

MasterCem SW 4101

Cement additive engineered for enhancement of slump and workability in mortar and concrete.

DESCRIPTION OF THE PRODUCT

MasterCem SW 4101 is a liquid, ready-to-use cement additive designed to enhance cement performance. In addition to acting as a Grinding Aid in the milling process and a flow aid in

cement conveyance, **MasterCem SW 4101** improves specific cement properties by the activity of its chemical components. These act in the modification of clinker characteristics and in the enhancement of its hydraulic properties.

Products of the **MasterCem SW 4101** series are specifically designed to increase strength and workability in mortar and concrete. Typical slump improvement is +10-50% vs. plain control. However, product performance is dependent on grinding equipment characteristics, process conditions, raw material properties and cement type. To best benefit from cement additives, mill and separator process parameters may need to be adapted.

MasterCem SW 4101 improves the flow characteristics of cement with positive impact on cement conveyance and reduction of pack-set in storage silos.

FIELDS OF APPLICATION

MasterCem SW 4101 is developed for application in the cement grinding process in:

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

TECHNICAL DATA

Appearance	Brownish liquid
Density @ 20°C	1.024 – 1.064 g/cm ³
pH-value @ 20°C	9–11
Chloride ion content	< 0.5%

FEATURES AND BENEFITS

MasterCem SW 4101 offers the following benefits to cement production:

- **Product differentiation** and fulfilment of **applications requirements** through strength and workability improvement in mortar and concrete. Concrete produced with cement treated with **MasterCem SW 4101** shows enhanced rheological properties leading to better handling, easier pumping, and faster placing in formworks.
- **Cost reduction** due to lower unit grinding energy (kWh/t) and optimization of cement fineness and composition while maintaining cement properties.
- **Capacity extension** due to higher mill throughput and optimized cement recipe.
- **Improved cement handling** due to faster cement conveyance through the plant and in the distribution logistics. Reduction of plant stops and optimized storage in silos.

DOSING

MasterCem SW 4101 can be metered onto the mill feed or injected into the mill. The recommended dosage rate is between 500 and 1500 g per ton of cement (0.05-0.15% mass). Other dosages may be required in specific situations. The optimum dosage should be evaluated in plant 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 SW 4101 is compatible with all types of cements.

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STANDARDS

MasterCem SW 4101 fulfils the European cement standard EN 197.1.

PACKAGING

MasterCem SW 4101 is available in bulk, 1'000 l containers (IBC).

STORAGE

It is recommended to store **MasterCem SW 4101** at temperatures above 5°C and protect it from freezing; pipes should be thermally isolated. At low temperature the viscosity of the liquid additive will increase. If phase separation occurs at low temperature, the product must be re-mixed before use. If stored in unopened containers according to manufacturer's instructions, the shelf life is a minimum of 12 months.

HANDLING AND TRANSPORTATION

MasterCem SW 4101 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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