

GLENIUM[®] ACE 39

High-range water-reducing (superplasticising) admixture

DESCRIPTION

GLENIUM ACE 39 is an innovative High-Range Water-Reducing admixture (Superplasticiser) based on third generation polycarboxylic ether polymers with improved workability and finishing. The particular molecular configuration of **GLENIUM ACE 39** accelerates the cement hydration. Rapid absorption of the molecule onto the cement particles, combined with an efficient dispersion effect, exposes an increased surface area of the cement grains to react with water.

As a result of this effect, it is possible to obtain earlier development of the heat of hydration, rapid development of the hydration products and, as a consequence, higher strengths at a very early age. This makes **GLENIUM ACE 39** particularly beneficial for precast concrete applications. **GLENIUM ACE 39** meets the requirements of AS1478.1 for Type HWR admixtures.

ZERO ENERGY SYSTEM

Zero Energy System is based on a combination of the advanced technology admixture **GLENIUM ACE 39** and the innovative technology of Rheodynamic concrete. The **Zero Energy System** has been developed to help the precast concrete producer to rationalize his production process and save on energy costs combined with improved quality of the product and the working conditions.

RECOMMENDED FOR

- **GLENIUM ACE 39** is suitable for making precast concrete elements at all workabilities including Rheoplastic concrete having flowable consistence, no segregation and low water cement ratio and, consequently, high early and long term strengths.
- **GLENIUM ACE 39** may be used alone, or in combination with Rheomac VMA 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 39** performs best when the concrete temperature is at 20°C or above.

GLENIUM ACE 39 offers the following benefits for the precast concrete industry :-

- produce Rheoplastic and Rheodynamic concrete having a low water cement ratio
- optimise the curing cycles by reducing curing time or curing temperature
- eliminate the heat curing
- eliminate the energy required for placing, compaction and curing (Zero Energy)
- increase productivity/reduction in cycle times
- improve surface appearance
- produce durable precast concrete elements
- compared to the traditional superplasticisers, the engineering properties such as early and ultimate compressive and flexural strengths, bond to steel, modules of elasticity, shrinkage, creep and impermeability are improved

PROPERTIES

Relative Density @ 23 ± 2°C	1.048 – 1.088 g/ml
pH @ 23 ± 2°C	5.4 – 7.4
NVM @ 105 ± 2°C	30.7 – 34.7% w/w
Alkali as Na ₂ O equivalent	ca 0.43% w/w
Chloride ion (Cl ⁻)	ca 0.01% w/w
Sulphate as SO ₄ ²⁻	ca 0.30% w/w

APPLICATION

GLENIUM ACE 39 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 the cement is fully wetted out.

DOSAGE

The normally recommended dosage rate is:

By Volume – 0.2 to 1.5 litres per 100kg of cement (binder) and any material (fines of fillers) passing the 0.1mm sieve used for producing Rheodynamic concrete.

By Mass – 0.1 to 1.58kg per 100kg of cement (binder)

Other dosages may be used in special cases according to specific job site conditions. In this case consult your BASF Technical Representative.

FEATURES AND BENEFITS



The Chemical Company

GLENIUM[®] ACE 39

COMPATABILITY

GLENIUM ACE 39 is compatible and recommended for use with other BASF CC admixtures such as:

- RHEOMAC VMA admixtures to produce Rheodynamic and self-compacting concrete.
- RHEOMAC SURETEC slump retention admixtures
- STABILMAC for producing shrinkage compensated concrete.
- RHEOMAC AS180 and Rheomac SF100 amorphous silica's.
- MEYCO MS695, colloidal silica admixture for SCC.

GLENIUM ACE 39 is NOT compatible with RHEOBUILD superplasticisers.

PACKAGING

GLENIUM ACE 39 is available in Bulk, 1000 litres, 205 litre drums and 20 litre cubes.

STORAGE

GLENIUM ACE 39 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. **Do not use compressed air to agitate.** 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 your BASF Technical Sales Representative.

PRECAUTIONS

For the full health and safety hazard information and how to safely handle and use this product, please make sure that you obtain a copy of the BASF **Material Safety Data Sheet (MSDS)** from our office or our website.

AGACE39/2/0711

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF** 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

Field service where provided does not constitute supervisory responsibility. Suggestions made by **BASF** either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not **BASF**, are responsible for carrying out procedures appropriate to a specific application.

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