

MasterCem LS 3142

Cement plant admixture to increase the compressive strength of cement at medium and long curing times, reduce grinding energy and increase mill output.

Material description

MasterCem LS 3142 is a cement grinding admixture that belongs to the group of performance enhancers. These products, in addition to aiding the grinding process, enhance the performance and properties of the cement through the action of specific molecules that improve the hydraulic properties of the clinker and the secondary constituents that make up the cement.

The MasterCem LS 3000 line was developed to increase the compressive strength of cement at long curing times. These benefits can be used to improve cement performance or to enable recipe optimisation for equal performance.

MasterCem LS 3142 is a grinding aid that also makes cement easier to handle.

Typical performance in terms of compressive strength can be increased by 10-15% at 28 days compared to a non-additive reference. These results are highly dependent on the type of raw materials used, the grinding equipment used, the process conditions and the type of cement to be produced.

To obtain the best benefits from the use of grinding aids, the process parameters of the mill and separator may need to be adjusted.

The use of MasterCem LS 3142 also improves the "pack-set" making it easier to handle the cement powder, both in the grinding mill and in the conveyor lines to packaging and storage, thus avoiding powder bundling.

Fields of Application

MasterCem LS 3142 is primarily intended as a grinding aid in ball mills but can also be used for vertical mills or other grinding systems.

Features and benefits

MasterCem LS 3142 offers the cement manufacturer the following benefits:

- **reduction in production costs** due to less energy absorbed (kWh/t) during grinding and cement powder transport operations;
- **increased production capacity** due to higher grinding efficiency and recipe optimisation;
- **greater production efficiency** due to less mill wear, lower maintenance costs, reduced plant downtime and faster cement transfer to storage and packaging operations;
- **environmental sustainability** through reduced CO₂ emissions due to recipe optimisation and a lower clinker-to-cement ratio. Furthermore, the use of smaller quantities of clinker reduces the consumption of natural resources, thereby extending the average utilisation time of quarries.

Dosage

The recommended dosage for MasterCem LS 3142 varies between 400 and 1,000 g/ton of cement (0.04-0.10% by mass).

Different dosages are possible depending on the specific working conditions but, in any case, preliminary trials and pilot tests are recommended to determine the optimal dosage to be used.

Compatibility

MasterCem LS 3142 is compatible with all types of cements.

Packaging

MasterCem LS 3142 is available in 1,040 kg tanks and loose in tankers.

Storage

We recommend storing the product at a temperature not below +5°C and in any case protected from frost.

If stored correctly, the product has a shelf life of 12 months.



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Technical Information	
Appearance	Light brown liquid
Specific weight (g/ml at 20°C)	1.010 - 1.070
pH at 20°C	9.5 - 11.5

Handling and transportation

Refer to MasterCem LS 3142 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 or alternatively contact 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.

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