

MasterCast® 3217

High Range Water Reducing Admixture for Concrete
EN 934-2: T3.1 & T3.2

Material Description

MasterCast® 3217 is an innovative versatile admixture based on polycarboxylic ether (PCE) polymers. MasterCast® 3217 is specially engineered for the ready-mix concrete market to replace traditional water reducers and superplasticizers. Its configuration allows it to perform as a multifunctional admixture; it is possible to obtain a high-quality concrete mix with good strength development and extended workability without delayed setting characteristics.

“The Total Performance Control” concept ensures that ready-mix producers, contractors and engineers get a concrete that is of the same high quality as originally specified; starting from production at the batching plant, to the delivery and application into place, and followed by its hardening process. Utilizing Rheodynamic™ concrete technology it provides a concrete mix with exceptional placing characteristics.

Areas of Application

MasterCast® 3217 is used for the production of all grades from high quality to low specification ready-mix concrete.

MasterCast® 3217 may be used in combination with MasterMatrix® admixtures for producing Rheodynamic concrete, capable of self-compaction, even in the presence of dense reinforcement.

Characteristics and Benefits

MasterCast® 3217 offers the following benefits for:

The Ready-mix Producer:

- Capability of delivering high quality concrete at any time to the job site in place.
- Production of a concrete with low water cement ratio that meets **EN 206-1** without loss of workability.
- Single product for most applications from everyday water reducing to Self-compacting Concrete.

The Contractor / Applicator:

- Easier placing.
- Improved concrete surfaces.
- Guarantee to place the same concrete as specified and ordered from ready-mix plant.
- More versatile and forgiving concrete mix.

The Engineer:

- Insurance that concrete meets original specification.
- High quality concrete with better durability.

Dosage

The normally recommended dosage rate of MasterCast® 3217 is approximately:

By Weight - 0.2 to 1.5 kg per 100 kg of cement (binder) content.

Technical Properties

Appearance	Opaque Yellowish
Specific Gravity (20°C)	1.030 - 1.080 kg/lit
pH Value	5 - 8
Alkali Content (%):	≤ 3.00 (by mass)
Chloride Content (%)	≤ 0.10 (by mass)
Corrosion Behaviour	Contains only components according to BS EN 934-1:2008, Annex A.1
Dangerous Substances	Comply with annex AZ.

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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 MBT Teknik Yapı Kimyasalları San. ve Tic. A.Ş. Technical Services Department for advice. Trial mixes should be carried out to ensure optimum dosage and effect. Where the concrete is to be machine finished by utilizing power float or power trowelling methods, we recommend that you contact with MBT Teknik Yapı Kimyasalları San. ve Tic. A.Ş. Technical Services Department for dosage rate guidance.

Mixing

MasterCast[®] 3217 is a ready-to-use admixture to be added to the concrete as a separate component. Optimal performance is obtained if MasterCast[®] 3217 is dispensed into the concrete mix right after the addition of the first 80% of the mixing water, i.e. when all solids are wetted out. Avoid adding the admixture to the dry aggregates.

Compatibility

MasterCast[®] 3217 can be used with all types of **EN 197** Cements. For use with other special cements, contact our MBT Teknik Yapı Kimyasalları San. ve Tic. A.Ş. Technical Services Department.

MasterCast[®] 3217 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing MasterCast[®] 3217 they must be dispensed separately.

MasterCast[®] 3217 is not compatible with MasterRheobuild superplasticizers. In order to optimize special requirements the use of the following complementary additives is suggested:

- Viscosity modifying agent MasterMatrix[®] to produce Rheodynamic™ concrete
- Air entraining agent MasterAir[®] to improve frost/thaw resistance

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.

Effects of Overdosing

The detrimental effects of an overdose of MasterCast 3217 will depend upon the magnitude of the overdose in that an increase in initial setting time will occur. Provided the concrete is protected and cured, this will not necessarily result in any reduction in 28 day strength. The consistence (slump) of the concrete will be increased or the concrete will have a lower water content than the original mix design due to the additional plasticizing effects of the overdose. In addition to this there may be an increase in air entrainment.

Packaging

MasterCast[®] 3217 is supplied in bulk and 1000-kg 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.

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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 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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