



The Chemical Company

GLENIUM[®] 8100

High range water reducing/superplasticising admixture

DESCRIPTION

Glenium 8100 is an innovative second generation polycarboxylic ether polymer superplasticiser with improved slump retention.

The particular molecular configuration of **Glenium 8100** accelerates the cement hydration. Rapid absorption of the molecule onto the cement particles, combined with an efficient dispersion effect maintains workability yet 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 the heat of hydration, rapid development of the hydration products and, as a consequence, higher strengths at a very early age.

Complies with AS1478.1-2000 Type HWR High Range Water-reducing.

ZERO ENERGY SYSTEM

Zero Energy System is based on a combination of the advanced technology admixture **Glenium 8100** 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 product quality and working conditions.

RECOMMENDED FOR

- **Glenium 8100** is suitable for making precast concrete elements at all workability's including rheoplastic concrete having a fluid consistence, no segregation, a low water binder ratio and, consequently, high early and long term strengths.
- **Glenium 8100** may be used in combination with other BASF CC 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 8100** performs best when the concrete temperature is at 15°C or above.

FEATURES AND BENEFITS

Glenium 8100 offers the following benefits for the precast concrete industry to:

- *produce Rheoplastic and Rheodynamic concrete having a low water cement ratio*
- *optimise 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*
- *improved engineering properties, compared to traditional superplasticiser's, such as early and ultimate compressive and flexural strengths, shrinkage and permeability*

PROPERTIES

Typical properties are:

Appearance: Light brown, opaque liquid.	
SG	1.069 ± 0.02
pH	7.00 ± 1.0
NVM % w/w	30.0 ± 2.0
Alkali (Na ₂ O equivalent) % w/w	0.5 ± 0.1
Chloride ion (Cl) ⁻ % w/w	0.005 ± 0.001
Sulphate (SO ₄) ⁻² % w/w	0.05 ± 0.02

APPLICATION

Glenium 8100 is a liquid admixture normally added to concrete during the mixing process either at the batch plant or on site.

At the batch plant, **Glenium 8100** may be added with the initial batch water, however, 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. When added at site, mix for a minimum of 2 minutes before discharging.

Avoid adding **Glenium 8100** to the dry materials.

Concrete which has lost slump may be re-tempered with **Glenium 8100** provided initial setting has not started.

DOSAGE

The normally recommended dosage rate is:

0.2 to 0.6 litres per 100kg of cement (binder) and any material passing the 0.15mm sieve (fines of aggregates or fillers) used for producing Rheodynamic concrete.

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

COMPATABILITY

Glenium 8100 is compatible with most BASF Construction Chemicals admixtures providing they are added separately to the mix.

Glenium 8100 is compatible with BASF Construction Chemicals range of Viscosity Modifying Admixtures (VMA) and Pump Aids (sometimes described as Glenium Stream) often used with High Strength and Super Workable Concrete (SWC).

Glenium 8100 is recommended for use with:

- **Glenium Stream** admixtures to produce Rheodynamic and self-compacting concrete.
- **Rheomac, Stabilmac or Tetraguard** for producing shrinkage compensated concrete.
- **Meyco MS685**, silica admixture for SCC.



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Glenium 8100 is NOT compatible with admixtures containing Sulphonated Naphthalene Formaldehyde Condensate such as Rheobuild 1000 and Polyheed 850.

Glenium 8100 may have a synergistic effect on AEA's significantly increasing the amount of entrained air. Trials are recommended before using this combination.

It is recommended that any admixture or combination of admixtures is trailed with the particular materials and mix design to be used to verify concrete performance before commencing normal production.

For further information, consult your BASF Construction Chemicals Technical Representative.

PACKAGING

Glenium 8100 is available in Bulk, 1000 litre pallecons, 205 litre drums and 20 litre cubes.

STORAGE

Glenium 8100 is best stored in a place where the temperature does not drop below +5°C. If the product has frozen, thaw at +3°C and agitate until completely reconstituted. Do not use compressed air to agitate. Non-bulk containers preferably should be stored under cover, out of direct sunlight and protected 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 Construction Chemicals Technical Representative.

All BASF Construction Chemicals Australia & New Zealand data sheets are updated on a regular basis, it is the user's responsibility to obtain the most recent issue AGlen8100/2/0806

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF Construction Chemicals** 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 Construction Chemicals** either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not **BASF Construction Chemicals**, are responsible for carrying out procedures appropriate to a specific application.

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