SIDHYA ASIA
CHEMICAL PRIVATE LIMITED

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PRODUCT DATA SHEET

Sidhya® Rheo Crete 3000

Set retarding & stabilizing powder admixture for cement suspensions

Description

Sidhya® Rheo Crete 3000 is a special retarder developed to control the hydration of concrete and grouting systems. The product is a high-performance admixture for greater workability and extended open time of plaster, concrete and grout systems. The product's special formulation also has a stabilizing effect which makes the cementitious more pumpable and easy to store. The application of Sidhya® Rheo Crete 3000 enables increasing the compressive, tensile and flexural strength of concrete and cement systems.

Applications

Sidhya® Rheo Crete 3000 is a high-performance super retarder designed for extending the hydration process of cementitious suspension and concrete. Aside from extending the initial and final set times and enhance the strength through cement particle dispersion,the product can be mainly used for the following applications:

- Production of cement suspension in back filling.
- Production of high extended open time grout up to 96 hours.
- Production of high-quality grout/concrete in Gravity dam construction.
- Can be used as a retarder in long haul concrete in Dams.
- Production of hot weather concrete & grouting.
- Ideal for large pours such as dams and raft foundations.
- Helps in avoiding cold joints while pouring.

Mixing

Sidhya® Rheo Crete 3000 is not recommended to be added along with dry aggregates and cementitious materials. Sidhya® Rheo Crete 3000 should be added to the mixer post addition of full water, cementitious and other additives. To achieve the optimum performance, the product is recommended to have minimum wet mixing period of 60 seconds depending on the mixing conditions.

Technical Specifications

Color	White - Yellowish
Appearance	Homogenous
State	Powder/Crystalline
Specific Gravity	1.98 ± 0.05 @ 25^{0}C
pH	7.0 ± 1.0 @ 25^{0}C
Dry Matter [%]	99.0 ± 0.50
Sulphate Ion Content	<0.05%
Shell Life	12 months from the date of manufacturing if stored as per recommendations and original sealed packing.

Advantages

Sidhya® Rheo Crete 3000 improves the workability and open time of concrete and grout and hence provides the following advantages:

- Reduces the risk of pumping and choking of cement grout.
- Stabilizes and controls the hydration time of cement grout/concrete.
- Easy management of concrete/grout supply chain.
- Increases production efficiency of long-haul concrete.
- Enhances the performance of drilling fluids in gravity dam.
- Improves the elasticity and compressive strength of grout.
- Improvement in placement of concrete.
- Reduces shrinkage and creep.

Dosage

The recommended dosage of Sidhya® Rheo Crete 3000 should be between 0.2% to 1.0% by weight of cementitious. Effects of over dosage can delay the setting time and lead to bleeding and segregation in fresh properties.

The optimum dosage of the Sidhya® Rheo Crete 3000 should be determined by preliminary trials at site. The dosages above recommendations can be used if agreed by the client and consultant for special applications along with consultation of Sidhya® technical team.

Compatibility

Sidhya® Rheo Crete 3000 is compatible with all types of cement and binders such as GGBS, Ultra Fine GGBS, Micro silica, Fly ash and Metakaolin. Sidhya® Rheo Crete 3000 when using along with other Sidhya® products should be added separately and must not be blended prior to addition.

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Technical Compliances

Sidhya® Rheo Crete 3000 conforms to the requirements of IS 9103: 2007, EN 934 -2, ASTM C494 for Type B retarding admixtures.

Storage

Sidhya® Rheo Crete 3000 has a shell life of 12 months provided the temperature is kept between +1.0^{0}C to +50.0^{0}C. Please contact Sidhya® technical team if the product falls outside the temperature range.

Packaging

Sidhya® Rheo Crete 3000 is available in 25 kg bags and 600 kg jumbo bags and bulk tanker. Please contact our Sales Representative for customized packing and more details

Legal Notice

The recommendations related to the application and recommendations are given in good faith based on Sidhya's current experience and knowledge of the products. The benefits stated about the product are only applicable if guidelines provided by Sidhya for storing, handling and mixing are followed under normal conditions. 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 is always advised to test the product's compatibility and suitability for the intended requirements and application. Sidhya reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. 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.

Sustainability, Health and Safety

End use of the product must read the Material Safety Data Sheet (MSDS) of the product. The MSDS provides information and advice on storage, handling and disposal of the product and instructions related to physical ecological, toxicological and other safety related data.

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