

# Sigunit<sup>®</sup> L53 AF

## Liquid Alkali Free Shotcrete Accelerator

Construction

<b>Description</b>	Sigunit L53 AF is a high performance, alkali free accelerator for shotcrete in a liquid form.
<b>Uses</b>	<p>Sigunit L53 AF is a set accelerator suitable for both wet and dry spray applications. Sigunit L53 AF is mainly used in:</p> <ul style="list-style-type: none"> <li>• Securing of rock in tunnel and mine construction.</li> <li>• Rock and slope stabilisation.</li> <li>• High quality shotcrete for general construction work.</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>• Alkali-free (non-caustic) – Not classified as dangerous goods, poison or hazardous substance.</li> <li>• Marginal strength loss of the accelerated concrete if used correctly.</li> <li>• No additional contamination of mountain and ground water due to washed out alkalis.</li> <li>• Large reduction in rebound.</li> <li>• Improves bond of shotcrete to rock and concrete, making overhead spraying easier.</li> <li>• Free of chlorides, no danger to steel reinforcement and steel fibres.</li> <li>• Excellent performance on wet ground.</li> <li>• Very good performance at low temperatures.</li> </ul>
<b>Storage and Shelf Life</b>	Stored at temperatures between 5°C and 30°C in unopened original containers protected from direct sunlight, heat and frost, shelf life is at least three (3) months. If these conditions are unattainable the Sigunit L53 AF may precipitate. If this should occur, the performance of Sigunit L53 AF may be adversely affected, and a Sika Representative should be contacted.
<b>Instructions for Use</b>	<p>The effect of Sigunit L53 AF depends on cement content, age, type and substrate.</p> <p>It is also dependent on the temperature of the shotcrete, the application area and shotcrete methods used. The performance of the Sigunit L53 AF also significantly depends on:</p> <ul style="list-style-type: none"> <li>• The w/c ratio of the basic concrete mix, in the wet spray process</li> <li>• The amount of water added during spraying, in the dry spray process</li> </ul>
<b>Dosage</b>	The most effective dosage must be determined by trial. Generally, a dose rate range of 3% to 6% by weight of cement is recommended.
<b>Addition</b>	<p>Sigunit L53 AF is metered and added using a liquid dosage unit.</p> <p>Optimum dispersion in the shotcrete is governed by nozzle configuration and shotcreting techniques.</p>

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**Technical Data (Typical)**


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<b>Form</b>	Mixture of special organic substances
<b>Colour</b>	Yellow (translucent)
<b>Density (20°C)</b>	1.40 kg/litre approx.
<b>pH value (20°C)</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
<b>Packaging</b>	20 litre plastic pail 205 litre drum Bulk deliveries

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**Important Notes**

- The following Sika admixtures can be used in conjunction with Sigunit L53 AF:
  - SikaTard<sup>®</sup>930
  - Sikament<sup>®</sup> superplasticisers
  - SikaPump
- The concrete temperature should not be lower than 10°C when shotcreting in thick layers (100mm and above).
- Use of Sigunit L53 AF requires the technically correct installation of dosing and conveying equipment.
- Metal components that come into direct contact with the product should be fabricated of stainless steel.
- Do not use non-ferrous metals such as, brass and copper.

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**Handling Precautions**

- Avoid contact with skin and eyes.
- Wear protective gloves and eye protection during work.
- If skin contact occurs, wash skin thoroughly.
- If in eyes, hold eyes open, flood with warm water and seek medical attention without delay.
- A full Material Safety Data Sheet is available from Sika on request.

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**Important Notification**

The information, and, in particular, the recommendations relating to the application and end-use of Sika's 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 of our terms and conditions of sale. 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.

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.

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