BUILDING TRUST

PRODUCT DATA SHEET

Sika MonoTop®-3285

High strength dry-pack cementitious mortar

DESCRIPTION

Sika MonoTop®-3285 is a one part, cement-based mortar, with high final mechanical strengths, specifically designed to be placed as dry-pack bedding mortar for use in the renewable energy field, under metal or concrete bases and precast concrete elements.

USES

The product is used in areas where high mechanical strength is required, such as:
- Under the transition adapter in concrete and hybrid wind turbines
- In horizontal joints between concrete segments where low slump is required

CHARACTERISTICS / ADVANTAGES

- Easy mixing and placing by trowel
- Low slump
- Rapid strength development
- Free from chlorides and metallic particles
- Protects metallic parts against corrosion, due to its high pH level
- High mechanical strength

PRODUCT INFORMATION

Chemical Base	Cement, selected fillers, aggregates and special additives	
Packaging	Standard bag	25 kg
	Refer to the current price list for available packaging variations.	
Shelf Life	Standard bag	6 months from date of production
Storage Conditions	The Product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to the packaging	
Appearance / Colour	Grey powder	

Soluble Chloride Ion Content	0.01%	(BS EN 1015-17)

TECHNICAL INFORMATION

Compressive Strength	Cured 24 h at 23 °C Cured 3 d at 23 °C Cured 7 d at 23 °C Cured 28 d at 23 °C	30 MPa 58 Mpa 69 MPa 80 MPa	(SANS 5863:2006)
Modulus of Elasticity in Compression	Cured 28 d at 20 °C	30 GPa	(EN 12390-13)
Tensile Strength in Flexure	Conditioned 24 h at 20 °C Conditioned 3 d at 20 °C Conditioned 7 d at 20 °C Conditioned 28 d at 20 °C	4 MPa 6 Mpa 7 MPa 9 MPa	(SANS 5864)
Shrinkage	248 x 10^{-6}		(BS EN 12390-16)
Expansion	~0.1% volume after 24hrs. Max 3%		
Bleeding	0%		

APPLICATION INFORMATION

Mixing Ratio	Thixotropic consistency Thixotropic consistency — water ratio by weight	2.875 L of water for 25 kg of powder 11.5 %
Fresh mortar density	2.2 kg/L	
Yield	13 L of grout per 25 kg bag	
Layer Thickness	Maximum Minimum	80 mm 10 mm
Product Temperature	Maximum Minimum	+35 °C +5 °C
Ambient Air Temperature	Maximum Minimum	+35 °C +5 °C
Substrate Temperature	Maximum Minimum	+35 °C +5 °C
Pot Life	At 20 °C	50 minutes

Pot life depends on temperature
Note: Pot life will be shorter at higher temperatures. Pot life will be longer at lower temperatures.

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.

ECOLOGY HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

CONCRETE
IMPORTANT
Concrete must be sound and clean
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.

1. Remove, laitance, delaminated, weak, damaged and deteriorated concrete using appropriate preparation equipment to provide a textured finish and exposing the aggregate.
2. Clean any pockets or holes for structural fixings from all debris and water.

STEEL
IMPORTANT
Steel must be free from contaminates
The steel must be thoroughly clean, free from oil, grease, dust, loose material, surface contamination and materials which will impair the grout flow or reduce adhesion strength.
1. Clean the substrate from oil, grease, rust and scale by appropriate grinding, abrading or shot blasting equipment.

MIXING

ELECTRIC SINGLE OR DOUBLE PADDLE MIXER
IMPORTANT
Do not add more water than the maximum specified
1. Pour the minimum amount of water into a suitable clean mixing container.
2. Stir the water slowly with a spiral paddle (300 to 500 rpm).
3. Add the complete bag of powder into the water.
4. Mix continuously for 3 minutes to achieve a uniform and lump free smooth consistency.
5. Add more water within the mixing time up to the maximum allowed until the required consistency is achieved.
6. Wait for 2 to 3 minutes to release entrained air bubbles.
7. Mix again for 1 more minute.

GROUT MIXER
IMPORTANT
Carry out equipment trials
Carry out equipment trials to make sure the Product can be mixed satisfactory before full project application.
IMPORTANT
Do not use continuous mixing equipment
The Product is not designed for processing with continuous mixing equipment.
1. Pour the minimum water ratio in the correct proportion into the grout mixer.
2. While stirring the water, slowly add the powder.
3. Add more water within the mixing time up to the maximum allowed until the required consistency is achieved.
4. Mix continuously for a minimum of 3 minutes. For larger mixes the mixing time must be extended to approximately 5 minutes or as necessary.
5. Mix until the grout achieves a lump free smooth consistency.

APPLICATION

IMPORTANT
Strictly follow installation procedures
Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.
IMPORTANT
Application in the direct sun or strong winds
Avoid application in direct sun, strong winds or both to reduce the risk of the Product cracking.
PRE-WETTING
1. Thoroughly saturate the prepared concrete substrate with clean water for a recommended 2 hours before application of the grout.
2. Do not allow the substrate to dry within this time.
3. Remove all water from within the formwork, cavities or pockets.

The final surface must achieve a dark matt appearance (saturated surface dry) without glistening.
PLACING
The Product is applied manually.
Cold weather working
Note: Risk of reduced strength gain and physical properties
1. Store bags in a warm environment.
2. Use warm mixing water to assist with achieving strength gain and maintaining physical properties.

Hot weather working
Note: Increased risk of cracking and reduction of physical properties
1. Store bags in a cool environment.
2. Use cold mixing water to assist with controlling the exothermic reaction to reduce cracking and maintaining physical properties.

CURING TREATMENT

Protect exposed grout surfaces after finishing from premature drying and cracking using an appropriate curing method e.g. curing compound, moist geo-textile membrane, hessian or polythene sheet.
In cold weather, apply insulated blankets to maintain a constant temperature to prevent surface damage from freezing and frost.

CLEANING OF TOOLS

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

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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