

PRODUCT DATA SHEET

SikaGrind® LS-53 KH

EFFICIENT GRINDING AID AND QUALITY IMPROVER FOR PORTLAND LIMESTONE CEMENT

DESCRIPTION

SikaGrind® LS-53 KH is a chloride free, liquid cement additive with performance enhancing properties. SikaGrind® LS-53 KH has been specifically developed for the production of Portland Limestone Cement. It improves the workability and strength development. SikaGrind® LS-53 KH is designed to optimize the efficiency of modern separators and cement mills especially for co-grinding of blended cements.

USES

- Improve the production rate of the cement grinding system
- Replace clinker with limestone
- Increase the early and late strength of cement
- Improve the workability

CHARACTERISTICS / ADVANTAGES

SikaGrind® LS-53 KH is a dispersant with the following characteristics:

- Neutralisation of electrical charges on the surface of the cement particles
- Reduced agglomeration of ground cement particles (better dispersion)
- Less coating (accumulation of material) on grinding media and mill internals
- SikaGrind® LS-53 KH provides the following advantages in the cement production:
 - Enhanced grinding performance of the cement mill
 - Higher separator efficiency
 - Higher mill output (tons per hour)
 - Reduced relative power consumption per ton of cement
 - Easier achievement of the desired cement fineness (Blaine, sieve residue)
 - Minimized problems with “plugging”

SikaGrind® LS-53 KH gives the following advantages to the cement:

- Increased strength development at all ages
- Improved workability and improved particle size distribution
- Improved powder flow characteristics and easier discharge of the silos
- Economic and ecologic cement design with clinker replacements

PRODUCT INFORMATION

Composition	Blend of amines
Packaging	1,000 kg
Appearance / Colour	Brown Liquid
Shelf life	12 months in undamaged, unopened and sealed original containers.
Storage conditions	Stored at temperatures between +5°C and +35°C. Protect from frost, direct sunlight and contamination. Note: When delivered in bulk, the tanks and equipment used must be free

from contaminants.

Density	1.110 - 1.130 kg/L (at +25°C)
pH-Value	8.5 - 10.5

APPLICATION INFORMATION

Recommended Dosage	Typical dosage rates of SikaGrind® LS-53 KH are between 0.5 - 3 kg per tonne of cement (0.05 - 0.3% of total weight = cement clinker + additions). The optimum dosage to achieve the desired characteristics shall be determined in plant trials. Influencing factors are e.g. the properties of clinker, limestone and other plant variables. For consistent results, SikaGrind® LS-53 KH must be accurately dispensed.
Compatibility	Cements treated with SikaGrind® LS-53 KH are compatible in concretes produced with all commercial admixtures including air entrainers, water reducers, retarders and superplasticizers. The performance of concrete admixtures is not adversely affected by the use of SikaGrind® LS-53 KH.
Dispensing	SikaGrind® LS-53 KH shall be added onto the clinker feed shortly before the mill entrance or directly into the grinding mill. Suitable dosage pumps with adjustable flow rates shall be used for accurate dosing. Note: Periodically, the end of the additive tube/hose shall be checked to ensure that it is not blocked.

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.

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 the exact product data and uses.

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.

ECOLOGY, HEALTH AND SAFETY

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

Sika (Cambodia) Ltd.
Legacy Business Center, Building #29
street 245
Sangkat Tuol Tom Poug 2, Khan
Chamkarmorn
12308, Phnom Penh, Cambodia
Tel: +855 23 901 450

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