BUILDING TRUST

PRODUCT DATA SHEET

Sika® Sigunit®-5650 AFL ID

Liquid, alkali-free set accelerator for shotcrete

DESCRIPTION

Sika® Sigunit®-5650 AFL ID is a liquid, alkali and chloride free shotcrete set accelerator based on inorganic aluminum complexes. It is used for both dry and wet spraying. It provides high early strength and very good substrate adhesion

USES

Sika® Sigunit®-5650 AFL ID is used for:
- Dry spraying
- Wet spraying
- Producing high-performance lining shotcrete
- Stabilising excavation in tunnelling and mining
- Stabilising rock, slopes and trenches

FEATURES

- High early strength development
- Improves adhesion of shotcrete to the substrate
- Minimal strength loss
- Reduces rebound and dust
- Free from chlorides and other corrosion-promoting ingredients, making it suitable for use in reinforced and prestressed concrete structures
- Alkali-free

PRODUCT INFORMATION

Composition	Inorganic aluminum complexes
Packaging	Bulk supply, IBC Refer to the current price list for available packaging variations
Appearance and colour	Light beige suspension
Shelf life	6 months from date of production
Storage conditions	The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +35 °C. Protect from direct sunlight, frost and contamination. Always refer to the packaging. Use clean containers when delivered in bulk. Refer to the current Safety Data Sheet for information on safe handling and storage IMPORTANT **Corrosion in unalloyed steel containers** The Product may cause corrosion in unalloyed steel containers, which may affect the Product performance. 1. Do not store the Product in unalloyed steel containers 2. Store the Product in closed plastic, fiberglass or stainless-steel containers

Density	1,51 g/cm3 at (20 °C (68 °F))
pH-Value	2,3 at (20 °C (68 °F))
Conventional dry material content	55 %
Viscosity	≤ 500 mPa·s at +20 °C
Total chloride ion content	≤ 0,1 %
Equivalent sodium oxide	≤ 1,0 %

TECHNICAL INFORMATION

Specific advice	Sika® Sigunit®-5650 AFL ID is added at the nozzle. Accurate and constant dosing into the concrete flow is essential
Substrate	The substrate must be clean, free of loose stones and free of water under hydrostatic pressure
Concrete mixing time	The suitability of the proposed mix design must be tested in field trials before commencement of the project. High-quality shotcrete requires a w/c ratio of less than 0,5 and a flow table spread of More than 500 mm. Temperature of basic mix must be higher than 15 °C

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 4 % and 9 % by weight of binder. Lower ambient and basic mix temperatures require higher dosage of accelerator

BASIS OF PRODUCT DATA

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

IMPORTANT CONSIDERATIONS

- The accelerator’s effect depends on the content, age and type of cement, as well as on the shotcrete temperature
- 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®-5650 AFL ID
- When using sulphate resistant cements strength development can be slower
- Sika® Sigunit®-5650 AFL ID is not compatible with alkaline shotcrete accelerators
- Before using Sika® Sigunit®-5650 AFL ID the accelerator hoses must be cleaned thoroughly
- The use of Sika® Sigunit®-5650 AFL ID requires technically correct dosing and conveying / spraying technology
- Metal parts of the pump and piping that come into direct contact with Sika® Sigunit®-5650 AFL ID must be made of stainless steel
- Contact your local Sika Company for any additional technical support

ECOLOGY, HEALTH AND SAFETY

Refer to Material Safety Data Sheets.
Avoid contact with skin and eyes by using the required personal protective equipment, such as overalls, gloves and safety glasses. If contact with skin occurs, wash thoroughly using soap and water. If contact with eyes occurs, rinse thoroughly with an eyebath filled with water and seek medical advice. The products are harmless. Uncured products should be prevented from entering local drainage systems and water courses. Spillage must be collected using absorbent materials such as sawdust and sand and disposed of in accordance with local regulations

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 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.

PT. Sika Indonesia Head Office and Manufacturing
Jl. Raya Cibinong-Bekasi Km.20
Limusnunggal-Cileungsi
Bogor 16820-Indonesia
Tel. +62 21 8230025, Fax +62 21 8230026