

# MasterCem<sup>®</sup> LS 3290

Late Strength Enhancer for Cement

## DESCRIPTION

**MasterCem LS 3290** is specially formulated as the grinding aid and late strength enhancer for cements.

**MasterCem LS 3290** is an aqueous modified alkanolamines mixture. Its innovative technology allows optimum cement hydration to provide higher late strength.

**MasterCem LS 3290** is compatible with all types of cement. It complies with ASTM C465-85 as a non-harmful processing additive.

## FIELDS OF APPLICATION

- Ordinary Portland Cement
- Blended cement with limestone, fly ash or slag

For additional information on **MasterCem LS 3290** and its use in developing special performance characteristics, contact your local BASF Sales field representative.

## FEATURES AND BENEFITS

**MasterCem LS 3290** is a very effective cement particle dispersant in both dry and wet form. Its molecules adsorb into cement interstitial layer and react accordingly to enhance the hydration reaction and allow more surface area for cement hydration. Further reactions with cement particles allow precipitation and nucleation processes that contribute to improved development of cement strength.

Additional benefit of **MasterCem LS 3290** is its ability to reduce air content in the cement paste and concrete. This contributes to higher late strength in cement and concrete.

These characteristics contribute to the following benefits to cement manufacturers:

- Increased cement mill output at the same cement fineness between 6% and 15%.
- Reduced total cement production by reducing grinding costs per ton of cement and replacing clinker with other fillers.
- Increased late strength of cement in particular between 5% and 20%.
- Improvement of cement dry flowability.

## PROPERTIES

Physical and chemical properties:

- Specific gravity at 24°C: 1.03 – 1.06 g/ml
- pH at 24°C: 9.0 – 11.0
- Colour: Dark brown solution

## APPLICATION

### Dispensing

**MasterCem LS 3290** can be added at the clinker feed conveyer belt or directly into the cement mill's first compartment. A proper dosing pump is required to ensure the correct dosage into the cement for obtaining the optimum performance. Our technical supports are available to provide assistance in the use of **MasterCem LS 3290** with the manual, automatic or computerized dispensing system.

## DOSAGE

The typical dosage rate for **MasterCem LS 3290** is as per the table below:

Type of Cement	Dosage Rate (gram / ton cement)
Ordinary Portland	300 – 500
Other Hydraulic Cements	300 – 500

The strength development of cement is influenced by the chemical and physical composition of the basic ingredients of the cement, grinding process parameters and clinker characteristics. Plant trial or laboratory scale ball mill test is recommended to determine the optimum dosage required to achieve specific requirements.

Higher dosage might be needed for higher percentage of clinker replacement or less reactive cement.

## PACKAGING

**MasterCem LS 3290** is supplied in 210L sealed drums, 1000L IBC tanks and bulk delivery.

## SHELF LIFE

**MasterCem LS 3290** can be stored for 12 months if stored at temperatures above 5°C, in tightly sealed original packaging. If found to be frozen, thaw it at 20°C and reconstitute by stirring.

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## PRECAUTIONS

**MasterCem LS 3290** is not a fire or health hazard. Spillages should be washed down immediately with cold water.

For detailed health, safety and environmental recommendations, please consult and follow all instructions in the product Material Safety Data Sheet.

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<b>STATEMENT OF RESPONSIBILITY</b>	The technical information and application advice given in this MBCC Group publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.
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