BASF
The Chemical Company

GLENIUM® 114

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

Description

GLENIUM® 114 is an innovative second generation superplasticizer based on polycarboxylic ether (PCE) polymers, and is specially engineered for ready-mix concrete.

GLENIUM® 114 is differentiated from conventional superplasticisers, such as those based on sulphonated melamine and naphthalene formaldehyde condesates 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.

Fields of application

GLENIUM® 114 is used for the production of high quality ready-mix concrete.

GLENIUM® 114 may be used in combination with RheoMATRIX 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.

Features and Benefits

GLENIUM® 114 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

GLENIUM® 114 is supplied in 210 litre drums, 1,000 litre containers or in bulk.

*Typical properties

Appearance	Medium to dark brown coloured
Specific gravity @ 25°C	1.078
pH value	5-8
Chloride content	“chloride-free” to EN 934-2

Standards

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

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Application procedure

Dosage

The normally recommended dosage rate of GLENIUM® 114 is 0.8 to 2.5 litre per 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.

Mixing

GLENIUM® 114 is a ready-to-use admixture to be added to the concrete as a separate component. Optimal result is obtained if GLENIUM® 114 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.

Compatibility

GLENIUM® 114 is not compatible with RHEOBUILD® superplasticizers.

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

- Viscosity modifying agent RheoMATRIX® 110 to produce Smart Dynamic concrete

GLENIUM® 114 is suitable for mixes containing:

- Microsilica
- Pulverised fuel ash
- ground granulated blast furnace slag cement

Storage

GLENIUM® 114 should be stored out of direct sunlight and protected from extremes of temperature. The shelf life is 9 months when stored as above.

Handling and transportation

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

Safety precautions

GLENIUM SKY 114 contains no hazardous substances requiring labelling. For further information refer to the Material Safety Data Sheet.

Note

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local BASF representative.
BASF reserves the right to have the true cause of any difficulty determined by accepted test methods.

Quality and care

All products originating from BASF's 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, ISO 14001 and OHSAS 18001.

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* Properties listed are based on laboratory controlled tests.

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