Construction

SikaGrout® -Aid

Additive for grouting mortar or shrinkage compensate concrete

Product Description	SikaGrout®-Aid is a 2-step expansion / shrinkage compensating admixture. When mixed with cement, sand and water on site, a good quality shrinkage compensated grouting mortar is obtained. SikaGrout®-Aid can be added as well to concrete components (cementitious binder, water, additives, sand and aggregate) to produce shrinkage compensate concrete.
Uses	SikaGrout®-Aid is suitable for the production of grout to be used for the grouting of bridge bearings, anchors, machine foundations, steel columns. Secondary or second stage concrete shall be produced with SikaGrout®-Aid.
Characteristics / Advantages	SikaGrout®-Aid improves the following properties of the site-mixed grout: ■ Excellent flow and good filling properties ■ Good dimensional stability ■ No bleeding ■ High strength ■ Shrinkage compensated (2-step expansion)
Product Data **Form** **Appearance / Colour**	 Beige powder
Packaging	20 kg bags
Storage **Storage Conditions / Shelf Life**	 6 months from the date of production when stored in original unopened packaging in a cool, dry place.
Technical Data **Specific Gravity**	 1.21

Mechanical / Physical Properties

Typical Results

Grout mixes Tests carried out at +25°C

Water content		20 %
Flow		250 mm
Consistency	JA Cone	3.5 seconds
Bleeding		0 %
Setting time	Initial	7 h : 40 m
	Final	9 h : 45 m
Expansion at 24 hours		0.5 – 1.0 %
Compressive strength	1 day	~15 N/mm²
	3 days	~33 N/mm²
	7 days	~40 N/mm²
	28 days	~54 N/mm²

The results above are typical data and given as a guide only. Site results may differ according to mixing process, curing, etc. Preliminary tests are always recommended.

System Information

Application Details

Dosage (recommended)

Design mix for 1 m³ mortar (Water : Dry mix ratio approximately 20% in case of mortar flow 250 mm):

- Cement (Type 1) 838 kg
- Sand (saturated surface dry) 930 kg
- SikaGrout®-Aid 91 kg
- Water 372 ltr

Density of mixed mortar ~ 2.2 kg/ltr

To produce shrinkage compensate concrete follow the design in accordance with ACI 211.1-89 standard recommended practice for selecting proportions for concrete and us suitable superplasticizer like Sikament® or Viscocrete® range in addition of SikaGrout®-Aid. Dosage of SikaGrout®-Aid might vary from 5 to 10% bwb depending of the required expansion. Preliminary trials are recommended

Substrate Quality

Concrete, mortar and stone
Surfaces must be sound, clean, free from frost, oils, grease, standing water and all loosely adhering particles and other surface contaminants.

Metal surfaces (iron and steel)
Surfaces should be clean, free from scale, rust, oil and grease.

Substrate Preparation	The substrate should be prepared by suitable mechanical preparation techniques such as high pressure water, breakers, grit blasting, scabblers, etc. All absorbent surfaces must be well saturated with clean water, but free of any surface water or puddles prior to the application of SikaGrout®-Aid mortar.
Application Instructions **Mortar Preparation**	Prepare mortar in the following sequence: 1. Pour the required amount of water into the mixer 2. Then add sand followed by cement 3. Lastly add SikaGrout®-Aid into the mixture
Application Method / Tools	Immediately after mixing, stir lightly with a spatula for a few seconds to release any entrapped air. Pour the mortar immediately into the properly prepared cavity. Ensure that sufficient pressure head is maintained during placing. Care must be taken to ensure that there are sufficient ventilation outlets to allow displaced air to escape. Formwork must be watertight.
Cleaning of Tools	Clean all tools and application equipment with water immediately after use. Hardened and/or cured material can only be mechanically removed.
Notes On Application / Limitations	Use well graded, clean, washed river sand 0 – 3 mm. SikaGrout®-Aid mixed with wet sand produces an extremely flowable mortar. If wet sand is used, reduce mixing water content.
Curing Details **Curing**	After the grout has initially hardened, remove the formwork and cure exposed mortar surface for at least 3 days with Antisol® -E curing compound. In case of any exposed surfaces after placement of grout, cover these areas with plastic sheets to prevent excessive water loss. Use Antisol®-E as recommended above after initial hardening.
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.
Health and Safety Information	For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet (available upon request) containing physical, ecological, toxicological and other safety-related data.

Sika (Thailand) Limited
Head Office
700/37 Moo 5 Bangpakong Industrial Park II,
Km.57 Bangna-Trad Rd., T. Klongtamhru,
Muang District, Cholburi 20000

Tel : +66 3821 4270-85
Fax : +66 3821 4286
E-mail : sikathai@th.sika.com
website : http//www.sika.co.th