

**Product Data Sheet**  
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Sigunit®-49 AF

## Sigunit®-49 AF

Alkali free powder shotcrete accelerating admixture

### Product Description

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

### Uses

Sigunit®-49 AF is suitable for use as an accelerator in the dry spray process.

The main uses of Sigunit®-49 AF are:

- Shotcrete with high initial strength
- Support at the face in tunnelling
- Rock and slope stabilisation

### Characteristics / Advantages

The accelerator's effect is dependent on the cement content, type and age, the shotcrete and substrate temperatures, layer thicknesses and the spray process. In dry spraying, the quantity of mixing water is an important criterion for the accelerating effects of Sigunit®-49 AF.

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

- Alkali-free and non-toxic, which eliminates any adverse effects from additional alkalis in the spray dust
- 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
- Sigunit®-49 AF is non corrosive to steel reinforcement

### Product Data

#### Form

**Appearance / Colour** Powder, beige

**Packaging** 25 kg bags  
Palleted: 40 x 25 kg

#### Storage

**Storage Conditions / Shelf Life** 12 months from date of production if stored in undamaged and unopened, original sealed bags in dry conditions.

#### Technical Data

**Chemical Base** Mineral based, alkali-free powder.

**Density** 1.10 ± 0.05 kg/l



## System Information

### Application Details

<b>Dosage</b>	<p>The exact dosage must be defined by preliminary testing. It is normally between 4% and 7% of weight of binder.</p> <p>The mix design for dry process shotcrete is dependent on the quality requirements and method of application. The following Sika® products are frequently also used for improving the basic concrete mix for shotcrete:</p> <ul style="list-style-type: none"> <li>- Sikacrete®-L</li> <li>- Sikacrete®-PP1 TU</li> <li>- SikaFume®-HR / -TU</li> </ul>
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### Application Instructions

<b>Notes on Application / Limitations</b>	<p>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.</p> <p>The use of Sigunit®-49 AF requires skilled technical installation of the dosing and pumping system.</p> <p>Support from our Technical Department is recommended.</p>
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<b>Value Base</b>	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.
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<b>Local Restrictions</b>	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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<b>Health and Safety Information</b>	For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.
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<b>Legal Notes</b>	<p>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.</p>
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Sika Limited  
 Watchmead  
 Welwyn Garden City  
 Hertfordshire  
 AL7 1BQ  
 United Kingdom

Phone +44 1707 394444  
 Telefax +44 1707 329129  
[www.sika.co.uk](http://www.sika.co.uk), email: sales@uk.sika.com

