

## PRODUCT DATA SHEET

# SikaGrout-295 AD MX

## Cementitious High Strength Grout

### PRODUCT DESCRIPTION

SikaGrout-295 AD MX is a 1-part, cementitious, flowable, shrinkage compensated high strength grout.

### USES

For renewable energy applications where gaps and joints between structural elements / substrates require a high mechanical strength grout:

- Wind turbine bases
- Stanchion base plates
- Bearing plates
- Heavy machine base plates
- Vertical and horizontal precast concrete elements
- Filling large voids
- For interior and exterior use

### CHARACTERISTICS / ADVANTAGES

- Thickness 10 – 150 mm (0.40-5.90 inch)
- Easy mixing and placing
- Rapid strength development
- Good flow properties
- Pumpable
- Free from chlorides and metallic particles
- High pH level protects metallic parts against corrosion
- Shrinkage compensated
- High mechanical strengths
- Non-corrosive

### APPROVALS / STANDARDS

This product is covered by a harmonised European standard and conforms to a European Technical Assessment which has been issued for it. No CE Declaration of Performance is available.

### PRODUCT INFORMATION

<b>Chemical Base</b>	Cement, selected fillers, aggregates and special additives
<b>Packaging</b>	30 kg bags (66.14 lbs.)
<b>Appearance / Color</b>	Grey powder
<b>Shelf Life</b>	9 months from date of production

**Storage Conditions** Product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +5 °C (41°F) and +30 °C (86°F). Always refer to packaging.

**Maximum Grain Size**  $D_{max}$ : ~3 mm (0.12 inch)

## TECHNICAL INFORMATION

<b>Compressive Strength</b>	<b>1 day</b>	<b>3 days</b>	<b>7 days</b>	<b>28 days</b>	(ASTM C109)
	~60 MPa (~8,700 Psi)	~75 MPa (~10,850 Psi)	~85 MPa (~12,300 Psi)	~90 MPa (~13,000 Psi)	

**Modulus of Elasticity in Compression** ~31 GPa (4.50 x 10<sup>6</sup> Psi) (ASTM C469)

<b>Flexural Strength</b>	<b>1 day</b>	<b>3 days</b>	<b>7 days</b>	<b>28 days</b>	(ASTM C109)
	~6 MPa (~870 Psi)	~8 MPa (~1,160 Psi)	~9 MPa (~1,305 Psi)	~10 MPa (~1,450 Psi)	

**Tensile Adhesion Strength** ~18 MPa (~2,600 Psi) after 28 days (ASTM C882)

## APPLICATION INFORMATION

**Mixing Ratio** 11.5 % - 12.0 % of water by weight of powder  
3.45–3,6 l (7.3 - 7.6 pints) of water for 30 kg (66.14 lbs.) of powder

**Fresh Mortar Density** ~2.3 kg/l (19.2 lb/gal)

**Coverage** ~14.5 liters ( 3.83 gal.) of grout per 30 kg (66.14 lbs.) bag

**Layer Thickness** 10 mm (0.39 in.) min./ 150 mm (5.90 in.) max.

**Ambient Air Temperature** +5 °C (41°F) minimum/ +30 °C (86°F) maximum

**Substrate Temperature** +5 °C (41°F) minimum/ +35 °C (95°F) maximum

## APPLICATION INSTRUCTIONS

### SURFACE PREPARATION

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

#### Steel, iron

Clean, free from oil, grease, rust and scale etc.

#### Shutter Formwork

Where formwork is to be used, all 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.

### MIXING

#### Electric Single or double paddle mixer

Pour the correct amount of water into a suitable clean mixing container. While stirring slowly using a spiral paddle (200 – 500 rpm), add the complete bag of powder into the water. Mix continuously for 4 minutes to achieve a uniform and lump free smooth consistency. Do not add more water than the maximum specified.

#### Grout mixer

SikaGrout-295 AD MX must be mixed using suitable grout mixing equipment combined with agitator for continuous large volume mixing. Volume capacity of equipment must be applicable to the volume of material being mixed for a continuous operation. Equipment trials must be considered to ensure product can be mixed satisfactory before full project application. Pour the minimum water ratio in the correct proportion 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 maximum allowed until the required consistency is achieved.

Mix continuously for a minimum of 3 minutes. For larger mixes the mixing time must be extended as necessary until the grout achieves a lump free smooth consistency.

Do not add more water than the maximum specified.  
Note: Do not use continuous mixing equipment.

## 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: Grout pump application

For large volume placement, grout pumps are recommended. Equipment trials must 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'.

### Cold weather working

Consider storing bags in a warm environment and using warm water to assist with achieving strength gain and maintaining physical properties.

### Hot weather working

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 the fresh grout immediately from premature drying using an appropriate curing method e.g. curing compound, moist geotextile membrane, polythene sheet, etc. 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 mechanically removed

## AVAILABILITY/WARRANTY

- Sika Method Statement: Cementitious grouts

## LIMITATIONS

- To avoid cracking of exposed surfaces, immediately protect freshly applied material from direct sun and, or strong wind.
- Keep exposed surfaces to a minimum.
- To avoid cracking in warm temperatures keep bags cool & use cold water for mixing.
- Not to be used for concrete repairs.
- Do not use vibrating poker.
- 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.

## BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

## OTHER RESTRICTIONS

See Legal Disclaimer.

## ENVIRONMENTAL, HEALTH AND SAFETY

### REGULATION (EC) NO 1907/2006 - REACH

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

## LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at [usa.sika.com](http://usa.sika.com) or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs.

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