

PRODUCT DATA SHEET

Sika® Sigunit® L-5601 AF FR

SHOTCRETE ACCELERATOR

PRODUCT DESCRIPTION

Sika® Sigunit® L-5601 AF FR is a high-performance alkali-free, liquid set accelerator for shotcrete.

USES

Sika® Sigunit® L-5601 AF FR is suitable for both dry and wet spraying processes. Typical applications include:

- Excavation stabilisation in tunnelling and mining
- Rock, slope and trench stabilisation
- High quality shotcrete lining

CHARACTERISTICS / ADVANTAGES

- High early strength development
- Alkali-free
- Minimal strength loss in the accelerated concrete
- No pollution of groundwater by leached alkalis
- Distinct reduction of rebound and dust
- Improved shotcrete bond to the substrate
- Chloride-free, no corrosive affect on reinforcement steel

APPROVALS / STANDARDS

Conforms to the requirements of BS EN 934-5 Table 2 DoP 92202993, certified by Factory Production Control Body 1164 and provided with the CE mark

PRODUCT INFORMATION

Chemical Base	Inorganic aluminium complexes
Packaging	1460 kg IBC (1000 L)
Shelf Life	6 months from date of production if stored in original, undamaged and sealed containers.
Storage Conditions	Storage at temperatures between 5°C and 30°C. Protect from direct sunlight, frost and contamination. In case of separation of Sika® Sigunit® L-5601 AF FR the suspension has to be homogenised before using. Sika® Sigunit® L-5601 AF FR must not be stored in standard steel containers.
Appearance / Colour	White liquid suspension
Density	~1.46 kg/L
Conventional Dry Material Content	~55 %
Viscosity	≤400 mPa.s at 20°C
pH-Value	~2.5
Total Chloride Ion Content	≤0.1 % w/w (chloride free)
Equivalent Sodium Oxide	≤1.0 % (alkali content)

TECHNICAL INFORMATION

Concrete Mix Design	Mix design must be tested in field trials before commencement of the project to include tests across the expected ambient and concrete temperature range on site. High quality shotcrete typically requires a water/cement ratio of less than 0.5 and a flow table spread of >500 mm.
Substrate	The substrate must be clean, free of loose stones and free of water under hydrostatic pressure.

APPLICATION INFORMATION

Recommended Dosage	The correct dosage must be determined by preliminary testing. For layer thicknesses of up to 10 cm applied in one pass, the recommended accelerator dosage is between 6 % and 9 % by weight of binder. Lower ambient and basic mix temperatures require higher dosage of accelerator.
Dispensing	Sika® Sigunit® L-5601 AF FR is added at the nozzle. Accurate and constant dosing into the concrete flow is essential.
Compatibility	Sika® Sigunit® L-5601 AF FR is not compatible with alkaline shotcrete accelerators.

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.

LIMITATIONS

When using sulphate resistant cements, strength development can be slower.

ECOLOGY, HEALTH AND SAFETY

REGULATION (EC) NO 1907/2006 - REACH

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

Key factors affecting performance:

- Content, age and type of cement
- Shotcrete temperature
- Substrate quality
- Spraying process
- Quality of equipment and application technique
- Water/cement ratio of concrete mix

SIKA LIMITED

Watchmead
Welwyn Garden City
Hertfordshire, AL7 1BQ
Tel: 01707 394444
Web: www.sika.co.uk
Twitter: @SikaLimited



Product Data Sheet

Sika® Sigunit® L-5601 AF FR
April 2024, Version 01.02
021401011000000242

Before using Sika® Sigunit® L-5601 AF FR the accelerator hoses must be cleaned thoroughly.

Metal pump components and piping that come into direct contact with Sika® Sigunit® L-5601 AF FR must be made of stainless steel.

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

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.

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.

SikaSigunitL-5601AFFR-en-GB-(04-2024)-1-2.pdf

