

# PRODUCT DATA SHEET

## Sika® Sigunit® L-54 AF

### ALKALI FREE LIQUID ACCELERATOR SHOTCRETE ADMIXTURE

#### DESCRIPTION

Sika® Sigunit® L-54 AF is an alkali free accelerator in liquid form for shotcrete applications.

#### USES

Sika® Sigunit® L-54 AF is a set accelerator suitable for both wet and dry spray applications.

Sika® Sigunit® L-54 AF is mainly used in :

- Securing of rock in tunnel mine construction.
- Rock and slope stabilization
- High quality shotcrete for general construction work.

#### CHARACTERISTICS / ADVANTAGES

- Alkali free (non-caustic) and classified as non-toxic product.
- Very fast setting of shotcrete mixes
- No strength loss of the accelerated concrete if used correctly
- No additional contamination of mountain and ground water due to washed out alkalis
- Large reduction in rebound
- Improves bond of shotcrete to rock and concrete, making overhead spray easier.
- Free of chlorides, no danger to steel reinforcement and steel fibres.
- Low viscosity – less pumping problems

#### PRODUCT INFORMATION

<b>Chemical Base</b>	Mixture of special organic substances	
<b>Packaging</b>	210 L Drum	
<b>Appearance / Colour</b>	Liquid / Greyish transparent	
<b>Shelf Life</b>	Minimum 3 months from the date of production	
<b>Storage Conditions</b>	<p>Stored at temperatures between 5 °C and 30 °C in unopened original containers protected from direct sunlight and heat.</p> <p>It these conditions are unattainable the Sika® Sigunit® L-54 AF may precipitate. If this occurs, the performance of Sika® Sigunit® L-54 AF may be adversely affected, and a Sika Representative should be contacted.</p>	
<b>Density</b>	at +20 °C	1.33 – 1.40 kg/L
<b>pH-Value</b>	at +20 °C	3.0 – 4.0
<b>Total Chloride Ion Content</b>	No added chlorides	

#### TECHNICAL INFORMATION

<b>Concreting Guidance</b>	The water cement ratio for mixing concrete should preferably be less than 0.45. The lower the water cement ratio, the better the results obtained will be, including lower dosage of Sika® Sigunit® L-54 AF
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## SYSTEM INFORMATION

### Compatibility

Sika® Sigunit® L-54 AF is compatible with all types of ordinary Portland Cement and standard cement replacement materials.  
It is also compatible with the following Sika Product system Sikatards, Sikaments, SikaPump, Sika Ferrogard.

## APPLICATION INFORMATION

### Recommended Dosage

In general a dosage 4 - 7 % by weight of cement.  
The most effective dosage must be determined by site trials.

## APPLICATION INSTRUCTIONS

### DISPENSING

- Sika® Sigunit® L-54 AF is metered and added using a liquid dosage unit.
- Optimum dispersion in the shotcrete is governed by nozzle configuration and shotcreting techniques

### LIMITATIONS

- The Sika® Sigunit® L-54 AF's effect depends on cement content, age, type and substrate.
- It is also dependent on the temperature of the shotcrete and the application area, and shotcrete methods used.
- The performance of the Sika® Sigunit® L-54 AF also significantly depends on, in the wet spray process, the w/c ratio of the basic concrete mix, and in the dry spray process, the amount of water added during spraying.
- Metal components that come into direct contact with the products should be fabricated of stainless steel. Do not use brass parts.

## 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.

## 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.

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## 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.

## 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.