

CEMENTIUM™ 2300 ES (Formerly known as Cementium 200ES)

Early Strength Enhancer for Cements

DESCRIPTION

CEMENTIUM 2300 ES is formulated as a grinding aid, set accelerator and early strength enhancer. It is an aqueous non-chloride modified alkanolamine mixture.

CEMENTIUM 2300 ES is compatible with all types of cement. It complies with ASTM C465-99 as a non-harmful processing additive.

FIELDS OF APPLICATION

- Ordinary Portland cement.
- Other Hydraulic cements with limestone, fly ash or slag.

The special characteristics of **CEMENTIUM 2300 ES** effectively activate the hydration process between cement particles and the non-reactive or reactive fillers.

For additional information on **CEMENTIUM 2300 ES** and its use in developing special performance characteristics, contact your local BASF Construction Chemicals Sales field representative.

FEATURES AND BENEFITS

CEMENTIUM 2300 ES considerably increases both the cement grinding efficiency and cement strengths to a degree unequalled by conventional grinding aids. It is effective in adsorbing into cement particles and promoting the reaction between C_3A and gypsum to produce C_3A -hydration products which improves the early strength of cement.

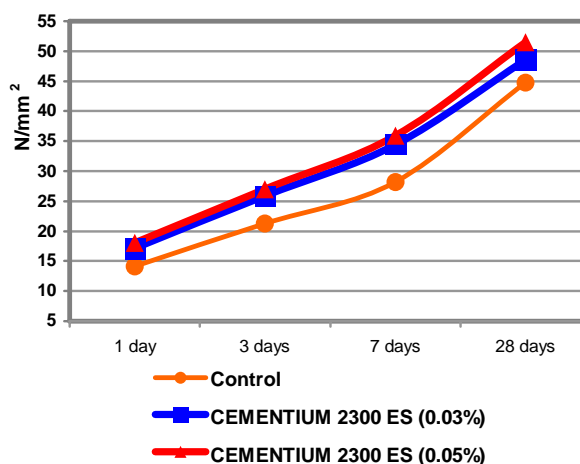
These characteristics contribute to the following:

- 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 early strength of cement in particular between 10% and 30%.
- Improved cement dry flowability.

TYPICAL PERFORMANCE DATA

CEMENTIUM 2300 ES increases the early strength of cement.

Cement Early Strength Development with
CEMENTIUM 2300 ES
(OPC Blaine size 3000-3200 cm^2/g)



Sample	Compressive Strength (N/mm ²)			
	1 day	3 days	7 days	28 days
Control	14.1	21.3	28.2	44.8
CEMENTIUM 2300 ES(0.03%)	17.1	25.9	34.4	48.6
CEMENTIUM 2300 ES(0.05%)	18.1	27.0	35.9	51.5

APPLICATION

Dispensing

CEMENTIUM 2300 ES 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 support staffs are available to provide assistance in the use of **CEMENTIUM 2300 ES** with the manual, automatic or computerized dispensing systems.

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The Chemical Company

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DOSAGE

The typical dosage rate for **CEMENTIUM 2300 ES** 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

CEMENTIUM 2300 ES is supplied in 210L sealed drums, 1000L IBC tanks and bulk delivery.

SHELF LIFE

CEMENTIUM 2300 ES can be kept 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.

PRECAUTIONS

CEMENTIUM 2300 ES 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.

AN/C2300ES/v1/020409

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF Construction Chemicals** 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.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by **BASF Construction Chemicals** either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not **BASF Construction Chemicals**, are responsible for carrying out procedures appropriate to a specific application.