MasterGlenium® ACE 437

Essential component of ZERO ENERGY SYSTEM – A latest generation high-performance polycarboxylate ether (PCE) superplasticizer for the Precast industry

DESCRIPTION
MasterGlenium ACE 437 (Admixture Controlled Energy) consists of a range of innovative superplasticizers based on latest generation polycarboxylate ether polymers. The particular molecular configuration of MasterGlenium ACE 437 accelerates the cement hydration by exposing increased surface of the cement grains to react with water. As a result, 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 very early age. The polymer structure of MasterGlenium ACE 437 is specially designed to improve the rheology of precast concrete, making it flowable and less viscous even at very low water/cement ratios. Robustness is a distinctive feature precast concrete produced with MasterGlenium ACE 437.

TYPICAL APPLICATIONS
MasterGlenium ACE 437 is suitable for making precast concrete elements with highly-fluid concrete without segregation at low water cement ratios with consequently high early and ultimate strengths. MasterGlenium ACE 437 may be used in combination with MasterMatrix for producing advanced Self Compacting Concrete (SCC) or Smart Dynamic Concrete (SDC) without the aid of vibration, for economic, ecological and ergonomic precast production.

ADVANTAGES
MasterGlenium ACE 437 offer the following benefits for the precast concrete industry:

- Improved surface appearance
- Durable precast concrete elements as per EN 206-1
- Elimination of the energy required for placing, compaction and curing
- Optimization of the curing cycles by reducing curing time or curing temperature
- Increased productivity

PACKAGING
MasterGlenium ACE 437 is available in bulk or drums.

STANDARDS
MasterGlenium ACE 437 meets the requirements of EN EN934-2 and ASTM C494 Type A & F.

TYPICAL PROPERTIES*

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Appearance and Form</td>
<td>Clear to light brown liquid</td>
</tr>
<tr>
<td>Specific gravity @ 25°C</td>
<td>1.076 – 1.092</td>
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<tr>
<td>pH-value @ 25°C</td>
<td>4.0 - 7.0</td>
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<tr>
<td>Chloride ion content</td>
<td>“Chloride Free” to EN 934</td>
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APPLICATION GUIDELINES
MasterGlenium ACE 437 is a ready to use liquid admixture that is added to the concrete at the time of batching. The maximum effect is achieved when the MasterGlenium ACE 437 is added after the addition of 70% of the water. MasterGlenium ACE 437 must not be added to the dry materials. Thorough mixing is essential and a minimum mixing cycle, after the addition of the MasterGlenium ACE 437, of 60 seconds for forced action mixers is recommended.
MasterGlenium® ACE 437

DOSAGE RATE
The recommended dosage rate is 0.5 to 2.0 L/100kg of cementitious material. Other dosages may be used in special cases according to specific production conditions. In this case please consult our Technical Services Department.

COMPATIBILITY
MasterGlenium ACE 437 is compatible and recommended for use with:
- MasterMatrix to modify the viscosity of SCC.
- MasterAir, air entraining admixture to improve freeze-thaw resistance.
- MasterFinish, demoulding agent for easy formwork removal and improved finish.
- MasterKure, user friendly curing compound for highly efficient water retention.

MasterGlenium ACE 437 is not compatible with MasterRheobuild superplasticizers.

MasterGlenium ACE 437 is suitable for mixes containing all types of Portland cement and cementitious materials as follows:
- microsilica
- fly ash (PFA)
- ground granulated blastfurnace slag GGBS

STORAGE AND SHELF LIFE
MasterGlenium ACE 437 should be stored above 5°C in closed containers or storage tanks to protect from evaporation and extreme temperatures.

The shelf life is 12 months when stored as above.

HEALTH AND SAFETY
MasterGlenium ACE 437 contains no hazardous substances requiring labelling. For further information refer to the Material Safety Data Sheet.

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 ISO 45001.

* Properties listed are based on laboratory controlled tests.

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