

# PRODUCT DATA SHEET

## Sigunit®-L530 AF

ALKALI FREE LIQUID ACCELERATOR SHOTCRETE ADMIXTURE

### PRODUCT DESCRIPTION

Sigunit-L530 AF is a high performance, alkali free accelerator for shotcrete in liquid form.

#### USES

Sigunit-L530 AF is suitable for use as an accelerator in both the dry and wet spray processes. The main uses of Sigunit-L530 AF are as follows:

- Shotcrete with high initial strength
- Support at the face
  - in tunneling
  - in mining
  - in gallery construction
  - in shaft construction
- Lining stabilisation in underground works
- Rock and slope stabilisation
- 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 Sigunit-L530 AF. Sigunit-L530 AF has the 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

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## PRODUCT DATA

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<b>FORM</b>	Special blend of inorganic materials
<b>COLOUR</b>	Cloudy black liquid
<b>PACKAGING</b>	Available in 1000 kg non-returnable IBC

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<b>STORAGE</b>	<b>STORAGE CONDITIONS / SHELF-LIFE</b> Three (3) months from date of production if stored in undamaged and unopened, original sealed containers, protected from direct sunlight and frost, at temperatures between +5°C and +30°C. Opened containers must be used as quickly as possible.
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<b>TECHNICAL DATA</b>	<b>DENSITY</b> 1.40kg/litre approx.
	<b>PH VALUE</b> 3.0 ± 0.5
	<b>CHLORIDE CONTENT</b> No added chlorides
	<b>TEA CONTENT</b> Does not contain triethanolamine
	<b>AIR ENTRAINMENT</b> Does not affect air content of shotcrete

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## System Information

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<b>SYSTEM STRUCTURE</b>	Pumped concrete aggregate grading: <ul style="list-style-type: none"><li>▪ Normally max. aggregate size 8mm</li><li>▪ Concrete consistency (dependent on spray equipment): Flow table spread size 45cm; w/c ratio 0.48</li><li>▪ The use of a suitable superplasticizer (such as Sika ViscoCrete SC-310) is essential</li><li>▪ Temperature of fresh concrete: &gt; 15°C</li></ul>
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<b>APPLICATION DETAILS</b>	<b>DOSAGE</b> The correct dosage must be determined by preliminary testing. For layer thicknesses of up to 15cm in one pass, dosage is 3% to 6% of weight of binder.  Dosage of Sigunit-L530 AF 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: <ul style="list-style-type: none"><li>- Sika ViscoCrete SC-310</li><li>- SikaFume</li><li>- Sika Pump</li></ul>
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**APPLICATION INSTRUCTIONS****NOTES ON APPLICATION / LIMITATIONS**

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.

When using sulphate resistant cements, strength development can be slower. Sigunit-L530 AF is not compatible with Sigunit-L20 / L62. Before using Sigunit-L530 AF the hoses must be cleaned thoroughly.

The use of Sigunit-L530 AF 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.

Support from our Technical Service Department is recommended.

**VALUE BASE**

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.

**HEALTH AND SAFETY INFORMATION****SAFETY PRECAUTIONS**

- To avoid allergic reactions, we recommend the use of protective gloves and facial mask, during work. In case of contact with skin or eyes, immediately wash thoroughly with plenty of water. Sigunit-L530 AF should not be discharged into drains, waterways or the ground. Local regulations and health and safety advice on the packaging labels must be observed
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**IMPORTANT NOTES**

- Residues of material must be removed according to local regulations. Please consult safety data sheet
- Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the safety data sheet.

## 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 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

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