

High range water reducing/superplasticizing admixture with enhanced workability retention performance



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EN934 part 2 tables 3.1 & 3.2

Description of Product

GLENIUM[®] SKY 902 is an innovative superplasticizer based on polycarboxylic ether (PCE) polymers. It is the next step of the Total Performance Control[™] concept. GLENIUM[®] SKY 902 is specially engineered for ready-mix concrete. Its particular configuration allows its delayed adsorption onto the cement particles and disperses them efficiently.

With Glenium[®] SKY 902 it is now possible to obtain a high quality concrete mix with accelerated strength development and extended workability without delayed setting characteristics. Glenium[®] SKY 902 gives the same high quality performance as other products in the Glenium[®] SKY range but pays particular emphasis on workability retention. The unique polymer formulation enables true workability retention to be achieved across a broad spectrum of consistence classes (S3 to SF3). This is achieved without set retardation or reduced 24 hour strength performance. The formulation of Glenium[®] SKY 902 has been optimised for use with high replacement levels of GGBS (ground granulated blast furnace slag) whilst still retaining performance with concretes containing PFA (pulverised fuel ash).

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 Smart Dynamic Concrete technology it provides a concrete mix with exceptional placing characteristics, extended workability retention and accelerated cement hydration for early strength development and high-quality concrete.

Fields of Application

GLENIUM[®] SKY 902 is especially beneficial for the production of high quality ready-mix concrete particularly when high water reductions are required in combination with a requirement for an extended period of workability e.g. long distance deliveries or deliveries with extended discharge times. Glenium[®] SKY 902 is designed to exhibit workability retention for periods up to 3 hours.

Features and Benefits

GLENIUM[®] SKY 902 offers the following benefits for:

The ready-mix producer:

- Production of a concrete with low water cement ratio that meets EN 206-1 without loss of workability.
- Single product for many application needs.
- Enhanced retention performance with high replacement levels of GGBS and PFA
- Confidence that the workability will be the same at the job site as it was when first produced.

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.
- More versatile concrete mix.

The engineer:

- Insurance that concrete meets original specification
- High quality concrete with better durability.

Technical Data/Typical Properties

Appearance	Yellow liquid
Specific gravity @ 20°C	1.08 ± 0.02 g/cm ³
pH-value	6.0 ± 1
Alkali content (%)	0.85%
Chloride content (%)	<0.01%
Total Chlorine content (%)	<0.01%
Sulphate (SO ₃ %)	0.05%
Sulphide (mg/l)	<0.5

Application Procedure**Dosage**

GLENIUM[®] SKY 902 is particularly suited for mixes where higher strengths/low water cement ratios are required without significant workability reduction over a 3 hour period. The normally recommended dosage rate of GLENIUM[®] SKY 902 is approximately:

By Volume - 0.5 to 1.6 litres per 100 kg of cement (binder) content.

By Weight - 0.54 to 1.73 kg per 100 kg of cement (binder) content.

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[®] SKY 902 is a ready-to-use admixture to be added to the concrete as a separate component. Optimal results are obtained if GLENIUM[®] SKY 902 is dispensed into the concrete mix 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 and cement.

Compatibility

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

- Viscosity modifying agent RheoMATRIX[®] to produce Smart Dynamic Concrete or Self Compacting Concrete
- Air entraining agent MICRO-AIR[®] to improve frost/thaw resistance

Packaging

GLENIUM[®] SKY 902 is supplied in Bulk, 1000-litre IBC's and 25-litre containers.

Storage

GLENIUM[®] SKY 902 must be stored 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. For specific storage advice, consult BASF Construction Chemicals Technical Services Department.

Shelf Life

12 months if stored according to manufacturer's instructions in unopened containers.

Handling and Transport

No special requirements must be observed during use. Protection gloves and glasses are however recommended. GLENIUM[®] SKY 902 is non-flammable, non-toxic or irritant and is not subject to special transport requirements.

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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 vapour 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

"BASF plc, Construction Chemicals " (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.