

## PRODUCT DATA SHEET

## PRMX-513

## EFFICIENT GRINDING AID AND QUALITY IMPROVER FOR PORTLAND LIMESTONE CEMENT

## DESCRIPTION

PRMX-513 is a liquid cement additive with performance enhancing properties. PRMX-513 has been specifically developed to produce Portland Limestone Cement. It improves the workability and strength development. PRMX-513 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

## FEATURES

PRMX-513 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.

PRMX-513 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”.

PRMX-513 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	Aqueous blend of minerals and polymers
Packaging	1,000 kg IBC
Appearance and colour	Colourless - Yellow liquid
Shelf life	12 months from the date of production if it is stored properly in undamaged, original, and sealed packaging.

**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** 1.140 - 1.170 g/cm<sup>3</sup> (25 °C (77 °F))

**pH-Value** 8.0 - 10.5 (25 °C (77 °F))

**Viscosity** 30 - 60 mPa.s (25 °C (77 °F))

## APPLICATION INFORMATION

**Recommended dosage**

Typical dosage rates of PRMX-513 are between 0.25 – 1.0 kg per tonne of cement (0.025 – 0.100% of total weight = cement clinker + additions). 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. For consistent results, PRMX-513 must be accurately dispensed.

**Compatibility**

Cements treated with PRMX-513 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 using PRMX-513.

**Dispensing**

PRMX-513 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 Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## 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.

## 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.

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## 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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