

MasterGlenium SKY 695

Second generation high range water reducing polycarboxylate ether admixture primarily developed for ready-mix concrete industry where high slump retention and a low W/C are required. (EN 934-2: 2001 Tables 11.1 & 11.2)

DESCRIPTION AND WHERE TO USE

MasterGlenium SKY 695 is an innovative last generation superplasticizer of polycarboxylic ether (PCE) polymers. MasterGlenium SKY 695 is specially engineered for ready-mix Rheoplastic concrete having fluid consistence and self-compacting concrete, having a very high workability retention, especially under hot weather conditions. The fresh concrete shows no segregation and at the same time has a low water cement ratio and, consequently, high early and long term strengths as per EN 206-1 and UNI 11104 standards.

MasterGlenium SKY 695 may be used also to produce Rheodynamic concrete, capable of self compaction, even in the presence of dense reinforcement, without the aid of vibration

MasterGlenium SKY 695 is chloride free and meets UNI EN 934-2 Tables 11.1 & 11.2.

TOTAL PERFORMANCE CONTROL

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 placing into the formworks 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.

MasterGlenium SKY CHEMISTRY

The Total Performance Control™ concept is the result of years of study of an in-house expertise in nanotechnology. This allows BASF Construction Chemicals to control the chemical and physical behaviour of polymers and their interactions with cement. MasterGlenium SKY 695 is an innovative last generation superplasticiser of polycarboxylic ether (PCE) polymers.

The dispersion effect of superplasticizers is based on the adsorption of molecules on cement particles, imparting a negative charge that causes electrostatic repulsion and steric hindrance between them and, therefore, causing

dispersion. The hydration, and particularly the ettringite formation, works against the superplasticiser. The molecules already adsorbed are covered by the ettringite lawn and thus are ineffective.

The particular configuration of the MasterGlenium SKY molecules allows its delayed adsorption onto the cement particles and disperses them efficiently over a long period of time. The molecular structure is essential for the early development of strength. With superplasticizers based on conventional polycarboxylate ether, the molecules cover the entire surface of the cement grain and build a barrier against contact with water. Therefore, the hydration process takes place slowly. The MasterGlenium SKY molecules on the other hand leave sufficient surface of the cement exposed to allow contact with water for a rapid hydration reaction which results in high early strength development.

BENEFITS

Total Performance Control and the use of MasterGlenium SKY 695 offers the following benefit to the ready-mix concrete producer:

- Reduction the water content with respect to the state of the art polycarboxylate based superplasticisers.
- Production of Rheoplastic and Rheodynamic concrete having a very low W/C ratio.
- Workability retention for a longer period especially in hot weather conditions avoiding the problem of re-tempering with water before the pouring operation.
- Improvement of the rheology even in concrete mixes having a low fines content.
- Optimization of the production of durable concrete as per the EN 206-1 and UNI 11104 standards.
- As compared to the traditional superplasticisers, the engineering properties such as early and ultimate compressive and flexural strengths, bond to steel, and modulus of elasticity, shrinkage, creep, and impermeability are improved.

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COMPATIBILITY

In order to optimize some special properties of the concrete, use of the following complementary admixtures is suggested:

- Air Entrainer **MasterAir 108** for freeze – thaw resistance (exposure categories XF1 to XF4, EN 206-1).
- Silica fume in powder form **MasterRoc MS 610** for high resistance against aggressive environments.
- Structural polypropylene fibers **MasterFiber 246**
- Demoulding agent **MasterFinish RL 211** for good surface appearance.
- Curing agent **MasterKure 127 WB** for sealing the surface of freshly finished concrete against rapid evaporation of water which may cause plastic shrinkage cracking.
- High-performance viscosity modifying agent **MasterMatrix SDC 150** for Smart Dynamic Construction concrete.

MasterGlenium SKY 695 is not compatible with all admixtures of MasterRheobuild serie.

DIRECTIONS FOR USE

MasterGlenium SKY 695 is a liquid admixture to be added to the concrete during the mixing process:

- Mix cement and secondary binders, sand, coarse aggregates and the mix water until a stiff, yet homogeneous, mixture is obtained. Optimal mixing water reduction is obtained if MasterGlenium SKY 695 is mixed into the concrete right after the addition of the initial 80-90% of the total water. Avoid adding the admixture to the dry aggregates
- Add MasterGlenium SKY 695 admixture and mix again for to 60 seconds in order to disperse it homogeneously.

Continue mixing until required workability is obtained, with addition of the remaining water.

DOSAGE

The normal recommended dosage rate is 0,5 to 1,8 litre per 100 kg of binder.

Other dosages may be recommended in special cases according to specific job site conditions.

In such cases please consult BASF Technical Service Department for advice.

PACKAGING AND STORAGE

MasterGlenium SKY 695 is available in 208 litre drums and 1000 litre IBC tank.

MasterGlenium SKY 695 must be stored in a place where the temperature does not drop below 5 °C. In case of freezing, warm up and homogenise the admixture solution before using.

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Technical Information	
Form	Liquid
Colour	Light Brown (Yellowish)
Relative density (g/cc at 20°C)	1,037 - 1,077



We create chemistry

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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. Environment sustainability: Partner Green Building Council since 2009.

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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.

November 2015

