

Master X-Seed 1500

Hardening accelerating admixture for concrete and shotcrete – essential component of the Crystal Speed Hardening concept

Material Description

Master X-Seed 1500 is an engineered suspension of crystal seeds containing nanoparticles, designed to boost the hydration process of early age cement (6-12 hours). Based on unique and innovative seeding technology, the growth of the essential Calcium Silicate Hydrate crystals is strongly accelerated.

Master X-Seed 1500 promotes concrete hardening at low, ambient and even heat curing temperatures. Unlike traditional acceleration methods and thanks to the unique mode of action - the virtually barrier-free crystal growth of the seeds in between the cement grains - early strength development is accelerated while the final microstructure benefits from equivalent or improved properties.

Complies with ASI478.1-2000 Type SAc Special Purpose Accelerating.

CRYSTAL SPEED HARDENING

Master X-Seed 1500 is the essential component of Master Builders Solutions Crystal Speed Hardening concept.

Crystal Speed Hardening expresses the Value Proposition offered by the unique crystal seeding technology of Master X-Seed:

- Efficient processes
- Energy reduction
- Material optimization
- High quality specifications

The concept addresses key industry requirements and has the power to exceed all current solutions. In particular, the concept is designed to make a significant contribution to meeting sustainable construction targets.

Areas of Application

Master X-Seed 1500 is optimized for shotcrete & all kinds of concretes, especially for structural precast elements where high early strength development is a key success factor for the producer.

Master X-Seed 1500 is a relevant alternative to heat curing methods and the strong promotion of hydration in particular supports the use of binders with lower clinker content.

Characteristics and Benefits

- Early strength acceleration at low, ambient and heat curing temperatures
- Improved rheology
- Earlier re-entry times with shotcrete
- Flexible adjustment of production capacities
- Increased production cycles (double, triple rotation)
- Better use of formwork by earlier de-moulding
- Reduction/elimination of heat curing
- Reduced investment and running cost of curing
- Allows use of minimum required cement quantities
- Allows binder optimization by using lower grade, less clinker-containing cements or by increasing use of supplementary cementitious
- Lower risk of delayed ettringite formation
- Reduced water absorption
- Improved concrete durability aspects
- Improved plant and product eco-efficiency by reducing CO2 emissions

Properties

Appearance	White liquid
Specific gravity @ 20°C	1.14 ± 0.02 g/cm ³

Quantity to Use

The recommended dosage rate of **Master X-Seed 1500** is 1.0 to 2.5 litres per 100 kg of cement. It is strongly recommended that trials be performed to identify the correct dosage rate for optimal concrete performance.

The dosage rates given above are for typical usages, they are not meant as absolute limits, as other dosages may be utilised in special cases according to specific job conditions. If required consult your local Master Builders Solutions Technical Sales Representative.

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Application

Master X-Seed 1500 is a ready-to-use liquid admixture to be added to the concrete during the mixing process. Enough mixing time to secure homogeneous dispersion should be provided.

Compatibility

Master X-Seed 1500 can be used with all types of cements. For use with other special cements, contact your local Master Builders Solutions Technical Sales Representative. Master X-Seed 1500 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing Master X-Seed 1500 they must be dispensed separately. Master X-Seed 1500 is compatible with most Master Builders Solutions products such as:

- MasterGlenium superplasticizers for high dispersion
- MasterPolyheed range of products
- MasterMatrix viscosity modifying agents for robust self-compacting and super workable concretes
- MasterFinish form release agents for easy formwork removal and aesthetic surface finish

Packaging

Master X-Seed 1500 is available in bulk, 1000 litre IBCs and 20 litre cubes.

Storage & Shelf Life

Keep only in the original container in a cool, well-ventilated place. Protect from direct sunlight. Store protected against freezing.

Master X-Seed 1500 has a shelf life of 9 months.

Precautions

For the full health and safety hazard information and how to safely handle and use this product, make sure that you obtain a copy of the Safety Data Sheet (SDS) from our office or website.

Disclaimer

Master X-Seed-1500-ANZ-V8-0523

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