SmartCare HYPERSHOT AF 100

ALKALI FREE ACCELERATOR

Hypershot AF 100 alkali free accelerator is used for wet mix sprayed concrete processes in the tunneling and mining industry. The product is applied where initial ground support is needed or where a permanent lining has been designed (such as for single shell tunnel lining).

Hypershot AF 100 is a liquid high performance set accelerator for sprayed concrete applications. Hypershot AF 100 has been developed primarily to be used in sprayed concrete mixes containing pure OPC mix. However, it can also be used with OPC & Fly Ash mix.

By adjusting the dosage, the setting times and rebound can be reduced providing efficient working environment.

ADVANTAGES

- High build enables faster coverage with minimized slump.
- Compatible with most of the superplasticizers
- Can be applied up to 300mm in one application to vertical surfaces and up to 200mm overhead dependent on weight / volume of aggregate
- Non caustic leads to safer handling / operating conditions
- Low rebound - controlled set allows new material to be embedded in applied mortar
- Chloride free liquid
- 28 days strength not adversely affected
- Minimal dust production during application.

STANDARD COMPLIANCE

Hypershot AF 100 meets the requirements of EN 934-5 "Admixtures for sprayed concrete", ASTM C1141/C1141M "Standards Specifications for Admixtures for Shotcrete", and EFNARC "European Specification for Sprayed Concrete".

PROPERTIES	
Appearance	A Turbid Suspension
Specific gravity	1.41 ± 0.05 @ 270C
pH	3.0 ± 0.5
Chloride content	Nil to BS 5075
Alkali content % by mass	≤ 1.0 EN 480-12

PRODUCT FEATURES

AVAILABLE PACKS

250 KG HDPE BARREL

Shelf life: Hypershot AF 100 has a minimum shelf life of 12 months

Hypershot AF 100 should be stored at room temperature (min 5°C and max 38°C), kept dry and out of direct sunlight. It is recommended that the product shall be mechanically agitated after long storage and before use.

Typical dosage

The optimum dosage for Hypershot AF 100 to meet specific requirements should always be determined by trials using the materials and conditions that will be experienced in use. This allows the optimization of admixture dosage and mix design and provides a complete assessment of the concrete mix.

However, for optimum performance, the w/c ratio should be designed below 0.45. This ensures rapid setting and lower dosages. Typically, 5 to 6 % (w/w of cementitious) dosage is suitable for spraying layers of 100 mm in a single pass.

A pumpable mix design is required to produce a high workability mix without risk of bleeding and segregation of aggregates. The correct quantity of Hypershot AF 100 is directly added to the concrete at the time of shotcreting

Note: Dosing of Hypershot AF 100 may increase in case of seepage or running water areas.

Effects of overdosing

An overdose of double the intended amount of Hypershot AF 100 will result in increased setting of the mix before it reaches the surface to be sprayed. It will also result in a loss of strength

PRECAUTIONS

Health and Safety

Hypershot AF 100 is non-caustic. It should not be swallowed or allowed to come into contact with skin or eyes. Suitable protective gloves and goggles should be worn.Splashes on the 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 Datasheet available for this product.

Fire

Hypershot AF 100 is non-flammable.

Cleaning and disposal

Spillages of Hypershot AF 100 should be hosed down with water.

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