

PRODUCT DATA SHEET

Sika® Sigunit®-49 AF

Alkali-free accelerating admixture in powder form



DESCRIPTION

Sika® Sigunit®-49 AF is a non-toxic, alkali-free accelerator in powder form for shotcrete in the dry spray process.

USES

When large thicknesses is required to be sprayed even if overhead spraying is necessary

When high initial strength is needed / the shotcrete must play a supporting role in the early stage.

The main application areas of Sika® Sigunit®-49 AF are:

- Heading stabilization in tunnelling
- Support at the face in tunnelling
- Rock and slope stabilisation

FEATURES

Sika® Sigunit®-49 AF causes in the shotcrete:

- Fast setting and high early strength
- The performance is depending on:
- Cement content, - age and kind
 - Shotcrete and substrate temperatures
 - The quantity of mixing water
 - Layer thicknesses and the spray process

The following advantages distinguish Sika® Sigunit®-49 AF as a shotcrete accelerator:

- Alkali-free and non-toxic, which eliminates any adverse effects from additional alkali's in the spray dust
- If proper applied minimum strength loss in the accelerated concrete
- No additional surface and ground water pollution by leached-out alkalis
- Lower rebound during application
- Improves bond of shotcrete to rock and concrete, making overhead spraying easier
- Sika® Sigunit®-49 AF is non corrosive to steel reinforcement

CERTIFICATES AND TEST REPORTS

Confirms to the requirements of EN 934-5, Table 2

PRODUCT INFORMATION

Composition	Mineral based alkali-free powder
Packaging	25 kg bags, 40 bags on a pallet
Appearance and colour	Beige powder
Shelf life	12 months shelf life from date of production if stored properly in undamaged, unopened, original sealed packaging.
Storage conditions	Dry storage at temperatures up to 30 °C. Protect from direct sunlight.
Bulk density	1.10 ± 0.1 g/cm ³

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Total chloride ion content $\leq 0.1\%$

Equivalent sodium oxide $\leq 1.0\%$



APPLICATION INFORMATION

Recommended dosage	The exact dosage must be defined by preliminary testing. It is normally between 4 % and 7 % of weight of binder. The maximum dosage should not exceed 7 % of weight of binder.
Compatibility	An aptitude test according to DIN 18551 is required before use. When applying shotcrete in thicker layers, make sure that the temperature of the basic concrete is not below +15 °C. Lower temperatures require a higher dosage of the accelerator. The use of Sika® Sigunit®-49 AF requires skilled technical installation of the dosing and pumping system. Support from our Technical Department is recommended.
Dispensing	At the construction site Sika® Sigunit®-49 AF is added to the premix when introduced into the injection molding machine. In dry concrete plant Sika® Sigunit®-49 AF is metered into the mixer.

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

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

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. 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.

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