

High range water reducing/superplasticizing admixture



CE Approved – Certificate No. 0086-CPD-469071

EN934 part 2 table 3.1 & 3.2 High Range Water Reducing/Superplasticizing and Table 7- Hardening Accelerating.

Description of Product

Glenium[®] ACE 333 is part of the innovative second-generation range of polycarboxylic ether polymer superplasticizers. The particular configuration of Glenium[®] ACE 333 has a longer working time than Glenium[®] ACE 30 whilst still accelerating the cement hydration for early stripping. Rapid adsorption of the molecule onto the cement particles, combined with an efficient dispersion effect, exposes increased surface of the cement grains to react with water.

As a result of this effect, it is possible to obtain earlier development of heat of hydration, rapid development of the hydration products and, as a consequence, higher strengths at a very early age.

Complies with EN934 Part 2 Table 3.1 & 3.2 High range Water Reducing/Superplasticizing and Table 7 - Hardening Accelerating.

ZERO ENERGY SYSTEM

Zero Energy System is based on a combination of the advanced technology admixture Glenium[®] ACE 333 and the innovative technology of Rheodynamic concrete. The Zero Energy System has been developed to help the precast concrete producer to rationalise his production process and save on energy costs combined with improved quality of the product and the working conditions.

Fields of Application

- Glenium[®] ACE 333 is suitable for making precast concrete elements at all workabilities including Rheoplastic concrete having fluid consistence, no segregation and low water cement ratio and, consequently, high early and long term strengths

- Glenium[®] ACE 333 may be used in combination with Glenium[®] STREAM admixtures for producing Rheodynamic concrete, capable of self-compaction, even in the presence of dense reinforcement, without the aid of vibration, for making precast elements.
- Glenium[®] ACE 333 imparts early stiffening to allow withdrawal of end plates or box-outs etc.

Features and Benefits

Glenium[®] ACE 333 offers the following benefits for the precast concrete industry to:

- Produce Rheoplastic and Rheodynamic concrete having a low water cement ratio
- Optimise the curing cycles by reducing curing time or curing temperature
- Eliminate / reduce the heat curing required to achieve a given maturity
- Eliminate the energy required for placing and compaction and curing (**Zero Energy**)
- Speeds productivity / reduction in cycle times
- Improve surface appearance
- Produce durable precast concrete elements as per EN 206-1
- As compared to traditional superplasticizers, the engineering properties such as early and ultimate compressive and flexural strengths, bond to steel, modulus of elasticity, shrinkage, creep and impermeability are improved

Technical Data/Typical Properties

| | |
|-------------------------|-------------------------------|
| Appearance | Light brown to yellow liquid |
| Specific gravity @ 20°C | 1.07 ± 0.02 g/cm ³ |
| pH-value | 7.5 ± 1 |
| Alkali content (%) | Less than or equal to 2.0 |
| Chloride content (%) | Less than or equal to 0.10 |

Application Procedure

Glenium[®] ACE 333 is a liquid admixture to be added to the concrete during the mixing process. The best results are obtained when the admixture is added after at least 70% of the added water and after all the other components are already in the mixer and wetted.

Dosage rate

The normally recommended dosage rate is:

By Volume - 0.187 to 1.402 litres per 100 kg of cement (binder) and any material (fines of fillers) passing the 0.1 mm sieve used for producing Rheodynamic concrete.

By Mass - 0.20 to 1.50 kgs per 100 kg of cement (binder)

Other dosages may be used in special cases according to specific job site conditions. In this case please consult our Technical Services Department

Compatibility

Glenium[®] ACE 333 is compatible and recommended for use with:

- Glenium[®] STREAM admixtures to produce Rheodynamic and self-compacting concrete.
- MICRO-AIR[®], air entraining admixture, to improve freeze thaw resistance (exposure class XF 1 to XF4, EN 206-1)
- RHEOMAC[®] for producing shrinkage compensated concrete
- MEYCO[®] MS685, silica admixture for SCC

Packaging

Glenium[®] ACE 333 is available in 1000-litre IBC's, 205-litre drums and 25-litre containers.

Storage

Glenium[®] ACE 333 must be stored in a place where temperature does not drop below +5°C. If product has frozen, thaw at +3°C and agitate until completely reconstituted. 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 our Technical Services Department.

Shelf Life

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

Watch Points

Glenium[®] ACE 333 is not compatible with Rheobuild[®] superplasticizers.

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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.