

PRODUCT DATA SHEET

SikaGrind® ES 2178

(formerly MCem ES 2178)

Cement additive engineered for enhancement of cement early strength and reduction of unit grinding energy/increase of cement mill throughput

DESCRIPTION

SikaGrind® ES 2178 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, SikaGrind® ES 2178 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 SikaGrind® ES series are specifically designed to increase early strength of cement. These benefits can be used either for achieving superior product performance or for cement optimization while maintaining the original performance level. SikaGrind® ES 2178 improves the flow characteristics of cement with positive impact on cement conveyance and reduction of pack-set in storage.

USES

SikaGrind® ES 2178 is developed for application in the cement grinding process in :

- Ball mills (closed and open circuits)
- Vertical mills
- Other grinding systems, such as: GGBS grinding

PRODUCT INFORMATION

Packaging

SikaGrind® ES 2178 is available in bulk and Intermediate Bulk Container (IBC)

Shelf life

If stored in unopened containers according to manufacturer's instructions, the shelf life is 12 months.

Storage conditions

It is recommended to store SikaGrind® ES 2178 at temperatures above 5°C. Pipes should be thermally isolated.

FEATURES

SikaGrind® ES 2178 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.
- 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.
- Good working environment due to low dust generation.

CERTIFICATES AND TEST REPORTS

SikaGrind® ES 2178 fulfils the European cement standard EN 197.1.

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|-----------------------|-------------------------------------|
| Appearance and colour | Brown liquid |
| Density | 1.15–1.20 g/cm ³ at 25°C |
| pH-Value | 7–9 |

APPLICATION INFORMATION

Compatibility SikaGrind® ES 2178 is compatible with all types of cements.

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

IMPORTANT CONSIDERATIONS

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.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SikaGrind® ES 2178 can be metered onto the mill feeders or injected into the mill. The recommended dosage rate is between 300 - 600g per ton of cement. Other dosages may be required in specific situations. The optimum dosage should be evaluated in plant trials. For further information please consult Sika Technical Service Department.

Calibrated dosing equipment with an adjustable flow rate and appropriate dosage range is recommended to obtain the maximum performance of the product.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

Sika Gulf B.S.C. (c)

Tel: +973 177 38188
 Email: info@bh.sika.com
 Sika Kuwait Cons. Mat. & Paints Co WLL
 Tel: +965 22 282 296
 Email: sika.kuwait@kw.sika.com
 Web: gcc.sika.com

Sika UAE LLC

Sika MB Construction Chemicals LLC
 Sika International Chemicals LLC
 Tel: +971 4 439 8200
 Email: info@ae.sika.com
 Web: gcc.sika.com

Sika Saudi Arabia Limited

Sika Construction Chemicals for
 Manufacturing LLC
 Riyadh / Jeddah / Dammam / Rabigh
 Tel: +966 12 692 7079
 Email: info@sa.sika.com
 Web: gcc.sika.com

Sika LLC - Oman

Master Builders Solutions LLC
 (part of Sika)
 Tel: +968 22 826 500
 Email: info@om.sika.com
 Web: gcc.sika.com



ISO 9001, 14001, 45001 – SGS
 -Sika UAE LLC
 -Sika International Chemicals LLC
 -Sika Gulf B.S.C. (c)
 -Sika MB Construction Chemicals for Manufacturing LLC
 -Sika MB Construction Chemicals for Master Builders Solutions LLC

All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.



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