BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET

Sika® Sigunit® P-10 AF

INSTANT SHOTCRETE ACCELERATOR

PRODUCT DESCRIPTION

Sika® Sigunit® P-10 AF is a readily soluble powder. Sika® Sigunit® P-10 AF dissolved in water is a high performance liquid, alkali-free set accelerator for shotcrete. Its effectiveness depends on the mixing ratio between powder and water.

WHERE TO USE

Sika® Sigunit® P-10 AF dissolved in water is suitable for both dry and wet spraying processes and it is used for:
- Excavation stabilisation in tunnelling and mining
- Rock-and slope stabilisation
- High quality lining shotcrete

CHARACTERISTICS / ADVANTAGES

Sika® Sigunit® P-10 AF dissolved in water as a shotcrete set accelerator has the following characteristics and advantages:
- 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 substrate
- Chloride-free, no negative affect on reinforcement steel

The supply in powder form has the following additional advantages:
- High flexibility in use
- Low cost of logistics
- Longer shelf-life

PRODUCT INFORMATION

CSC MasterFormat®	**03 05 00**
Composition / Manufacturing	Special inorganic materials
Packaging	600 kg FIBC 25 kg bag
Appearance / Colour	Off White
Shelf Life	24 months from date of production if stored properly in original unopened, sealed and undamaged packaging in dry conditions. Solution: At a concentration of 55 %, the liquid product mixed from Sika® Sigunit® P-10 AF has a shelf life of two (2) months. When concentrated at 45 %, the shelf life is four (4) months.

Storage Conditions	Protected from humidity, direct sunlight and frost, preferably at temperatures between 5 and 30 °C. The liquid product mixed from Sika® Sigunit® P-10 AF must be stored in suitable containers made of plastic or stainless steel.
Bulk Density	~ 0.45 kg/L
pH-Value	3.0 dissolved in water

TECHNICAL INFORMATION

Specific Advice	Dissolved Sika® Sigunit® P-10 AF is added at the nozzle. Accurate and constant dosing into the concrete flow is essential. Dissolving: Please, consult Method Statement of Sigunit-P1 AF /-P10 AF
Concrete Mix Design	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.
Concrete Substrate	The substrate must be clean, free of loose stones and free of water under hydrostatic pressure.

APPLICATION INFORMATION

Recommended Dosage	The correct dosage of the liquid accelerator has to be determined by preliminary testing and depends on the concentration of the liquid. For layer thicknesses of up to 100 mm applied in one (1) pass, dosage of a 55 % solution is between 4 and 8 % of weight of binder. Lower ambient and basic mix temperatures require higher dosage of accelerator. Depending on the required performance Sika® Sigunit® P-10 AF is dissolved in water with a powder/water ratio of 45/55 M-% to 55/45 M-%. It has to be mixed in mimimum for 45 minutes. Please consult the Method Statement of Sika® Sigunit® P-10 AF/-P1 AF.

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

LIMITATIONS

- 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. 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 dissolved Sika® Sigunit® P-10 AF powder.
- When using sulphate resistant cements strength development can be slower.
- Solutions from Sika® Sigunit® P-10 AF are not compatible with alkaline shotcrete accelerators. Before using Sika® Sigunit® P-10 AF based liquids the accelerator hoses must be cleaned thoroughly. The use of the liquid accelerator requires technically correct dosing and conveying / spraying technology. Metal parts of the pump that come into direct contact with alkali free accelerators should be made out of stainless steel.
- Contact Sika Canada for any additional technical

support.

ENVIRONMENT, HEALTH & SAFETY

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.

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 recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: www.sika.ca

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