

# SikaGrout®-3200

## Fatigue Certified OnShore Wind Tower Precision Grout

<b>Product Description</b>	SikaGrout®-3200 is a fast hardening, high early strength, high final strength, 1-component, shrinkage compensated, free flowing cementitious grout for structural filling of joints and under grouting base plates.
<b>Uses</b>	High performance precision grouting of vertical or horizontal joints for onshore steel and pre-cast concrete wind towers
<b>Characteristics / Advantages</b>	<ul style="list-style-type: none"><li>■ Fatigue tested and certified</li><li>■ Fast early strength development</li><li>■ High final strength</li><li>■ Fluid consistency</li><li>■ Can be pumped</li><li>■ Expansion compensated</li><li>■ Application thickness 10 to 150 mm</li><li>■ High adhesion to concrete</li><li>■ CE Certification</li></ul>
<b>Tests</b>	
<b>Approval / Standards</b>	EN 1504-6: 2006: Anchoring of reinforcing bars. Fatigue tested and certified.
<b>Product Data</b>	
<b>Form</b>	
<b>Appearance / Colour</b>	Grey powder
<b>Packaging</b>	30 kg valve bags and big bags on request
<b>Storage</b>	
<b>Storage Conditions / Shelf-Life</b>	6 months from date of production if stored properly in undamaged original sealed packaging, in dry cool conditions.
<b>Technical Data</b>	
<b>Chemical Base</b>	Special cement, quartz aggregates and additives
<b>Density</b>	Fresh mortar density: ~ 2.3 kg/l
<b>Grading</b>	D <sub>max</sub> : ~3 mm
<b>Layer Thickness</b>	10 mm min / 150 mm max.
<b>Expansion</b>	Max 2% / > 0.1 % after 24 hours



## Mechanical / Physical Properties

<b>Compressive Strength</b>	At 20°C (mixing ratio 11 % water)				(EN 196-1)
	1 day	2 days	7 days	28 days	
	~ 60 MPa	~ 70 MPa	~ 80 MPa	~90 MPa	
<b>Compressive Strength</b>	Equivalent to C80 concrete (150 x 300 cylinders)				(EN 206-1)
<b>Flexural Strength</b>	At 20°C				(EN 196-1)
	1 day	28 days			
	~ 5 MPa	~10 MPa			
<b>Adhesive bond</b>	> 2.0 MPa				( EN 1542)
<b>Elastic Modulus</b>	~38 GPa				(EN 13412)

## Application Details

<b>Yield</b>	30 kg bag yields ~14.5 litres of mortar
<b>Substrate Quality</b>	<i>Concrete:</i> The concrete shall be thoroughly clean, free from dust, loose material, surface contamination and materials which will impair the grout flow or reduce adhesion strength. Delaminated, weak, damaged and deteriorated concrete and where necessary sound concrete shall be removed by suitable means as directed by the Engineer or Supervising Officer.
<b>Substrate Preparation / Priming</b>	<i>Pre-Wetting</i> The concrete substrate shall be thoroughly saturated with clean water a recommended 12 hours before application of the grout. The surface shall not be allowed to dry in this time. Prior to application of the grout, excess water shall be removed and the surface shall achieve a dark matt appearance (saturated surface dry) without glistening and surface pores and pits shall not contain water.

## Application Conditions / Limits

<b>Substrate Temperature</b>	+5°C min.; +35°C max.
<b>Ambient Temperature</b>	+5°C min.; +35°C max.

## Application Instructions

<b>Mixing Ratio</b>	11% to 12.5 % / 3.3 to 3.75 litres water per 30 kg bag
<b>Mixing</b>	SikaGrout®-3200 shall be professionally mixed using suitable mixing equipment applicable to the volume of material being mixed. Pour the minimum water ratio in the correct proportion into a suitable mixing container. While stirring slowly, add the powder to the water. Add more water within the mixing time up the maximum allowed until the desired consistency is achieved and to suit ambient temperature conditions. Do not add more water than the maximum specified. Mix thoroughly for minimum <b>3 minutes</b> . For larger mixes the mixing time shall be extended to approximately 5 minutes or as necessary until the mortar is homogeneously mixed with no lumps and no remaining dry powder.

<b>Application Method / Tools</b>	<p>SikaGrout® -3200 can be applied manually using traditional pouring techniques or for large applications using suitable grout pump. It is recommended to carry out a small trial to check suitability of grout pump &amp; consistency of mixed material.</p> <p>Apply the material shortly after mixing to take advantage of the expansion properties.</p> <p>Ensure formwork is strong enough to support the freshly applied grout and sealed to prevent leakage.</p> <p>Cure exposed surfaces immediately with protective sheet or membrane. Shield the fresh mortar from direct sun, wind and frost.</p> <p>Finish exposed surface as desired as soon as the mortar has started to stiffen. Do not add additional water on surface. Do not over work surface as this may cause surface cracking.</p>
<b>Cleaning of Tools</b>	<p>Clean all tools and application equipment with water immediately after use. Hardened material can only be mechanically removed.</p>
<b>Pot life</b>	~60 minutes at 20°C
<b>Notes on Application / Limitations</b>	<ul style="list-style-type: none"> <li>■ Take precautions to protect application from direct sun and/or strong wind</li> <li>■ Do not add water under or over recommended dosage</li> <li>■ Apply only to sound, clean, damp prepared concrete substrate</li> </ul>
<b>Curing Details</b>	
<b>Curing Treatment</b>	Protect the fresh mortar from early dehydration using the relevant curing method.
<b>Value Base</b>	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.
<b>Local Restrictions</b>	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.
<b>Health and Safety Information</b>	For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.
<b>Legal Notes</b>	<p>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.</p>



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