

# Master X-Seed 100

## Unique hardening accelerator for cementitious materials – essential component of the Crystal Speed Hardening™ concept

### DESCRIPTION AND WHERE TO USE

Master X-Seed 100 is an engineered suspension of crystal seeds containing nanoparticles, designed to boost the hydration process of early age cement (6 -12 hrs).

Based on unique and innovative seeding technology, the growth of the essential Calcium Silicate Hydrate crystals is strongly accelerated.

Master X-Seed 100 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.

Master X-Seed 100 is the essential component of BASF's Crystal Speed Hardening concept. Crystal Speed Hardening expresses the Value Proposition offered by the unique crystal seeding technology of Master X-Seed 100:

- Efficient Processes
- Energy Reduction
- Material Optimization
- High Quality Specs

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.

Master X-Seed 100 is optimized for 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 100 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.

### BENEFITS

Master X-Seed 100 offers the following benefits:

- Early strength acceleration at low, ambient and heat curing temperatures Flexible adjustment of production capacities.
- Increased production cycles (double, triple rotation).
- Better use of formwork by earlier demoulding.
- 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 materials (Limestone, Fly Ash, Slag).
- Lower risk of delayed ettringite formation.
- Reduced water absorption.
- Improved concrete durability aspects Improved plant and product ECO-efficiency by reducing CO<sub>2</sub> emissions.

### COMPATIBILITY

Master X-Seed 100 is compatible with all BASF core technologies such as ZERO ENERGY SYSTEM and SMART DYNAMIC CONCRETE, in particular with:

- **MasterGlenium** type superplasticizers for high fluidification power
- **MasterMatrix** viscosity modifying agents for robust self-compacting concrete
- **MasterAir** air entraining agents for improved freeze-thaw resistance
- **MasterFinish** form release agents for easy formwork removal and aesthetic surface finish

### DIRECTIONS FOR USE

Master X-Seed 100 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.

# Master X-Seed 100

Technical Information	
Form	White suspension
Relative density (g/cc at 20°C)	1.105 - 1.165

## DOSAGE.

The recommended dosage rate is 2 to 4 litres per 100 kg of cement.

Other dosages may be used in special cases according to specific conditions. In this case please consult our Technical Services Department.

## PACKAGING AND STORAGE

Master X-Seed 100 is available in 10 liters cans, 1.000 liters containers or in bulk.

Master X-Seed 100 must be stored at temperatures above 5°C. Protect from freezing! If frozen, warm slowly up and

carefully remix before use. If stored in unopened containers according to manufacturer's instructions, the shelf life is 6 months.

## HANDLING AND TRANSPORTATION

No special requirements must be observed while the product is used. Protective gloves and glasses are recommended. Do not eat, drink or smoke during application. Master X-Seed 100 is non-flammable, non-toxic or irritant and is not subject to special transport requirements.

From 16/12/1992 BASF Construction Chemicals Italia Spa operates under the Quality System in compliance with European Standard UNI-EN ISO 9001. The environmental management system of BASF Construction Chemicals Italia Spa is certified accordingly to UNI EN ISO 14001 and the System of Safety Management is certified accordingly to OHSAS 18001.

### BASF Construction Chemicals Italia Spa

Via Vicinale delle Corti, 21 – 31100 Treviso – Italy

T +39 0422 429200 F +39 0422 421802

[www.master-builders-solutions.com/it-it](http://www.master-builders-solutions.com/it-it)

e-mail: [infomac@mbcc-group.com](mailto:infomac@mbcc-group.com)

For further information, please consult your local BASF Construction Chemicals Italia Spa representative.

The technical advice on how to use our products, either written or verbally given, are based on the present state of our best scientific and practical knowledge, and no guarantee and/or implicit or explicit responsibility are assumed on final results of works executed by the use of our products.

The owner, his representative, or the contractor is responsible for checking the suitability of our products as to the intended use and aims.

Supersedes all prior issues on this product.

March 2020

