

MasterGlenium® 111

New polycarboxylic ether superplasticizer for the Precast industry and slip form concrete with low water cement ratio

DESCRIPTION

MasterGlenium 111 is an innovative latest generation superplasticizer based on polycarboxylic ether (PCE) polymers and is specially engineered for ready-mix concrete.

MasterGlenium 111 is differentiated from conventional superplasticisers, such as those based on sulphonated melamine and naphthalene formaldehyde condensates in that it is based on a unique carboxylic ether polymer with long lateral chains. This greatly improves cement dispersion. At the start of the mixing process the same electrostatic dispersion occurs but the presence of the lateral chains, linked to the polymer backbone, generate a steric hindrance which stabilizes the cement particles capacity to separate and disperse. This mechanism provides flowable concrete with greatly reduced water demand.

TYPICAL APPLICATIONS

MasterGlenium 111 is suitable for making precast concrete elements with highly-fluid and slip form concrete without segregation at low water cement ratios with consequently high early and ultimate strengths.

MasterGlenium 111 may be used in combination with **MasterMatrix** for producing Smart Dynamic Concrete (SDC). The technology produces advanced self-compacting concrete, without the aid of vibration. For economic, ecological and ergonomic ready-mix / precast concrete production.

ADVANTAGES

MasterGlenium 111 offers the following benefits for:

The ready-mix producer:

- Capability of delivering high performance concrete at any time to the job site in place
- Production of a concrete with low water cement ratios
- Single product for many application needs

The contractor / applicator:

- Easier placing and faster strength development
- Improved concrete surfaces
- Guarantee to place the same concrete as specified and ordered from ready-mix plant

The engineer:

- Insurance that concrete meets original specification
- High quality durable concrete

PACKAGING

MasterGlenium 111 is supplied in 1,000 L containers or in bulk.

STANDARDS

ASTM C-494 Type F
ASTM C-1017 Type I & II

TYPICAL PROPERTIES*

Appearance	Medium to dark brown coloured liquid
Specific gravity @ 25°C	1.080
pH value	4.0 - 7.0
Chloride content	"chloride-free" to EN 934

APPLICATION GUIDELINES

The normally recommended dosage rate of **MasterGlenium 111** is 0.5 to 2.0 L/100kg of total cementitious material.

Other dosages may be recommended in special cases according to the specific site conditions. In this case please consult our Technical Services Department for advice.

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MIXING

MasterGlenium 111 is a ready-to-use admixture to be added to the concrete as a separate component. Optimal result is obtained if **MasterGlenium 111** is poured into the concrete mix right after the addition of the first 80% of the mixing water, i.e. when all solids are wetted. Avoid adding the admixture to the dry aggregates.

In order to optimize special requirements, the use of the following complementary additives is suggested:

- Viscosity modifying agent **MasterMatrix** to produce Smart Dynamic Concrete (SDC).
- Air entraining agent **MasterAir** to improve frost/thaw resistance

MasterGlenium 111 is suitable for mixes containing:

- Microsilica
- Fly Ash (PFA)
- Ground granulated blast furnace slag cement

Note: **MasterGlenium 111** is not compatible with **MasterRheobuild** superplasticizers.

STORAGE AND SHELF LIFE

MasterGlenium 111 should be stored in unopened containers or bulk tanks to be protected from extremes of temperature. The shelf life is 12 months when stored as above.

HEALTH AND SAFETY

No special requirements must be observed during use. Protection gloves and glasses are however recommended. **MasterGlenium 111** is non-flammable, non-toxic or irritant and is not subject to special transport requirements.

MasterGlenium 111 contains no hazardous substances requiring labelling. For further information refer to the Material Safety Data Sheet.

QUALITY AND CARE

All products originating from Master Builders Solutions Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001 and ISO 14001.

* Properties listed are based on laboratory controlled tests.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

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