

Proset AFR

Alkali free sprayed concrete accelerator, with minimum rebound characteristics



Description

Proset AFR is a set accelerating, alkaline and chloride free admixture specially designed to achieve rapid setting with minimum rebound for applications of sprayed concrete, shotcrete and gunite processes.

Advantages

- ▲ Rapid set allows thick sections to be built-up.
- ▲ Alkaline free.
- ▲ Minimum rebound.
- ▲ Single pass spraying for thick layers.
- ▲ Excellent for overhead applications.
- ▲ Can be used for 'wet and dry' processes.

Compatibility

Proset AFR can be used with all types of Portland cement and cement replacement materials. Proset AFR is compatible with other DCP admixtures when used in the same concrete mix.

If more than one type of admixture is to be used in the concrete mix, they must be dispensed to the concrete separately.

Standards

Proset AFR complies with ASTM C1141, Type I and II, Grade 9.

Method of Use

Stiffening occurs approximately after 10 seconds of mixing concrete with Proset AFR. As with all other processes and products, the rapid initial acceleration of the cement hydration process, will affect the ultimate concrete strength.

Dosage

The optimum dosage for Proset AFR to meet specific requirements should be determined by trials using the materials and conditions that will be experienced in use.

This can best determine the optimum dosage to be used and will ensure most cost effective site application.

Technical Properties @ 25°C:

Colour:	Pale straw liquid
Specific gravity:	1.40 ± 0.1
pH:	2 - 5
Viscosity: ASTM D1084	400 ± 100 mPa.s (cp)
Chloride content:	< 0.1%
Setting time* @ 8% dosage range:	
EN 196-3	
Initial setting time	≤ 6 min
Final setting time	≤ 9 min

**The above data was developed under controlled laboratory conditions. Properties in the field may vary. Expect reasonable variations from these results, depending on cement type, jobsite or test conditions.*

The typical dosage range for Proset AFR is 7.0 - 10.0 kg per 100 kg of cementitious and cement replacement material, including PFA, GGBFS or microsilica, which can be used as a starting point for the trials.

Use at Other Dosages

Dosages outside the typical range quoted above may be used if necessary to meet particular mix requirements. Compliance with requirements must be assessed through trial mixes. For further information and support, contact DCP Technical Staff.

Effects of Over Dosage

An overdose of the intended amount of Proset AFR will result in reduced setting of the mix and will result in some loss of strength.

Dispensing and Mixing

Proset AFR is normally introduced directly after the air ring in the spray nozzle. In order to obtain a consistent supply of admixture at the nozzle the delivery system should have a 600 KPa pressure pot, and a 20 mm inside diameter pressure delivery hose controlled by a pressure restrictor and tap.

Proset AFR

With 'wet process' the use of a water reducing admixture to reduce the water content while increasing workability of the mix is recommended.

Cleaning

Proset AFR can be washed with fresh cold water.

Packaging

Proset AFR is available in 275 kg plastic drums supply.

Storage

Proset AFR has a shelf life of 6 months from date of manufacture if stored in a dry area out of direct sunlight and exposure to frost in original unopened container at temperatures between 5°C and 35°C.

Material needs good mixing before usage, and for bulk storage, site agitation or recycling pumps is a must.

If these conditions are exceeded, DCP Technical Department should be contacted for advice.

Cautions

Health and Safety

Proset AFR is not classified as hazardous material. Proset AFR should not come into contact with skin and eyes. Goggles and gloves should be used.

In case of contact with eyes wash immediately with plenty of water and seek medical advice promptly.

For further information refer to the Material Safety Data Sheet.

Fire

Proset AFR is nonflammable.

More from Don Construction Products

A wide range of construction chemical products are manufactured by DCP which include:

- ▲ Concrete admixtures.
- ▲ Surface treatments
- ▲ Grouts and anchors.
- ▲ Concrete repair.
- ▲ Flooring systems.
- ▲ Protective coatings.
- ▲ Sealants.
- ▲ Waterproofing.
- ▲ Adhesives.
- ▲ Tile adhesives and grouts.
- ▲ Building products.
- ▲ Structural strengthening.

Note:

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.

www.dcp-int.com

