

# Master X-Seed STE<sup>®</sup> 056

## High range water-reducing superplasticising admixture

### MATERIAL DESCRIPTION

**Master X-Seed STE 056** 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 056** admixture is based on a unique technology that facilitates improved cement hydration, thus enhancing strength development.

**Master X-Seed STE 056** admixture will meet ASTM C 494/C 494M requirements for Type S, Specific Performance, admixtures. The strength-enhancing property of **Master X-Seed STE 056** 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 CO<sub>2</sub> emissions reduction.

#### Particle Seeding Technology

**Master X-Seed STE 056** 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.ith associated benefits in CO<sub>2</sub> emissions reduction.

### FIELDS OF APPLICATION

Recommended for use in:

- Green Sense<sup>®</sup> 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 CO<sub>2</sub> emissions associated with concrete.

### PERFORMANCE

Rate of Hardening: **Master X-Seed STE 056** 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 056** admixture has a recommended dosage range of 250 to 1000 ml/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 056** admixture is supplied in 205L drums, IBC 1000L and bulk delivery.

### STORAGE

**Master X-Seed STE 056** admixture must be stored at temperatures above 5°C. If **Master X-Seed STE 056** admixture freezes, thaw and reconstitute by mechanical agitation. Do not use pressurized air for agitation.

### SHELF LIFE

**Master X-Seed STE 056** 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.

### NOTES

Corrosivity – Non-Chloride, Non-Corrosive: **Master X-Seed STE 056** 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 056** admixture.

Compatibility: **Master X-Seed STE 056** 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,

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accelerators, retarders, extended set control admixtures, corrosion inhibitors, and shrinkage reducers.

**Master X-Seed STE 056** admixture has only been tested with other admixtures manufactured by Master Builders Solutions. Thus, use of **Master X-Seed STE 056** admixture with non-Master Builders Solutions admixtures may produce unpredictable results. Master Builders Solutions denies any warranty expressed or implied with respect to any application using a non-Master Builders Solutions admixture in combination with **Master X-Seed STE 056** admixture.

### PRECAUTIONS

**HEALTH:** **Master X-Seed STE 056** 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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