

MasterGlenium® SKY 675

High Range Water Reducing Admixture for Concrete
EN 934-2 T 3.1 / 3.2

Material Description

MasterGlenium® SKY 675 is an innovative second-generation superplasticizer based on polycarboxylic ether (PCE) polymers. It is derived directly from the Total Performance Control™ concept. MasterGlenium® SKY 675 is specially engineered for ready-mix concrete. Its particular configuration allows its delayed adsorption onto the cement particles and disperses them efficiently. As compared with other PCE superplasticizers, it is possible to obtain a high quality concrete mix with accelerated strength development and extended workability without delayed setting characteristics.

The molecular structure of MasterGlenium® SKY 675 is effective in early strength development. Conventional super plasticizers completely wrap cement particles and prevent them from joining with water by forming a barrier. By this way, the hydration process becomes slower. Differently from this mechanism, MasterGlenium® SKY 675 molecules leave gaps on cement particles that allow sudden hydration. These gaps enable early high strength development.

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 and accelerated cement hydration for early strength development and high-quality concrete.

Areas of Application

MasterGlenium® SKY 675 is used in the production of high-quality ready-mix concrete.

MasterGlenium® SKY 675 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

MasterGlenium® SKY 675 offers the following benefits for:

The Ready-mix Producer:

- Capability of delivering high quality concrete at any time to the job site in place.

Technical Properties

Structure of the Material	Modified Polycarboxylic Ether Based
Appearance	Brown Liquid
Specific gravity (20°C)	1,058 – 1,098 kg/t
pH Value	~ 5,0 – 7,0
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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- 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 MasterGlenium[®] SKY 675 is approximately:

By Weight – 0.8 to 1.5 kg per 100 kg of cement (binder) content.

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. Division 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 troweling methods, we recommend that you contact the according to specific job conditions. If required consult MBT Teknik Yapı Kimyasalları San. ve Tic. A.Ş. Technical Services Department for dosage rate guidance.

Mixing

MasterGlenium[®] SKY 675 is a ready-to-use admixture to be added to the concrete mix as a separate component. Optimal mixing water reduction is obtained if MasterGlenium[®] SKY 675 is dispensed into the concrete mix right after the addition of the first 80% of the mixing water, i.e. when all the solids are wetted out. Avoid adding the admixture to the dry aggregates.

Compatibility

MasterGlenium[®] SKY 675 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. MasterGlenium[®] SKY 675 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing MasterGlenium[®] SKY 675 they must be dispensed separately.

MasterGlenium[®] SKY 675 is not compatible with all admixtures of the MasterRheobuild[®] series.

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 agents 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.

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Packaging

MasterGlenium[®] SKY 675 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.

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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