



# IKSA Construction Chemicals, Concrete Additives & Underground Technologies

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## IKSAGUNIT DAS

Alkali-free Dry-mix Shotcrete & Guniting Accelerator

### DESCRIPTION

IKSAGUNIT DAS is an aluminum sulphate based quick setting admixture used in dry-mix shotcreting and guniting works.

### STANDARTS

Conforms to ASTM C 1141 Type I Class B and TSEN 934-5

### APPLICATION

IKSAGUNIT DAS is a noncorrosive powder and used with sprayed concrete for consolidating rock surface in tunnels, galleries, retaining walls and concrete linings applied through wet mix shotcreting and guniting.

### ADVANTAGES

- Substantial reduction of rebound by adjusting the cohesiveness of the concrete.
- Homogenous distribution in concrete.
- , IKSAGUNIT-DAS does not affect the durability negatively.
- , IKSAGUNIT-DAS eliminates the risk of ASR (Alkali Agregate Reaction).
- Compatible with pumping aids

### METHOD OF APPLICATION

IKSAGUNIT-DAS is supplied in powder form ready for use. Required dosage is between 4 to 10% by weight of cement used, depending upon mix design, ambient temperature, and substrate. IKSAGUNIT-DAS is adjusted for different kinds of cement used and optimum dosage to be determined through tests at the jobsite. The required amount of IKSAGUNIT-DAS is added into the dry sand/cement mix usually by dispensing equipment, after the predamping (if done).

CEMENT: Since IKSAGUNIT-DAS accelerates complex hydration and crystallization process, difference in composition of cement and fineness affects the consumption considerably. Normal portland cement is recommended as binder.

WATER: Waters containing anhydrite sulphate adversely affect shotcreting. For this reason water analysis is required. W/C ratio can vary between 0,3 to 0,4 depending upon ambient temperature, cement composition and aggregate granulometry. W/C ratio to be reduced especially at low ambient temperatures.

AGGREGATE: Sand and coarse aggregate should be clean and free from impurities as clay and silt. From chemical reaction point of view, compounds containing chlorides and sulphates and material causing alkaline/aggregate reaction are not desirable. Moisture content should be lower than 5%. Aggregate granulometry and amount of cement used are dependent to the purpose of shotcreting.

SPRAYING AND REBOUND: Surface to be sprayed should be free of any loose pieces, clean, solid and moistened to avoid surface to suck water from concrete. For damp and water leaking surfaces, water in concrete should be reduced. Air pressure should be monitored carefully. Distance between surface and nozzle to be 1-1.5m and nozzle should be at right angle to the surface. Thin and multilayer application with continuous move in nozzle helps to reduce the rebound. (Refer to ACI 506-66)

### PHYSICAL PROPERTIES

Chemical Structure	: Inorganic mixture
Appearance	: Mealy (white) powder
Bulk Density	: $1,10 \pm 0,05$ kg/L
Water Soluble Chloride	: $\leq \%0,1$ (TS EN 480-10)
Alkali Content	: $\leq \%1$ (TS EN 480-12)

### PACKING

IKSAGUNIT-DAS is supplied in 20kg craft paper bags.

### STORAGE

IKSAGUNIT-DAS is insensitive to frost and should be stored in dry places. The shelf life of undamaged bags is one year

### SAFETY

IKSAGUNIT-DAS is a nontoxic material. No special precaution is required during handling.

The regular precautions as use of gloves and goggles are required, during handling. Avoid being in touch with the product. If contacted to skin and eye, wash with plenty of water. For detailed information MSDS is available.

Regarding the design, development, production and distribution of its products, IKSA is certified and applies the quality assurance system ISO 9001:2015. In addition, IKSA Integrated Management System involves ISO 14001:2015 and ISO 45001:2018 as well.

### TECHNICAL ASSISTANCE

Technical assistance is offered for material selection, mix design, application procedures and specifications preparations, and product testing.

*The details for our products and their possible uses indicated above should be understood as advisory only, to the best of our knowledge. The details do not constitute any guarantee or legal commitment and must be verified for each individual application.*