

MasterGlenium[®] 114AE

New polycarboxylic ether superplasticizer for the production of high-quality ready-mix concrete with low water cement ratio and exceptional workability

DESCRIPTION

MasterGlenium 114AE is an innovative latest generation superplasticizer based on polycarboxylic ether (PCE) polymers and is specially engineered for ready-mix concrete.

MasterGlenium 114AE 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 stabilises the cement particles capacity to separate and disperse. This mechanism provides flowable concrete with greatly reduced water demand.

TYPICAL APPLICATIONS

MasterGlenium 114AE is used for the production of high-quality ready-mix concrete.

MasterGlenium 114AE 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 114AE 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 without loss of workability
- Single product for many application needs

The contractor / applicator:

- Easier placing and faster strength development
- Improved concrete surfaces

- Place concrete as specified and ordered from ready-mix plant

The engineer:

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

PACKAGING

MasterGlenium 114AE is supplied in 210 L drums, 1,000 L containers or in bulk.

STANDARDS

EN 934-2
 ASTM C-494 Type F&G

TYPICAL PROPERTIES*

Appearance	light to medium brown
Specific gravity @ 25°C	1.082
pH value	4.0 – 7.0
Chloride content	“chloride-free” to EN 934

APPLICATION GUIDELINES

The normally recommended dosage rate of **MasterGlenium 114AE** is 0.8 to 2.5 L/100 kg 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 114AE is a ready-to-use admixture to be added to the concrete as a separate component. Optimal result is obtained if **MasterGlenium 114AE** 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.

MasterGlenium 114AE is suitable for mixes containing:

- Microsilica
- Pulverised fuel ash
- GGBS (Ground granulated blast furnace slag cement)

Note: **MasterGlenium 114AE** 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 110** to produce Smart Dynamic concrete

STORAGE AND SHELF LIFE

MasterGlenium 114AE should be stored out of direct sunlight and protected from extremes of temperature. The shelf life is 12 months when stored as above.

The occurrence of a surface layer with **MasterGlenium 114AE** is normal and will have no effect on the performance of the product.

HEALTH AND SAFETY

No special requirements must be observed during use. Protection gloves and glasses are however recommended. **MasterGlenium 114AE** is non-flammable, non-toxic or irritant and is not subject to special transport requirements.

MasterGlenium 114AE 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

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NOTE

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