

# MasterGlenium® ACE 3383

Admixture Controlled Energy Essential component of Zero Energy system. A chloride free, new generation of polycarboxylic ether superplasticizer. In synergy with Rheodynamic concrete, it optimizes the production of precast concrete structural elements. Meets the requirements of EN 934 – 2 and ASTM C494 type A and F.

## DESCRIPTION AND FIELD OF APPLICATION

**MasterGlenium ACE 3383** is an innovative third generation of polycarboxylic ether polymers superplasticizer. The particular molecular configuration of MasterGlenium ACE 3383 accelerates the cement hydration. 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 the heat of hydration, rapid development of the hydration products and, as a consequence, higher strengths at very early age.

**MasterGlenium ACE 3383** is suitable for making precast concrete elements with Rheoplastic concrete having fluid consistence, no segregation and low water cement ratio and, consequently, high early and long-term strengths. **MasterGlenium ACE 3383** may be used in combination with MasterGlenium 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.

## ZERO ENERGY SYSTEM:

Zero Energy System is based on a combination of the avant-garde admixture **MasterGlenium ACE 3383** 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.

## BENEFITS

**MasterGlenium ACE 3383** offers the following benefits for the precast concrete industry to:

- Produce Rheoplastic and Rheodynamic concrete having a low water cement ratio
- Optimize the curing cycles by reducing curing time or curing temperature
- Eliminate the heat curing
- Eliminate the energy required for placing and compaction and curing (ZERO ENERGY)
- Increase productivity
- Improve surface appearance
- Produce durable precast concrete elements as per EN 206-1
- As compared to the traditional superplasticizers, the engineering properties such as early and ultimate compressive and flexural strengths, bond to steel, and modulus of elasticity, shrinkage, creep, and impermeability are improved.

## PACKING AND STORAGE

MasterGlenium ACE 3383 is available in 1000 liters bulk.

MasterGlenium ACE 3383 must be stored in a place where the temperature does not drop below 5°C. In case the product freezes, bring the temperature of the product to 30°C and remix.

## HANDLING & STORAGE

No special requirements must be observed while the product is used. Protection gloves and glasses are recommended. Do not eat, drink or smoke during the application. **MasterGlenium ACE 3383** is not- ammalable, non-toxic or irritant and is not subjects to special transport requirements.

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## COMPATIBILITY

MasterGlenium ACE 3383 is compatible and recommended for use with:

- MasterGlenium STREAM admixtures to produce Rheodynamic concrete.
- MasterMatrix to modify the viscosity of SCC.
- MasterAir, air entraining admixture, to improve freeze thaw resistance (exposure class XF 1 to XF4, EN 206 – 1).
- MasterRoc MS 610, silica fume, for high performance concrete and increased durability in chemical aggressive environments (exposure class XA1 to XA3, EN206 – 1).
- MaterLife SRA 20 for producing shrinkage compensated concrete.
- MasterFinish, demoulding agent for easy formwork removal and improved finish.
- MasterKure, curing compound for protection of fresh concrete to prevent rapid evaporation of water. N.B.  
**MasterGlenium ACE 3383** is not compatible with the MasterRheobuild superplasticizers.

## DOSAGE RATE

The normally recommended dosage rate is 0.5 to 3.0 liters per 100 kg of the binder and any material (Fines or fillers) passing the 0.1 mm sieve used for producing Rheodynamic concrete.

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

## DIRECTIONS FOR USE

**MasterGlenium ACE 3383** 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 all the other components are already in the mixer and after the addition of at least 80% of the total water. The water content is adjusted to obtain the desired consistence or workability.

## NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information, contact your local Master Builders Solutions representative.

Master Builders Solutions reserves the right to have the true cause of any difficulty determined by accepted test methods.

## QUALITY STATEMENT

All products manufactured by Master Builders Solutions Egypt, or imported from Master Builders Solutions affiliate companies world-wide, are manufactured to procedures certified to conform to the quality, environment, health & safety management systems described in the ISO 9001:2015, ISO 14001:2015 & OHSAS 18001:2007 standards.

\* Properties listed are based on laboratory controlled tests.

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