basis. It is the user's responsibility to obtain the latest version.**

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