

PRODUCT DATA SHEET

SikaGrout[®]-870 IN

Cementitious high strength non-shrink precision grout

DESCRIPTION

SikaGrout[®]-870 IN is a non-shrink, natural aggregate precision grout with excellent high early and ultimate strengths. It is specially formulated to provide an extended working time even at high ambient temperatures when mixed and placed at any recommended consistency. SikaGrout[®]-870 IN is normally placed at a flowable consistency to completely fill voids between 10mm and 100mm. Thicknesses greater than 100mm are possible with the addition of aggregate.

USES

SikaGrout[®]-870 IN is used for all precision, nonshrink grouting applications with clearances of 10mm or more, including:

- Critical equipment baseplates, soleplates & columns;
- Precast wall panels, beams, columns, structural building members and curtain walls;
- Bridge bearing pedestals.
- Patching poured in place concrete structures, e.g. honeycombing, using preplaced aggregate techniques;
- Underpinning;
- Concrete repair applications where a form and pour material is required;
- Applications requiring high early compressive strengths and high ultimate compressive strengths.

CHARACTERISTICS / ADVANTAGES

- High early strength – Ensures rapid commissioning of new equipment and structures.
- High ultimate strength – Ensures permanence of the installation under static and moderate repetitive loads.
- Flowable long life grout – Easy to grout intricate spaces normally inaccessible by conventional grouting technique.
- Extended working time – Facilitates grouting of large or difficult placements in a single pour, often without the use of a pump.
- Dense, non-shrink grout – Hardens free of bleeding, settlement and drying shrinkage, ensuring tight contact with all grouted surfaces.
- Easy to use – Requires no special mixing equipment, it can be mixed in a standard concrete mixer or in a pail using a grout stirrer.
- No added chloride – Does not add to chloride load of structure
- Compliance with codes – Meets the nonshrink requirements of ASTM C 1107

PRODUCT INFORMATION

Packaging	25kg bag
Appearance / Colour	Grey powder
Shelf life	06 months
Storage conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +10 °C and +30 °C.
Density	2.25 ± 0.1 gm/cc

TECHNICAL INFORMATION

Compressive strength	Curing time	Compressive strength (N/mm ²)	ASTM C109
	1 day	≥ 35	
	3 days	≥ 45	
	7 days	≥ 75	
	28 days	≥ 80	
Values at water:powder=0.156, cube size 70.6 mm, at +30 °C			
Flexural strength	Curing time	Flexural strength (N/mm ²)	EN 196-1
	7 days	~ 9	
	28 days	~ 10	
Expansion	> 0.30% Early Stage (3 hrs) > 0.25% Hardened Stage (28 days)		ASTM C 1090
Bleeding	0% (No bleeding)		

APPLICATION INFORMATION

Consumption	~1950 kg/m ³ (water : powder = 0.15)		
Yield	12.8 litres (25 kgs)		
Layer thickness	100 mm max. Note: Higher layer thickness can be done with addition of aggregates. Contact Sika Technical Services for additional information.		
Flowability	8 ~ 12 Seconds		J14 Cone (JSCE-F 541)
Ambient air temperature	+5 °C min. / +40 °C max.		
Mixing ratio	Water/Powder Ratio : 0.14 to 0.16 3.5 ltrs to 4 ltrs water in 25kg powder Water Demand – Actual water demand will depend on consistency required and temperature (both ambient and grout).		
Substrate temperature	+5 °C min. / +40 °C max.		
Pot life	~30 minutes at +30 °C (water : powder = 0.15)		
Setting time	Initial = > 8 hours Final = < 10 hours		

BASIS OF PRODUCT DATA

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.

FURTHER DOCUMENTS

Sika Cementitious Grouting of machine base plates.

ECOLOGY, HEALTH AND 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.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Concrete

- The concrete must be structurally sound, thoroughly clean, free from oil, grease, dust, loose material, surface contamination and materials which will impair the grout flow or reduce adhesion strength.
- Laitance, delaminated, weak, damaged and deteriorated concrete and where necessary sound concrete must be removed by suitable mechanical preparation as directed by the engineer or supervising officer.

Shutter Formwork

- Formwork must be of adequate strength, treated with release agent and sealed to prevent leakage of pre-wetting water and grout.
- Ensure formwork includes outlets for removal of the

pre-soaking water or use vacuum extraction equipment to remove water.

Pre-wetting

- The prepared concrete substrate must be thoroughly saturated with clean water for a recommended 12 hours before application of the grout.
- The surface must not be allowed to dry within this time.
- Before application of the grout, all water must be removed from within formwork, cavities or pockets and the final surface must achieve a dark matt appearance (saturated surface dry) without glistening.

MIXING

- Pour minimum water ratio in correct proportion into the grout mixer.
- Stir water slowly with a spiral paddle (200~500 rpm). While stirring the water, slowly add powder to water.
- Add more water within the mixing time up to the maximum allowed until the required consistency is achieved.
- Mix continuously for a minimum of 3 minutes or until the grout achieves a lump free smooth consistency.
- Do not add more water than the maximum specified.

CURING TREATMENT

- Protect exposed grout surfaces after finishing from premature drying and cracking by curing under water for at least 72 hours.
- In cold weather apply insulated blankets to maintain a constant temperature to prevent surface damage from freezing and frost.

CLEANING

Clean all tools and application equipment with water immediately after use. Hardened material can only be mechanically removed.

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.

Sika India Pvt. Ltd.
620, Diamond Harbour Road
Commercial Complex II
Kolkata - 700 034
West Bengal, India

Contact:
Phone: +91 33 2447 2448
Fax: +91 33 2397 8688
info.india@in.sika.com
www.sika.in



Product Data Sheet
SikaGrout®-870 IN
October 2024, Version 01.01
020201010010000581

SikaGrout-870IN-en-IN-(10-2024)-1-1.pdf