

PRODUCT DATA SHEET

Sika® Sigunit® L-50 AFX

ALKALI-FREE LIQUID SHOTCRETE ACCELERATOR

PRODUCT DESCRIPTION

Sika® Sigunit® L-50 AFX is a high-performance liquid, alkali-free accelerator for wet or dry shotcrete.

USES

Sika® Sigunit® L-50 AFX is a suitable shotcrete accelerator for both wet and dry shotcrete applications including:

- General construction work.
- Support at the face and securing of rock in tunnel and mine construction.
- Rock and slope stabilization along highways and transportation routes.

CHARACTERISTICS / ADVANTAGES

- High early concrete strength development.
- Significant concrete rebound reduction.
- Good long-term strength and durability.
- Alkali-free: avoids pollution and leachate of alkalis into ground and surface water.
- Easier overhead spraying by improved adhesion of shotcrete to rock and concrete.
- Reduction of dust formation.
- Suitable for steel reinforced shotcrete and substrates.
- Suitable for synthetic and steel fiber reinforced shotcrete.

Sika® Sigunit® L-50 AFX does not contain intentionally added chlorides.

PRODUCT INFORMATION

Packaging	<ul style="list-style-type: none"> ▪ 264 US gallon totes (1000 L) ▪ Bulk delivery.
Shelf Life	Shelf life when stored in dry warehouse conditions between 40°F and 80°F (5°C - 27°C) is 6 months from date of manufacture.
Storage Conditions	Sika® Sigunit® L-50 AFX should be stored between 40°F - 80°F (5°C - 27°C). Protect from direct sunlight. Store in stainless steel or plastic container. The low pH of the admixture may cause corrosion if stored in normal steel container, which may affect overall performance of the admixture. Sika® Sigunit® L-50 AFX should always be mixed thoroughly prior to use. If frozen, Sika® Sigunit® L-50 AFX cannot be reconstituted and must be discarded according to applicable local laws.
Appearance / Color	White Viscous Liquid
Specific gravity	Approx. 1.43

Recommended Dosage

The correct dosage must be determined by preliminary testing. Pre-trials should be executed to confirm correct dosage with the equipment and shotcrete that is intended to be used. The typical dosage of Sika® Sigunit® L-50 AFX is between 4 - 8 % by weight of cementitious material. Lower concrete and ambient temperatures will require higher dosages. The set accelerating effect of Sika® Sigunit® L-50 AFX depends on cement type and cementitious content, age of mix, type of substrate, shotcrete methods used, and temperature of the shotcrete and the application area.

The performance of Sika® Sigunit® L-50 AFX is highly dependant upon temperature, the water-cement ratio of the shotcrete mix in the wet spray process, and the amount of water added during spraying in the dry spray process.

To the extent specialized materials (such as microsilica) are specified, extreme ambient project conditions are encountered, or other unusual project conditions require special consideration outside the recommended dosage, please contact your local regional Sika office or Sika Technical Service department at 1-800-933-7452 prior to using the Sika admixture.

Mixing

Sika® Sigunit® L-50 AFX should be mixed thoroughly prior to use. Sika® Sigunit® L-50 AFX is dosed and added on-site by a liquid dispensing system. Optimum dispersion in the shotcrete is governed by nozzle configuration and shotcreting techniques.

Important information:

- The conveyance hose for the accelerator must be thoroughly cleaned before using Sika® Sigunit® L-50 AFX.
- Compatible with membrane pumps, rotor-stator pumps, peristaltic pumps, and gear pumps.
- Do not use any pumps that utilize ball-and-seat type valves, piston pumps or pressure tanks.
- Metal parts of the dosage equipment and/or pump coming into direct contact with Sika® Sigunit® L-50 AFX must be made of stainless steel.
- Do not use a filter on the suction hose as it will get clogged and obstruct flow.

The use of Sika® Sigunit® L-50 AFX requires skilled and technically correct installation of dosing and conveying equipment. Please contact your local regional Sika office or Sika technical service department for further information.

Combination with other Sika admixtures:

Sika® Sigunit® L-50 AFX can be used in combination with other Sika admixtures and can be successfully used in mix designs utilizing supplementary cementitious materials.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions. Always perform test batches to establish mix design and mix properties and performance prior to use.

LIMITATIONS

The accelerator's effect depends on the content, age and type of cement, as well as on the shotcrete temperature. Furthermore, the shotcrete quality is widely affected by the substrate, the applied layer thickness, the spraying process, the quality of equipment and the 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 Sika® Sigunit® L-50 AFX.

When using sulphate resistant cements strength development can be slower.

Sika® Sigunit® L-50 AFX is not compatible with alkaline shotcrete accelerators. Before using Sika® Sigunit® L-50 AFX the accelerator hoses must be cleaned thoroughly.

The use of Sika® Sigunit® L-50 AFX requires technically correct dosing and conveying / spraying technology. Metal parts of the pump and piping that come into direct contact with Sika® Sigunit® L-50 AFX must be made of stainless steel.

Contact your local Sika company for any additional technical support required.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

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Product Data Sheet

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OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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