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Master X-Seed® STE

Strength-Enhancing Admixture

DESCRIPTION

Master X-Seed STE is a patent-pending, strength enhancing admixture that improves both early and late-age strength development in concrete, while supporting sustainable construction. **Master X-Seed STE** admixture is based on a unique technology that facilitates improved cement hydration, thus enhancing strength development. **Master X-Seed STE** admixture will meet ASTM C 494/C 494M requirements for Type S, Specific Performance, admixtures.

The strength-enhancing property of **Master X-Seed STE** admixture permits a reduction in the total cementitious materials content of a given concrete mixture while maintaining compressive strength development equivalent to that of reference concrete, with associated benefits in CO₂ emissions reduction.

Particle Seeding Technology

Master X-Seed STE admixture is based on a BASF proprietary technology that ensures a stable suspension of synthetically-produced crystalline CSH nanoparticles. These particles act as active seeds in a concrete mixture to facilitate the growth of active crystals between cement particles. The unique technology of **Master X-Seed** admixture provides an unmatched improvement of the hydration process in a concrete matrix which increase early-and late-age strength development compared to a reference untreated concrete mixture.

FIELDS OF APPLICATION

Recommended for use in:

- Green Sense® Concrete
- Ready-mixed concrete
- Prestressed concrete
- Precast concrete
- Self-consolidating concrete (SCC).

FEATURES AND BENEFITS

- Improves cement hydration
- Increases strength development - both early- (1-day) and late-age (28-day)
- Enhances workability of high-performance concrete mixtures
- Provides a strength safety factor and/or expanded performance space

- Reduces in-place concrete costs when utilized in optimized concrete mixtures.
- Permits higher replacement levels of supplementary cementitious materials (SCMs)
- Permits earlier stripping and reuse of forms.
- Helps reduce CO₂ emissions associated with concrete.

PERFORMANCE

Rate of Hardening: **Master X-Seed STE** admixture is formulated to provide similar-setting characteristics compared to a reference untreated concrete mixture. The time of setting of concrete is primarily influenced by ambient and concrete temperatures, as well as the chemical and physical compositions of the basic ingredients of the concrete. Therefore, trial mixtures should be made with job materials to determine the dosage required for a given application.

DOSAGE

Master X-Seed STE admixture has a recommended dosage range of 250 to 1000ml/100kg) of cementitious materials. Because of variations in concrete materials, jobsite conditions and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local sales representative.

PACKAGING

Master X-Seed STE admixture is supplied in 205 L drums and bulk delivery.

STORAGE

Master X-Seed STE admixture must be stored at temperatures above 5°C. **If Master X-Seed STE** admixture freezes, thaw and reconstitute by mechanical agitation. Do not use pressurized air for agitation.

SHELF LIFE

Master X-Seed STE admixture has a minimum shelf life of 12 months. Depending on storage conditions, the shelf life may be greater than stated. If the product is not utilized within 3 months, agitation may be required.



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NOTES

Corrosivity – Non-Chloride, Non-Corrosive: Master X-Seed STE admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressing steel or of galvanized steel floor and roof systems. Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of Master X-Seed STE admixture.

Compatibility: Master X-Seed STE admixture is compatible with most admixtures used in the production of quality concrete, including normal, mid-range and high-range water-reducing admixtures, air-entrainers, accelerators, retarders, extended set control admixtures, corrosion inhibitors, and shrinkage reducers.

Master X-Seed STE admixture has only been tested with other admixtures manufactured by BASF. Thus, use of Master X-Seed STE admixture with non-BASF admixtures may produce unpredictable results. BASF denies any warranty expressed or implied with respect to any application using a non-BASF admixture in combination with Master X-Seed STE admixture.

PRECAUTIONS

HEALTH: Master X-Seed STE does not contain any hazardous substances requiring labelling. It is safe for use with standard precautions followed in the construction industry, such as use of hand gloves, safety goggles, etc. For detailed Health, Safety and Environmental Recommendations, please consult and follow all instructions on the product Material Safety Data Sheet.

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Master X-Seed STE v1. 1118

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this BASF Construction Chemicals publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by BASF either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not BASF Construction Chemicals, are responsible for carrying out procedures appropriate to a specific application.

BASF Construction Chemicals Asia Pacific

33 Tuas Avenue 11
Singapore 639090

Tel: +65 68616766

Website: www.master-builders-solutions.asiapacific.basf.com