

PRODUCT DATA SHEET

SikaGrout®-3200 VN

FATIGUE CERTIFIED ONSHORE STEEL WIND TOWER PRECISION GROUT

DESCRIPTION

SikaGrout®-3200 VN is a 1-part, cementitious, fast hardening, high early strength and free flowing grout. It is specifically designed for onshore steel wind towers.

USES

High performance precision grouting of vertical or horizontal joints and under grouting base plates

CHARACTERISTICS / ADVANTAGES

- Fast early strength development
- High final strength
- Fluid consistency
- Suitable for pumping
- Shrinkage compensated
- Application thickness 10–150 mm
- Application temperature range +5°C to +35°C
- High adhesion to concrete

APPROVALS / STANDARDS

Available internal & external test reports

PRODUCT INFORMATION

Packaging	25 kg bag Refer to current price list for packaging variations
Shelf life	6 months from the date of production if stored properly
Storage conditions	The product must be stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5°C and +30°C. Always refer to packaging.
Appearance / Colour	Grey powder

TECHNICAL INFORMATION

Compressive Strength	1 day	≥ 55 N/mm ²	(ASTM C349 / C109)
	7 days	≥ 80 N/mm ²	
	28 days	≥ 100 N/mm ²	
Modulus of Elasticity in Compression	~38'000 N/mm ²		(ASTM C469)

APPLICATION INFORMATION

Mixing ratio	~11.5 % ~2.875 l of water for 25 kg of powder
Fresh mortar density	~2.3 kg/l

Yield	25 kg of powder yields ~12.1 litres of grout	
Layer Thickness	10 mm min./ 150 mm max.	
Flowability	Initial ≥ 250 mm	(ASTM C230)
Ambient Air Temperature	+5°C min. / +35°C max.	
Substrate Temperature	+5°C min. / +35°C max.	
Pot Life	~60 minutes at +20°C	

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.

IMPORTANT CONSIDERATION

- To avoid cracking of exposed surfaces, protect from direct sun and/or strong wind
- Use only on clean, sound substrate
- Do not exceed water addition
- Not to be used for concrete repair works
- Do not use vibrating poker
- Pour or pump from one side only
- Do not add additional water during the surface finishing as this will cause discoloration and cracking
- Avoid exposing surfaces during rainfall and prior to final set

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 PREPARATION

Concrete

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 unsound concrete must be removed by suitable mechanical preparation as directed by the engineer or supervising officer. Any pockets or holes for structural fixings should also be cleaned of all debris.

Shutter Formwork

Where formwork is to be used, it 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 if vacuum extraction equipment to be

move water will not be used.

For manual grout application, a header box or hopper should be constructed on one side of the formwork so that a grout head of 150–200 mm can be maintained during the grouting operation.

Note: pumping method is recommended.

MIXING

Drill and Spiral Mixer

Pour the correct amount of water into a suitable clean mixing container. While stirring slowly with drill and spiral mixer (200–500 rpm), add the complete bag of powder into the water. Mix continuously for 3 minutes to achieve a uniform and lump free smooth consistency. Do not add more water than the specified. Wait for 1-2 minutes to allow the entrapped air to escape and then mix again for 2 more minutes.

Grout Mixer

SikaGrout®-3200 VN must be mixed using suitable grout mixing equipment combined with agitator for continuous large volume mixing. Volume capacity of equipment should be applicable to the volume of material being mixed for a continuous operation. Equipment trials should be considered to ensure product can be mixed satisfactory.

Pour about 90% of the specified water amount into the grout mixer. While stirring the water, slowly add the powder to the water. Add more water within the mixing time up to the specified allowed until the desired consistency is achieved. Mix continuously for a minimum of 3 minutes. For larger mixes the mixing time can be extended until the grout achieves a lump free smooth consistency. Do not add more water than the specified amount.

APPLICATION

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

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. Prior to 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.

Placing

Apply the material shortly after mixing to take advantage of the expansion properties. Immediately after mixing for manual application, pour the mixed grout into the header box or hopper ensuring continuous grout flow during the complete grouting operation to avoid trapping air.

For large volume placement, grout pumps are recommended.

Equipment trials should be considered to ensure product can be pumped satisfactorily.

Surface finishing

Finish exposed grout surfaces to the required surface texture as soon as the grout has started to stiffen. Do not add additional water on the surface. Do not over work surface as this may cause surface discolouration and cracking. After the grout has initially hardened, remove formwork and trim edges while concrete is 'green'.

Control of heat

Consider storing bags in a cool environment and using cold 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 appropriate curing methods such as curing compound, moist geotextile membrane, hessian, polythene sheet.

CLEANING

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

LOCAL RESTRICTIONS

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

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.

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Product Data Sheet

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