

MasterCem AE 5101

Cement additive engineered for air entraining and plasticizing of masonry cement.

DESCRIPTION OF THE PRODUCT

MasterCem AE 5101 is a liquid, ready-to-use additive for masonry cement or other cements requiring air entraining.

Cements produced with MasterCem AE 5101, once mixed with water, show an air entrainment in the range of 10-20%. The air bubbles are properly sized and well dispersed in the paste, acting as tiny, flexible ball bearings. As a consequence, the fresh paste is better workable, easier to place, and with better cohesion, allowing great savings in application time. This is particularly valuable in vertical walls jobs. MasterCem AE 5101 also increases the water retention of the fresh paste that hardens in a more controlled way without breaks and cracks leading to greater resistance to freeze and thaw.

In addition to acting as an air entrainer, MasterCem AE 5101 works as a grinding aid and pack-set inhibitor, with positive impact on grinding efficiency, cement conveyance and storage.

FIELDS OF APPLICATION

MasterCem AE 5101 is developed for application in the cement grinding process in:

- Ball mills (closed and open circuit)
- Vertical mills
- Other cement grinding systems

TECHNICAL DATA

Appearance	Brownish liquid
Density @ 20°C	1.000 – 1.030 g/cm ³
pH-value @ 20°C	7 - 9
Chloride ion content	< 0.5%

FEATURES AND BENEFITS

MasterCem AE 5101 offers the following benefits to cement production and application:

- **Enhanced mortar paste workability** due to the air entraining effect. Faster mixing and application, with fewer efforts for workers and better cohesion to walls. Reduced bleeding and segregation.
- **Improved plaster quality (less cracks) and durability**, due to better water retention and more regular hardening.
- **Cost reduction** and optimized cement operations, due to lower unit grinding energy (kWh/t), faster conveyance and optimized storage.

DOSING

MasterCem AE 5101 can be metered onto the mill feed or injected into the mill. The recommended dosage rate is between 1000 and 1500 g per ton of cement (0.10-0.15% mass). Other dosages may be required in specific situations. The optimum dosage should be evaluated in field trials. For further questions please consult our Technical Service.

Calibrated dosing equipment with an adjustable flow rate and appropriate dosage range is recommended to obtain the maximum performance of the product.

COMPATIBILITY

MasterCem AE 5101 is compatible with all types of cements, including Ordinary Portland Cements and composite cements.

STANDARDS

MasterCem AE 5101 fulfills the European cement standard EN 197-1, as well as EN 459-1 and EN 459-2.

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PACKAGING

MasterCem AE 5101 is available in bulk, 1.000 l containers (IBC).

STORAGE

It is recommended to store MasterCem AE 5101 protected from freezing; pipes should be thermally isolated. At temperatures below zero degrees the viscosity of the liquid additive will increase. If stored in unopened containers according to manufacturer's instructions, the shelf life is a minimum of 12 months.

HANDLING AND TRANSPORTATION

MasterCem AE 5101 does not require a hazard warning label in accordance with EC Directives and it is not classified as a dangerous good under transport regulations. However, the general rules for handling of chemical products should be respected (e.g. use of gloves and goggles). Spillages can be absorbed with suitable materials. Please refer to the Materials Safety Data Sheet for more detailed information.

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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