

PRODUCT DATA SHEET

SikaGrind[®]-221 PH

EFFICIENT AND STRENGTH ENHANCING GRINDING AID FOR THE PRODUCTION OF CEMENT

DESCRIPTION

SikaGrind[®]-221 PH is a chloride-free liquid cement grinding aid with performance enhancing properties. SikaGrind[®]-221 PH has been specifically designed to increase the output of cement grinding plants and obtain improved strength development for Type1 cements.

USES

- Improve the production rate of the cement grinding system.
- Increase the strength of the cement

CHARACTERISTICS / ADVANTAGES

SikaGrind[®]-221 PH is a dispersant with the following characteristics:

- Neutralization of electrical charges on the surface of the cement particle.
- Separation of the cement particles.

SikaGrind[®]-221 PH provides the following advantages in the cement production:

- Enhanced grinding properties of the cement mill due to less accumulation of material on grinding balls and mill-liners.
- Higher separator efficiency due to improved cement particle dispersion.

- Reduced relative power consumption per ton of cement due to increased output of the grinding systems (tons per hour).
- Easier achievement of the desired cement fineness (Blaine, particles fraction > 32 µm, granulometry) due to reduced re-agglomeration of the sufficiently ground cement particles.
- Minimized problems with “plugging” due to improved powder flow characteristics.

SikaGrind[®]-221 PH gives the following advantages to the finished cement:

- Reduced quantity of “over-milled particles in the cement granulometry.
- Easier discharge of the silos.
- Increased strengths at all ages.
- Economic cement design with clinker replacements.
- Reduced water for normal consistency.

APPROVALS / STANDARDS

SikaGrind[®]-221 PH is produced under quality management systems according to EN ISO 9001.

PRODUCT INFORMATION

Chemical Base	Amine base
Packaging	1,000 L bulk and 210 L drum
Appearance / Colour	Brown liquid.
Shelf Life	At least 12 months in undamaged, unopened, and sealed original containers

Storage Conditions	Store at temperature between 5°C and 35°C. Protect from direct sunlight and contamination. Note: When delivered in bulk, the tanks and equipment used must be free from contaminants.
Density	Approximate 1.02 kg/L (at 27°C)
Recommended Dosage	Typical dosage rates of SikaGrind®-221 PH are between 0.3 - 1.0 kg per ton of cement (0.03% - 0.10% 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 source, type of cement and other plant variables. For consistent results, SikaGrind®-221 PH must be accurately dispensed.
Compatibility	Cements treated with SikaGrind®-221 PH 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®-221 PH.

DISPENSING

SikaGrind®-221 PH is added onto the clinker feed shortly before the mill entrance or directly into the grinding mill (first or second compartment). 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 Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

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.

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