BUILDING TRUST

PRODUCT DATA SHEET

SikaCeram® RSG 705

(formerly MasterTile® RSG 705)

EPOXY BASED, THIXOTROPIC, WATER CLEANABLE TILE ADHESIVE AND GROUT

DESCRIPTION

A three-component epoxy resin based tile adhesive and grout, featuring a smooth surface in various colours. It is ideal for applications in
medium and heavy duty corrosive and hygienic environments.
Suitable for use in hot and tropical climatic conditions.

USES

SikaCeram® RSG 705 is used wherever a high degree of chemical resistance and excellent mechanical properties are required, such as:

- Food production: meat, fish, vegetable and fruit processing, canning areas, dairies and bakeries
- Industrial kitchens and catering facilities
- Electrical substations and plant rooms
- Laboratories
- Swimming pools and leisure facilities
- Heavy duty workshops, garages and services facilities
- Bottling plants and breweries

Suitable for following types of tiles:

- Ceramic and porcelain tiles
- Ceramic-, glass-, marble-, wood- made mosaic
- Marble and other natural stone
- Acid resistant tiles
- Pavers

On the following surfaces, as tile adhesive, indoor and outdoor, on floors and walls:

- Gypsum or cement based substrates
- Old tiles
- Iron
- Fiberglass reinforced plastic

FEATURES

- Excellent workability and easy application
- Non-absorbent, easy to clean and hygienic in service
- Dual purpose: bedding and grouting of tiles with the same material
- Excellent resistance to a wide range of chemicals and acids.
- Impermeable: resistant to staining and absorption when permanently immersed in water
- Will not support bacterial growth in kitchens, swimming pools, etc.
- Excellent adhesion to most commonly encountered building substrates and materials
- Water miscible: tools and equipment can be cleaned with water and uncured material can be wiped off tiles with a wet cloth following grouting.
- Suitable for vertical and horizontal applications in interior and exterior

CERTIFICATES AND TEST REPORTS

- Resin tile grout: SikaCeram® RSG 705 complies with requirements of ANSI 118.3 and EN 13888, class RG.
- Tile-setting resin adhesive: SikaCeram® RSG 705 complies with requirements of ANSI 118.3 and EN 12004, class R2 T.

PRODUCT INFORMATION

Composition	Epoxy resin, quartz aggregates and specific admixtures	
Packaging	Part A:	1.213 kg
	Part B:	0.547 kg
	Part C:	7.74 kg
	Part A+B+C:	9.5 kg (~5 L)
Shelf life	12 months from date of production if stored properly	
Storage conditions	Store in a cool, dry area in original sealed packaging and at temperatures between +5 °C and +35 °C. Protect from direct sunlight, heat and moisture.	
Colour	Available in various colours. Please contact Sika's representative for advice.	
Density	~1.90 kg/l (Mixed at +25°C)	

TECHNICAL INFORMATION

Compressive strength	≥ 80 N/mm²	(ASTM C579, Method B)
Flexural-strength	> 30 N/mm²	(BS 6319, Part 3 / ASTM C580, Method A)
Tensile strength	> 15 N/mm²	(BS 6319 Part 7 / ASTM C307)
Tensile adhesion strength	> 2.5 N/mm² (or substrate failure)	(ASTM D4541)
Service temperature	Permanent exposure to dry heat: max. +50°C Note: No simultaneous chemical and mechanical exposure.	
Water absorption	< 0.2 %	(ASTM C413)
Chemical resistance	Resistant to many chemicals. Please contact Sika's Technical Department for chemical resistance table.	

APPLICATION INFORMATION

Consumption	Coverage rates are dependent on the specified tile or pavers dimensions. As a general guide, the approximate consumption can be calculated by volume, where ~1,9 kg/m²/mm of material is required for solid bed application. Consumption of tile grout can be calculated through the following formula: ((L1+ L2) x W x T x D) / (L1 x L2) , where: ▪ L1 = Tile length (mm) ▪ L2 = Tile width (mm) ▪ W = Joint width (mm) ▪ T = Tile thickness (mm) ▪ D = Density of tile grout (kg/l) Note: Final result will be in kg/m². Note: All figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and wastage etc.
Ambient air temperature	+10°C min. / +35°C max.
Substrate temperature	+10°C min. / +35°C max.
Substrate moisture content	< 4 % pbw moisture content. Test method: Sika®-Tramex meter, CM - measurement or Oven-dry-method. No rising moisture according to ASTM (Polyethylene-sheet).

Pot Life	~60 min at temperature of +25°C ~30 min at temperature of +40°C Note: The potlife begins when the resin and hardener are mixed. It is shorter at high temperatures and longer at low temperatures. The greater the quantity mixed, the shorter the potlife.

BASIS OF PRODUCT DATA

- All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.
- Internal Reference - Version: MBS_CC-UAE/ Tile_RSG705_08_95/v4/10_17/v5/07_19/v6/09_19

FURTHER INFORMATION

General Method Statement

IMPORTANT CONSIDERATIONS

- The application and use of SikaCeram® RSG 705 should be in accordance with the relevant international tiling codes practice.
- All calculated usages assume constant thickness on a regular substrate. Failure to achieve the required surface will lead to additional material being used.
- Movement joints should be provided in accordance with normal practice.
- Always perform a test on cleanability and staining before grouting/bonding natural stone or any type of tile with absorbent or porous surface.
- Use a soft felt to emulsify the product while cleaning in case tiles with structured surface.
- Always perform a preliminary test on cleanability if applying on tiles in colour contrast.
- Do not partialy mix. Mix only full sets.
- Do not add fillers or solvents.
- Chemical exposure may leads to discoloration / staining.
- Contact Sika's Technical Department prior applying on metal or plastic substrates.
- Prior to application, SikaCeram® RSG 705 systems should be stored under cover and protected from extremes of temperatures which may cause inconsistent workability and cure times for the mixed material. Ideally, at least 24 hours before mixing, SikaCeram® RSG 705 systems should be maintained at approximately 20°C.
- During application in cold conditions, correct conditioning can help, but application should be halted if the ambient temperature is likely to fall below 10°C. Consideration should be given to the substrate or base slab as it is likely to be considerably colder than the surrounding air temperature. When temperatures exceed 30°C during application, working times may be reduced by as much as 50%.

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

Ensure all laitance and contaminants such as oil, grease and coating systems are removed by either mechanical wire brushing or grit blasting. The surface should be dry and any dust should be removed by an industrial vacuum. The surface should contain no more than 4 % moisture and any major repairs in the form of damaged arrisses, cracks and honeycombing should be repaired with the appropriate Sika® repair system. Where minor blemishes like blowholes exist, these can be filled out simultaneously with the bedding adhesive when it is applied.
Depending on the contaminants to be removed, perform adequate preparation techniques, such as jet washing or blastcleaning, in order to remove all traces of any materials that could reduce the product's adhesion on the substrate.
Joints should be cleaned at least to two thirds of the depth of the tile.

MIXING

SikaCeram® RSG 705 is reactive product of a heavy consistency. This means that it sets through a chemical reaction between the components. It is therefore crucial to ensure that these components are thoroughly mechanically mixed with the correct mixing ratio.
Using a slow speed electric drill with a paddle attachment, pour the reactor (Part B) into the base tin (Part A) and mix for approximately 2 minutes or until a uniform consistency and colour is obtained. Pour the mixed resin into a forced action mixer and slowly add the filler (Part C) mixing until a lump free, uniform consistency is achieved. The finished mix should have a very creamy consistency, is uniformly coloured and it is easy to apply and spread.
In most applications, the full contents of each component pack should be mixed together. However, where necessary, up to 2kg of the Part C may be omitted to facilitate application at low temperatures, to improve the application properties on floors or to aid application into narrow joints.

APPLICATION

To the prepared surface apply a solid bed of adhesive to a minimum thickness of 3 mm. Ensure that the size of the working area can be tiled within the pot life of the SikaCeram® RSG 705. On vertical applications, the adhesive must be applied with a notched trowel to leave a ribbed bedding.

Curing

Good curing is essential for resin based materials to ensure specified performance. A minimum temperature of 10°C should be maintained during the curing period by the use of additional heating if necessary. Installations using SikaCeram® RSG 705 systems can be opened to foot traffic after approximately 24 hours at 20°C. Complete cure is achieved after 72 hours at 20°C.

Tiling

Tiles and pavers should be pressed firmly into place with a twisting motion until properly aligned and bedded. On vertical applications, tiling should begin from the bottom upwards. Ensure that at least 75% of the tile back is in contact with the adhesive. A minimum width of 2 mm must be left around tiles for grouting.

Grouting

The grouting operation can be carried out simultaneously with the application of the bedding mortar or after the bedding mortar has set. When proceeding with one continuous operation, apply extra thickness in the bed to allow for material to ooze through the gaps once tiles are pressed onto the adhesive. The grout is then trimmed off and grouted joints are finished with a spatula or palette knife. Where grouting is to be carried out after the bed has set and tiles are permanently fixed in place apply the epoxy grout to the joints by plastic spatula and finish off. Following the grouting operation use a fibrous pad or wet soft cloth to clean off the excess material. This should take place within 15 minutes and care should be exercised not to use excess water or allow water to come into contact with the wet grout. Surplus material must be removed from the face of the tiles before it sets.

CLEANING OF EQUIPMENT

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

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.

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All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.

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