İKSA Construction Chemicals, Concrete Additives & Underground Technologies

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IKSAGUNIT DA
Low Alkali Based Dry-mix Shotcrete & Guniting Accelerator

DESCRIPTION
IKSAGUNIT DA is an aluminate based quick setting admixture used in dry-mix shotcreting and guniting works.
STANDARTS
Conforms to TSEN 934-5 Table 2 and ASTM C 1141 Type I Class B
APPLICATION
IKSAGUNIT DA 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.
- As it does not contain sulfates, IKSAGUNIT-DA does not affect the durability negatively.
- Because of the low alkali content, IKSAGUNIT-DA eliminates the risk of ASR (Alkali Agregate Reaction).
- Compatible with pumping aids

METHOD OF APPLICATION
IKSAGUNIT-DA is supplied in powder form ready for use. Required dosage is between 3 to 7% by weight of cement used, depending upon mix design, ambient temperature, substrate. IKSAGUNIT-DA is adjusted for different kinds of cement used and optimum dosage to be determined through tests at the jobsite. The required amount of IKSAGUNIT-DA is added into the dry sand/cement mix usually by a dispensing equipment, after the predamping (if done).
CEMENT: Since IKSAGUNIT-DA accelerates complex hydration and crystalization process, difference in composition of cement and fineness affects the consumption considerably. Normal portland cement is recommended as binder.
WATER: Waters containing anhydrite sulphate adversly 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.
Thus;
A) Guniting (spraying mortar): aggregate 0-4mm and high cement dosage (400-500kg/m3). Guniting is applied especially at coatings for water tightness, rock consolidation at tunnels and galleries.
B) Shotcreting (spraying concrete): aggregate 0-15mm and lower cement dosage (300-375 kg/m3). This is used as temporary coating.
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PHYSICAL PROPERTIES

Chemical Structure	: Inorganic mixture
Appearance	: Mealy (white) powder
Bulk Density	: 1,10±0,05 kg/L
Water Soluble Chloride	: ≤ %0,1 (TS EN 480–10)

PACKING
IKSAGUNIT-DA is supplied in 20kg craft paper bags.
STORAGE
IKSAGUNIT-DA is insensitive to frost and should be stored in dry places. The shelf life of undamaged bags is one year
SAFETY
IKSAGUNIT-DA 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. In addition, IKSA Integrated Management System involves ISO 14001 and ISO 18001 with the certificate numbers of 12 300 0334/01, 12 104 34115 TMS and 12 400 0023
TECHNICAL ASSISTANCE
Technical assistance is offered for material selection, mix design, application procedures and specifications preparations, and product testing.