

# PRODUCT DATA SHEET

## Sigunit® L-535 AF

### ALKALI FREE LIQUID ACCELERATOR SHOTCRETE ADMIXTURE

#### DESCRIPTION

Sigunit® L-535 AF is a high-performance, liquid, alkali-free shotcrete accelerator.

#### USES

Sigunit® L-535 AF is a suitable set-accelerator for wet-process shotcreting. The main fields of application for Sigunit® L-535 AF are:

- Securing of rock in tunnel mine construction
- Rock support and slope protection
- High-quality lining shotcrete

#### CHARACTERISTICS / ADVANTAGES

Particularly outstanding advantages of Sigunit® L-535 AF shotcrete accelerator are:

- Alkali-free
- If correctly used, marginal loss of strength of the shotcrete
- No added pollution to mountain water and underground water by leached-out alkalis
- Distinctly visible reduction of dust formation
- Easier overhead spraying by improved shotcrete adherence to rock and concrete
- Chloride-free, does not attack steel

#### PRODUCT INFORMATION

<b>Chemical base</b>	Inorganic substance	
<b>Packaging</b>	200 L drums 1000 L bulk	
<b>Appearance / Colour</b>	Liquid / Whitish Colour	
<b>Shelf life</b>	6 months from the date of production if stored properly in original, unopened and undamaged sealed packaging in dry conditions.	
<b>Storage conditions</b>	Store in shaded area, protect from direct sunlight.	
<b>Density</b>	at +20 °C	1.40 - 1.45 kg/L

#### TECHNICAL INFORMATION

<b>Concreting Guidance</b>	<ul style="list-style-type: none"> <li>▪ 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 Sigunit® L-535 AF</li> <li>▪ Concrete temperature should not be lower than +15 °C (especially so for thick layers). Lower temperatures require higher dosages.</li> </ul>
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## SYSTEM INFORMATION

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### Compatibility

Use of suitable superplasticiser (such as Sika Viscocrete® SC series) and setting stabilizer (such as SikaTard®-930) is strongly recommended. For specific application, additional admixtures / additives can be used, for example:

- SikaPump® for demanding pumping situations
  - SikaFume® for high strength, low rebound spray
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## APPLICATION INFORMATION

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### Recommended Dosage

In general a dosage 3 - 7 % by weight of cement.  
The most effective dosage must be determined by site trials.

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### DISPENSING

- The exact dosage must be determined by preliminary testing. For layers up to 15 cm thickness in 1 pass the dosage is in the range of 4 – 6 % by weight of the binder cement. Sigunit® L-535 AF is dosed by means of a peristaltic pump such as Aliva AL-403
  - Optimal atomisation of Sigunit® L-535 AF and its mixing with the shotcrete mix must be ensured
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## LIMITATIONS

- Sigunit® L-535 AF is compatible with all types of ordinary Portland Cement and standard cement replacement materials
- Accelerator hoses must be thoroughly cleaned before using Sigunit® L-535 AF
- Metal parts of the pump coming into direct contact with Sigunit® L-535 AF must be made from stainless steel
- The set-accelerating effect depends on cement content, cement age, cement type, temperature of shotcrete and substrate as well as on layer thickness and shotcreting method. A further efficiency parameter of Sigunit® L-535 AF is the w/c ratio of the concrete mix in wet-process shotcreting, or the quantity of water added at the nozzle in dry-process shotcreting
- Sigunit® L-535 AF is based on suspension of solid particles, it is recommended to stir well before use

## 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.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data and uses.

## 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.

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