

CEMENTIUM[®] 1103 GA

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

Description of Product

CEMENTIUM 1103 GA belongs to BASF's range of Grinding Aids. These products neutralize the agglomeration forces that are produced during the crystal framework fracture that occurs during the grinding process. The result is a dispersion effect that promotes the development of fineness with positive impact on grinding and separation efficiency.

These benefits can be used either for lowering unit grinding energy cost or for increasing mill throughput. Typical grinding efficiency improvement is in the range of 10-15% vs. plain control. However, product performance is strongly dependent on raw material properties, grinding equipment characteristics, process conditions and cement type. To best benefit from cement additives, mill and separator process parameters may need to be adapted.

Cement additives improve the flow characteristics of the cement through the mill and in subsequent handling: the so called "pack-set".

Fields of Application

CEMENTIUM 1103 GA is developed for application in the cement grinding process:

- Ball mills (main application)
- Vertical mills
- Other cement grinding systems

Features and Benefits

CEMENTIUM 1103 GA offers the following benefits to cement production:

- **Cost reduction** due to lower unit grinding energy and decreased specific maintenance cost. Use of low-cost energy tariffs and transfer of production to more efficient mills.
- **Capacity extension** due to higher mill throughput. Flexibility to satisfy peak market demands. Postponing or avoidance of investments for grinding capacity increase
- **Higher production efficiency** due to fewer plant stops and faster cement conveyance through the plant and silos, and in the subsequent distribution logistics.

Application Procedure

CEMENTIUM 1103 GA is a liquid, ready-to-use cement additive to be metered onto the clinker mill feed or directly into the mill.

Technical Data

Appearance	Liquid, clear to slightly turbid
Specific gravity @ 20°C	1,140 – 1,100 t/m ³
pH-value @ 23°C	Close to neutrality
Chloride ion content	Chloride free

Dosing

The recommended dosage rate is between 500 and 1,500 g per ton of cement (0.05-0.15% mass). Other dosages may be required in specific situations. Lab tests or plant trials are recommended to determine the optimum dosage. For further questions please consult our Technical Services Department.

Adequate, calibrated dosing equipment with adjustable flow rate and appropriate dosage range is required to obtain the maximum performance of the product.

Compatibility

CEMENTIUM 1103 GA is compatible with all types of cements, including Ordinary Portland Cements and composite cements.

Standards

CEMENTIUM 1103 GA fulfils the European cement standard EN 197.1.

Packaging

CEMENTIUM 1103 GA is available in bulk, 1'000 l containers and 208 l drums.

Storage

It is recommended to store CEMENTIUM 1103 GA at temperatures above 5°C and protect it from freezing. Tubes and pipes shall possibly be isolated. If stored in unopened containers according to manufacturer's instructions, the shelf life is minimum 12 months.

Handling and transportation

No special requirements must be observed while the product is used. Protective gloves and glasses are recommended. Do not eat, drink or smoke during application. CEMENTIUM 1103 GA is non-flammable, non-toxic, non-irritant, and is not subject to special transport requirements. CEMENTIUM 1103 GA can be diluted with water. Please refer to the MSDS for more detailed information.

Technical service

BASF assists customers in all phases of cement additives implementation in cement manufacturing by following a well structured process. This starts with the assessment of the customer's needs and the technical limitations, continues with lab and field grinding trials, and ends with a comprehensive performance evaluation of the added value of cement additives.

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