BUILDING TRUST

PRODUCT DATA SHEET

Sika® Sigunit®-15 AF 11 L PK

Alkali Free Liquid Accelerator Shotcrete Admixture

DESCRIPTION

Sika® Sigunit®-15 AF 11 L PK is a high performance, alkali free accelerator for shotcrete in liquid form.

USES

Sika® Sigunit®-15 AF 11 L PK is suitable for use as an accelerator in both the dry and wet spray processes. The main uses of Sika® Sigunit®-15 AF 11 L PK are as follows:

- Shotcrete with high initial strength
- Support at the face
- In tunneling
- In mining
- In gallery construction
- In shaft construction
- Lining stabilization in underground works
- Rock and slope stabilization
- High quality lining shotcrete
- To form permanent gunite or shotcrete shells

CHARACTERISTICS / ADVANTAGES

The accelerator's effect depends on the cement content, type and age, the shotcrete and substrate temperatures, layer thicknesses and the spray process. The water/ cement ratio in wet spraying and the quantity of mixing water in dry spraying are important criteria for the accelerating effects of Sika® Sigunit®-15 AF 11 L PK.
Sika® Sigunit®-15 AF 11 L PK has following characteristics and advantages as a shotcrete accelerator:

- High early strength development
- Alkali-free
- Minimal strength loss of the accelerated concrete
- No additional pollution of surface and groundwater by leached out alkalis
- Lower rebound during application
- Improves bond of shotcrete to rock and concrete, thus facilitating overhead spraying
- Distinct reduction of dust
- Chloride free: does not attack steel reinforcement

APPROVALS / STANDARDS

Sika® Sigunit®-15 AF 11 L PK follows the requirements of ASTM 1102 - 94.

PRODUCT INFORMATION

Chemical Base	Special blend of inorganic materials
Packaging	05 ltr jerry can 20 ltr plastic can 200 ltr drum 1000 ltr IBC Bulk supply in tanker is possible on demand

Appearance / Colour	Turbid Viscous liquid
Shelf Life	06 months minimum from production date if stored properly in original unopened packaging.
Storage Conditions	Store in undamaged, unopened, original sealed containers, protected from direct sunlight and frost, at temperature between +5 °C and +35 °C. Opened containers must be used as quickly as possible.
pH-Value	≤ 4
Total Chloride Ion Content	Nil
Specific gravity	1.4 - 1.6 at 25°C

APPLICATION INFORMATION

Recommended Dosage	The correct dosage must be determined by preliminary testing. For layering thicknesses of up to 15cm in one pass, dosage is 3% to 10% of weight of binder. Dosage of Sika® Sigunit®-15 AF 11 L PK is by peristaltic pump, such as the Aliva-403. Optimized mixing into the concrete mix and skilled nozzle handling are also essential. The following Sika products are generally used for the basic shotcrete mix: Sikament, Sika Plastiment and Sika Viscocrete SikaFume Sika Pump

SYSTEM INFORMATION

System Structure	Pumped concrete aggregate grading: ▪ Normally max. aggregate size 8mm ▪ Concrete consistency (dependent on spray equipment): flow table spread size 45cm; w/c ratio 0.48 ▪ The use of a suitable superplasticizer (such as Sikament, Sika Plastiment and Sika Viscocrete) is essential ▪ Temperature of fresh concrete: > 15°C

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.

FURTHER DOCUMENTS

If thicker layers of shotcrete are to be applied, ensure that the temperature of the concrete is not lower than 15°C. Lower temperatures will require a higher dosage

LIMITATIONS

When using sulphate resistant cements, strength development can be slower. Sika® Sigunit®-15 AF 11 L PK is not compatible with Sigunit-L20 / L62. Before using Sika® Sigunit®-15 AF 11 L PK the hoses must be cleaned thoroughly.
The use of Sika® Sigunit®-15 AF 11 L PK requires technically correct dosing and conveying / spraying technology. Metallic parts of the pump that come into direct contact with the product should be made of stainless steel. The local material sources and should be trialed.

ECOLOGY HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains 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.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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