

MasterCO₂re[®] 3017

High Range Water Reducing Admixture for Low Clinker Concrete Production, with Superior Rheology, Reduced Mixing Time
EN 934-2 T 3.1 / 3.2

Material Description

MasterCO₂re[®] 3017 is an innovative superplasticizer, based on the Intelligent Cluster System (ICS) Technology, developed in the R&D Laboratories of Master Builders Solutions. MasterCO₂re[®] 3017 combines the performances of fluidification, high early and ultimate strength with superior rheology, in one single solution. It improves considerably the pumpability, placing and finishing of concrete, simplifying the operations for all construction activities.

This advanced technology provides the perfect choice for stable and robust concrete performance in challenging lowclinker applications, paving the way for a more responsible future in the construction industry.

The polymer structure of MasterCO₂re[®] 3017 is specially designed to improve the rheology of ready-mix concrete, making it more workable and with low viscosity even at low water/cement ratios. Robustness, surface finish, and reduced mixing time are a distinctive feature of the concrete produced with MasterCO₂re[®] 3017.

Areas of Application

MasterCO₂re[®] 3017 is suitable for making concrete with low clinker contents with highly-fluid concrete without segregation but low water/cement ratios and, consequently, high early and final strengths.

Characteristics and Benefits

MasterCO₂re[®] 3017 offers the following benefits for the concrete industry:

- Enhanced robustness combined with low stickiness.
- Environmentally friendly, CO₂ reduced mix-design optimization
- Elimination or reduction of the energy required for placing, compaction and curing.

Dosage

Field trials should be conducted to determine the optimum addition rates of MasterCO₂re[®] 3017. As a starting point, the following dosage range is recommended.

By Weight - 0.4 to 1.8 litres per 100 kg of cement (binder).

The dosage rates given above are for typical usages, they are not meant as absolute limits, as other dosages may be utilized in special cases according to specific job conditions. If required consult Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd.Şti Technical Services Department for advice. Trial mixes should be carried out to ensure optimum dosage and effect.

Technical Properties

Appearance	Brown Liquid
Specific gravity (20°C)	1.07 ± 0.02 g/cm ³
pH Value	9.5 ± 1
Alkali Content (%)	≤ 1.00 (by mass)
Chloride Content (%)	≤ 0.10 (by mass)
Corrosion Behaviour	Contains only components according to BS EN 934-1:2008, Annex A.1

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Mixing

MasterCO₂re[®] 3017 is a ready-to-use liquid admixture, which should be added to the concrete during the mixing process together with the water. This is particularly important to obtain maximum efficacy. For best performance, it is advisable to dispense after 50 to 70% of the mixing water has been added, and then continue mixing until the mix is completely homogeneous.

Dispensing

MasterCO₂re[®] 3017 should be dispensed through a proprietary dispenser. Details are available on request from our Technical Services Department.

Compatibility

MasterCO₂re[®] 3017 can be used with all types of EN 197 Cements. For use with other special cements, contact our Technical Services Department. MasterCO₂re[®] 3017 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing MasterCO₂re[®] 3017, they must be dispensed separately.

When such complimentary admixtures are required it is important that laboratory trials are performed, prior to any supply, to determine the respective dosages of any complimentary admixture, and the suitability, in the fresh and hardened state, of the resultant concrete. In these circumstances we recommend that you consult our MBT Teknik Yapı Kimyasalları San. ve Tic. A.Ş. Technical Services Department for further advice.

Packaging

MasterCO₂re[®] 3017 is supplied in bulk and 1000-litre IBC's

Shelf Life

12 months if stored according to manufacturer's instructions in unopened container.

Storage

Store in original sealed containers and at temperatures between 5°C and 30°C. Store under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.

Health and Safety

For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapor until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Spillage

Chemical products can cause damage; clean spillage immediately.

Disclaimer

The technical information given in this publication is based on the present state of our best scientific and practical knowledge. MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret

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A.Ş. is only responsible for the quality of the product MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş. is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones.

Contact

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