

PRODUCT DATA SHEET

Sika® Sigunit® L-500 AFI

ALKALI-FREE LIQUID SHOTCRETE ACCELERATOR

PRODUCT DESCRIPTION

Sika® Sigunit® L-500 AFI is a high-performance liquid, alkali-free accelerator for wet or dry shotcrete.

USES

Sika® Sigunit® L-500 AFI 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-500 AFI does not contain intentionally added chlorides.

PRODUCT INFORMATION

Packaging	Sika® Sigunit® L-500 AFI is available in 275-gallon (1040-liter) totes
Appearance / Color	Off-White Liquid
Shelf Life	Shelf life when stored in dry warehouse conditions between 40°F and 80°F (5-27°C) is 4 months from date of manufacture.
Storage Conditions	Sika® Sigunit® L-500 AFI should be stored above 40°F (5°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. If frozen, Sika® Sigunit® L-500 AFI cannot be reconstituted and must be discarded according to applicable local laws.
Specific gravity	Approx. 1.360

APPLICATION INFORMATION

Recommended Dosage

The dosage of Sika® Sigunit® L-500 AFI should be between 4 - 8 % by weight of cementitious material. Lower temperatures will require higher dosages. The set accelerating effect of Sika® Sigunit® L-500 AFI depends on cement 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-500 AFI is highly dependant upon 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. Always perform test batches to establish mix design, mix properties and performance prior to use.

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-500 AFI 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:

- Concrete temperatures should not be lower than 60 °F (15 °C), especially when applying thick shotcrete layers. Sika® Sigunit® L-500 AFI dosage will increase for lower temperature applications.
- The conveyance hose for the accelerator must be thoroughly cleaned before using Sika® Sigunit® L-500 AFI.
- 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-500 AFI 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-500 AFI 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-500 AFI 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.

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.

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.**

Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at <https://usa.sika.com/en/group/SikaCorp/termsandconditions.html> or by calling 1-800-933-7452.

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Product Data Sheet

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