BUILDING TRUST

PRODUCT DATA SHEET

Sika® Sigunit®-111 LS PH

Liquid shotcrete accelerator

DESCRIPTION

Sika® Sigunit®-111 LS PH is a high quality shotcrete accelerator in liquid form.

USES

- Temporary support in underground constructions excavated by the traditional method (NATM)
- Slope stabilization
- Dewatering work in dry process configuration

CHARACTERISTICS / ADVANTAGES

Sika® Sigunit®-111 LS PH provides the following benefits:

- Reduction of the spraying time as application of thick layers is possible
- Create a rapid setting of the shotcrete
- Free from chlorides (can be used with shotcrete containing steel fibers – e.g. SikaFiber)
- Large reduction of rebound as long as the spraying is performed according to the states of the art
- Improves bonding of sprayed concrete to rock, concrete

PRODUCT INFORMATION

Chemical Base	Special inorganic substances in liquid form
Packaging	210 L/drum , 1000 L/bulk
Appearance / Colour	Cloudy transparent
Shelf Life	12 months from date of production if stored properly
Storage Conditions	Store properly in unopened and undamaged original sealed containers protected from direct sunlight & moisture at temperatures between +5°C and +30°C. Note: Once the drum is opened, use the material as quickly as possible.
Density	1.39 kg/L – 1.45 kg/L
Recommended Dosage	Accelerator dosage depends on many factors and actually should be adjusted as per the site conditions met. It should not be fixed for one time at all. The dosage of the accelerator would vary according to the scope of work. Typically, if the reduction of the rebound (without early strength) is required, the dosage would be ~6% to 10%. If early strength is required, dosage would be from 10% to 16%.

It would depend as well as on the type of application, vertical (bench) spraying, or overhead spraying. The performance of the accelerator would depend on the cement type, content, age and quality, the w/c of the mix, temperature of the mix, the substrate condition, etc.

Process	Requirement	Dosage
Dry	Rebound reduction or vertical application.	6% - 8%
	Early strength or overhead application.	10% - 16%
Wet	Rebound reduction or vertical application.	8% - 12%
	Early strength or overhead application.	12% - 16%

Appilcation Temperature
Concrete temperature should not be lower than 15ºC (especially so for thick layers). Lower temperatures require higher dosages.

Dispensing

Sika® Sigunit®-111 LS PH is added to tanks to suitable liquid dosing unit such as Aliva AL 403.4 (24-240 L/hr) or AL 403.5 (30-700 L/hr).
Suitable dosing unit type is determined according to cement content, spraying out-put and the accelerator dosage. In case of interest or question about Sika® Aliva liquid dosing unit, please contact our technical department.

Compatibility

Sika® Sigunit®-111 LS PH is compatible with all types of ordinary Portland cement. Note that shotcrete mixes produced with fly ash might see the initial set of the shotcrete delayed as compared to mixes not containing fly ash.
It is compatible with following products: Sikament®, Sika® ViscoCrete®, and SikaFiber. However, it is not compatible with Plastiment or Plastocrete® admixtures range. In case of doubt, please consult our technical department.

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.

APPLICATION INSTRUCTIONS

Generally speaking, the accelerator will be added and mixed with the other concrete components as follows:
Dry process:
Sika® Sigunit®-111 LS PH supplied from the liquid dosing unit to the mixing tube assembly by means of water under pressure (2 bar – 3 bar more than the conveying pressure). The mixing tube assembly being located at ~2.5 meters behind the nozzle or at the nozzle directly.
Wet process:
Sika® Sigunit®-111 LS PH is supplied from the liquid dosing unit to the mixing tube assembly by means of air under pressure (2 bar – 3 bar more than the conveying pressure). The mixing tube assembly being located at ~2.5 meters behind the nozzle or at the nozzle directly.

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 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 Philippines Inc.
888 Cayetano Avenue,
C5 Extension, Brgy. Palingon - Tipas
Taguig City, Philippines 1630
Telephone no. +63 2 8790-9800
Fax no. +63 2 8790-9828