

# MasterCem LS 3141

Cement additive engineered for enhancement of cement late strength and reduction of unit grinding energy / increase of cement mill throughput. Chloride free.

## Material description

MasterCem LS 3141 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 LS 3141 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 ES 3000 series are specifically designed to increase late strength of cement. These benefits can be used either for achieving superior product performance or for cement optimization while maintaining the original performance level. Typical late strength improvement is +5-15% at 28 days 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 LS 3141 improves the flow characteristics of cement with positive impact on cement conveyance and reduction of pack-set in storage. In addition, this additive also counteracts the phenomena of efflorescence from iron.

MasterCem LS 3141 fulfils the European cement standard EN 197-1.

## Areas of application

MasterCem LS 3141 is developed for application in the cement grinding process:

- ball mills (closed and open circuits),
- vertical mills,
- other cement grinding systems.

## Features and benefits

MasterCem LS 3141 offers the following benefits to cement producers:

- 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,
- sustainability due to reduced clinker factor and specific CO<sub>2</sub> emissions. Gain of carbon credits,
- product differentiation due to enhanced cement performance and improved properties for the final application,
- 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. Optimised curing cycles due to shorter curing times.

## Compatibility

MasterCem LS 3141 is compatible with all types of cements.

## Dosage

The recommended dosage rate is between 500 and 1000 g per ton of cement (0.05-0.10% 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.

## Packaging

MasterCem LS 3141 is available in 1.120 kg tanks and bulk.

## Storage

It is recommended to store MasterCem LS 3141 at temperatures above 5 °C. Pipes should be thermally isolated. If stored in unopened containers according to manufacturer's instructions, the shelf life is a minimum of 12 months.



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Technical Information	
Appearance	Brownish liquid
Density @ 20°C	1.080 - 1.160 g/cm <sup>3</sup>
pH-value @ 20°C	8.5 - 10.5

## Handling and transportation

Refer to MasterCem LS 3141 Safety Data Sheet. In any case it is recommended to apply the general rules for handling of chemical products (e.g. use of gloves and goggles).

## Safety information

For information on the correct and safe use, transport, storage and disposal of the product, consult the most recent Safety Data Sheet.

## Other services

For additional technical information, brochures, references, technical reports and technical support please visit [www.master-builders-solutions.com/it-it](http://www.master-builders-solutions.com/it-it) or alternatively contact [infomac@masterbuilders.com](mailto:infomac@masterbuilders.com).

Scan QR code to visit the product page and download the latest version of this technical data sheet and any additional documentation.



## Disclaimer

Since 16/12/1992, Master Builders Solutions Italia Spa has been operating under a Certified Quality System compliant with the UNI EN ISO 9001 Standard. Furthermore, the Environmental Management System is certified according to the UNI EN ISO 14001 Standard and the Safety Management System is certified according to the UNI ISO 45001 Standard.

For further information, please consult the local Technician of Master Builders Solutions. The technical advice on how to use our products, either written or verbally given, are based on the current state of our scientific and practical expertise, and does not imply the assumption of any guarantee and/or responsibility for the final results of works executed using our products.

Therefore, the customer is not exempted from the exclusive task and responsibility of verifying the suitability of our products for the intended use and purposes.

This version supersedes all the previous ones.

### Master Builders Solutions Italia Spa

Via Vicinale delle Corti, 21 – 31100 Treviso – Italia

T +39 0422 429200 F +39 0422 421802

[www.master-builders-solutions.com/it-it](http://www.master-builders-solutions.com/it-it)

e-mail: [infomac@masterbuilders.com](mailto:infomac@masterbuilders.com)