

BUILDING PRODUCT INFORMATION SHEET

Sika® Sigunit® L-530 AF

Liquid Accelerator for Shotcrete in Solution

DESCRIPTION

Sika® Sigunit® L-530 AF is a high-performance liquid, alkali-free, setting and hardening accelerator for shotcrete. Sika® Sigunit® L-530 AF is a solution based product and no circulation is required to keep Sika® Sigunit® L-530 AF homogenised.

USES

Sigunit® L-530 AF is suitable for both dry and wet spraying processes and it is used for:

- Support at the face, wall & backs whilst advancing tunnels and mines
- Rock- and slope stabilisation
- High quality lining shotcrete

FEATURES

Sika® Sigunit® L-530 AF liquid shotcrete set accelerator has the following characteristics and advantages:

- No circulation required
- No waste due to settlement
- High early strength development
- Alkali-free
- Minimal strength loss of the accelerated concrete
- No pollution of groundwater by leached out alkalis
- Distinct reduction of rebound and dust
- Improves bond of shotcrete to rock and concrete thus facilitating overhead spraying
- Chloride-free, does not negatively affect the reinforcement steel

PRODUCT INFORMATION

Product identifier	Sika® Sigunit® L-530 AF
Place of manufacture	Aotearoa New Zealand
Composition	Aqueous solution of selected inorganic materials.
Packaging	1000 litre IBC
Shelf life	Eight (8) months from date of production if stored in original, unopened, undamaged and sealed containers, protected from direct sunlight and kept at temperatures between +5°C and +35°C.
Storage conditions	Store at temperature between 5°C and 35°C protected from direct sunlight. After prolonged storage the performance of Sika® Sigunit® L-530 AF should be tested.
Appearance and colour	Cloudy white liquid
Specific gravity	1.44 g/cm ³
Viscosity	≤ 120 mPa s at +20°C
Total chloride ion content	≤ 0.1%
Equivalent sodium oxide	≤ 2.0%

APPLICATION INFORMATION

Recommended dosage	The correct dosage must be determined by preliminary testing. For layer thicknesses of up to 10 cm in one pass, dosage is between 4% and 7% of weight of binder.
Compatibility	The following Sika® products are generally used for the basic shotcrete mix: Sika® ViscoCrete® product range SikaTard®-930 or SikaTard®-960 HC SikaTell Sika® Stabilizer 4R SikaFume® Sigunit®L-530 AF is not compatible with alkaline shotcrete accelerators.

MANUFACTURER AND IMPORTER INFORMATION

Manufacturer information	Address	Sika (NZ) Limited 85-91 Patiki Road Avondale, Auckland 1026 New Zealand
	Phone number	0800 745 269
	Website	https://nzl.sika.com/
	Email address	info@nz.sika.com
	NZBN	9429000018791

BUILDING CODE INFORMATION

Building Code clauses	Note: This product on its own is not within the scope of the NZ Building Code. It is an additive / admixture for use in the manufacture of concrete, to enhance its performance properties in either its plastic or hardened state. When added to concrete that must comply with the NZ Building Code, and it used in accordance with Sika's technical literature, it will contribute to meeting the requirements of the following clauses: B1 Structure: Performance Clauses B1.3.1, B1.3.2, B1.3.3 (a, b, f, h, m, q) B1.3.4 B2 Durability: Performance clause B2.3.1-(a) not less than 50 years F2 Hazardous Building Materials: Performance clause F2.3.1
Building Code compliance statements	Performance B1.3.1, B1.3.2, B1.3.3 (a, b, f, h, m, q), B1.3.4: This product meets the requirements of AS1478.1 Chemical Admixtures for Concrete, Mortar and Grout. When added to concrete during the production phase it contributes to the hardened concrete meeting loading requirements arising from self-weight, imposed gravity loads, earthquake, wind impact, and the effects of creep and shrinkage over time. Performance B2.3.1 (a) 50 years: This product meets the requirements of AS1478.1 Chemical Admixtures for Concrete, Mortar and Grout. When added to concrete, mortar or grout during the manufacturing process it helps the hardened concrete to achieve its durability requirements and to remain serviceable for 50 years, or more. According to Sika's "Service Improvement" records, maintained within its ISO9001:2015 Quality Management System, this product has performed successfully since it was introduced in 2013. Performance F2.3.1: This product meets this requirement when used and applied in accordance with Sika's installation instructions and does not present a health hazard to people occupying or using the building. Refer to the Sika Product Technical Data sheet and product Safety Data Sheet nzl.sika.com for further information if required

BASIS OF PRODUCT DATA

All technical data in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

FURTHER DOCUMENTATION

When using sulphate resistant cements strength development can be slower.

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IMPORTANT CONSIDERATIONS

The substrate must be clean, free of loose stones and free of water under hydrostatic pressure.

The accelerator's effect depends on the cement content, the age and type of cement, on the substrate and the shotcrete temperature as well as on the layer thickness and spraying process, quality of equipment and application technique. The w/c ratio of the basic concrete mix in the wet spraying process, and the quantity of gauging water in the dry spraying process are also parameters influencing the acceleration effect of Sigunit®L-530 AF.

Before using Sigunit®L-530 AF the accelerator hoses must be cleaned thoroughly. The use of Sigunit®L-530 AF requires technically correct dosing and conveying / spraying technology. Metal parts of the pump that come into direct contact with Sigunit®L-530 AF must be made of stainless steel

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.

APPLICATION INSTRUCTIONS

DESIGN REQUIREMENTS

Design requirements for concrete that contains Sika admixtures, or other concrete additives are the responsibility of the ready mixed concrete producer and/or the concrete design engineer.

MAINTENANCE REQUIREMENTS

Once added the Sika admixture / additive becomes an integral part of the hardened concrete, mortar or grout. Refer to the supplier of that product for their maintenance instructions.

LOCAL RESTRICTIONS

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

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

The building product/building product line is not subject to warning or ban under section 26 of the Building Act 2004.

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