BUILDING TRUST

PRODUCT DATA SHEET

SikaCeram®-888 Tile Grout EP

Water cleanable and chemical resistant epoxy based coloured tile grout and tile adhesive

DESCRIPTION

SikaCeram®-888 Tile Grout EP is solvent free, hygienic, hard wearing, stainless, chemical resistant, two component water dispersed coloured epoxy tile grout and tile adhesive for fixing tiles / filling joints between ceramic tiles, vitrified tiles, glass mosaic tiles, porcelain tiles, marble and stone. Available in various colours. It is ideal for applications in areas demanding perfect cleanliness, high chemical and mechanical resistance.
Suitable for use in hot and tropical climatic conditions.

USES

Grouting and bonding the following types of tiles:
- Ceramic and porcelain tiles
- Ceramic-, glass-, marble-, wood- made mosaic
- Marble and other natural stone

On the following surfaces, as tile adhesive on floors and walls:
- Gypsum or cement based substrates
- Old tiles
- Iron
- Fiberglass reinforced plastic

Grouting and bonding tiles for the following applications:
- Swimming pools (including seawater pools), thermal pools, GRP pools, fountains, etc.
- Kitchens, tanneries, paper-mills, slaughterhouses, professional kitchens, etc.
- Laboratories of all kinds
- Hospitals (including operating theatres)
- Manufacturing areas
- Storage tanks
- Sewage treatment plants
- Animal facilities (agriculture, stables and zoos etc.)
- Sanitary applications like bathrooms, toilets, around urinals, etc.
- Industrial washing facilities (with high pressure water etc.)
- Food industry such as in diaries, pickling and preserves production, fruit juices /aerated drinks production etc.
- Interior and exterior use

CHARACTERISTICS / ADVANTAGES

- Very good workability
- Easy application
- Long open time
- Easy to clean joints with water
- Rapid hardening without cracking or shrinkage
- Waterproof and impermeable to liquids
- High mechanical resistance
- Good abrasion resistance
- Very good adhesion to ceramic tiles, mosaics, etc.,
- Easy to clean and maintain
- Good chemical resistance
- Resistant to steam cleaning
- Stainless and colourfast

PRODUCT INFORMATION

Product declaration	▪ RG according to EN 13888 ▪ RG according to ISO 13007-3 ▪ R2T according to EN 12004-1 ▪ R2T according to ISO 13007-1

Chemical base	Epoxy resin, quartz aggregates and special additives	
Packaging	Part A+B pre-batched	5 kg set
	Part A	4.5 kg
	Part B	0.5 kg
	Part A+B pre-batched	1 kg set
	Part A	0.9 kg
	Part B	0.1 kg
	Each pack contains 1 sponge, 1 pair gloves, 1 application manual for on site use.	
Shelf life	5 kg pack	12 months from date of production
	1 kg pack	18 months from date of production
Storage conditions	The product must be stored properly in undamaged original sealed packaging in dry and cool conditions at temperatures between +5 °C and +35 °C. Protect from direct sunlight, heat and moisture.	
Appearance / Colour	Part A	Coloured paste
	Part B	Amber coloured viscous liquid
	Available in below colour shades:	
	Pure White	Light Ivory
	Anthracite	Cement Grey
	Brown	Chocolate
	Black	Beige
	Ocean Blue	Sea Blue

Density	Part A+B mixed	1.60 ± 0.05 kg/L	(EN ISO 2811-1)
	Part A	1.85 ± 0.05 kg/L	
	Part B	0.95 ± 0.05 kg/L	
	All density values at +30 °C.		

TECHNICAL INFORMATION

Shore D hardness	1 day	≥ 50	(ASTM D2240)
	7 days	≥ 70	
	28 days	≥ 80	
Abrasion resistance	~0.4 g (H22/1000/1000, 28 d)		(ASTM D4060)
Compressive strength	≥ 45 N/mm²		(ANSI 118.3 / ASTM C579)
	≥ 45 N/mm²		(ISO 13007-4 / EN 12808-3)
Flexural strength	≥ 30 N/mm²		(ISO 13007-4 / EN 12808-3)
Tensile strength	≥ 20 N/mm² (7 d, +25 °C)		(ASTM D638)
Tensile adhesion strength	After > 20 min, open time	≥ 0.5 N/mm²	(EN 12004-2 / ISO 13007-2)
Shear Adhesion	Initial	≥ 2 N/mm²	(EN 12004-2 / ISO 13007-2)
	After water immersion	≥ 2 N/mm²	
	After thermal shock	≥ 2 N/mm²	
Shrinkage	≤ 1.5 mm/m		(ISO 13007-4 / EN 12808-4)
	≤ 0.25 %		(ANSI 118.3 / ASTM C531)
Service temperature	+5 °C min. / +70 °C max.		
Water absorption	≤ 0.1 g after 240 minutes		(ISO 13007-4 / EN 12808-5)

Chemical resistance

Chemical	Resistance on spillage test for 28 days
Acetic Acid (5%)	A
HCl (37%)	D
Formic Acid (2.5%)	D
HNO_3 (25%)	D
H_2SO_4 (50%)	D
NaOH (50%)	A
Xylene	A
Soap Solution (10%)	A
Lactic Acid (10%)	D+
Acetone	A
Diesel	A
Ammonia (25%)	A
Tartaric Acid (50%)	D
Tannic Acid (50%)	A
$KMnO_4$ (10%)	D
$CaCl_2$ (10%)	D
KOH (50%)	D
Chloroform	A
Glycerol	A
N-Butyl Acetate	A
Benzene	A
Carbon Tetrachloride	A
Ethyl Methyl Ketone	A
Toluene	A
Di Chloro Methane	A
Sodium Bi-Sulphate (10%)	D
Sodium Bicarbonate (20%)	D
$HgCl_2$ (10%)	D
Ethanol	A
H_2O_2 (30%)	A
Sodium Hypochlorite (6%)	D
Tea	D

A = Resistant, D = Resistant but with discoloration and/or loss of gloss, C = Not Resistant, + = More

Joint width

1–20 mm

Slip resistance

≤ 0.5 mm (EN 12004-2 / ISO 13007-2)

APPLICATION INFORMATION

Consumption

TILE ADHESIVE
Consumption is dependent on the substrate, surface profile, roughness, size of the tiles, the joints between them and application technique (single spreading/floating method or double spreading/buttering method).
As a guide for a single adhesive layer:

Size of tiles	Notched trowel size	Consumption
Small	4 mm	~3.2 kg/m²
Medium	6 mm	~4.8 kg/m²
Large	8 mm	~6.4 kg/m²

These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level or wastage etc.

TILE GROUT
Consumption is dependent on the surface profile and roughness of the substrate as well as on the size of the tiles and the joints between them. As a general guide, the approximate consumption can be calculated by volume, where ~1.6 kg/m² per mm of material is required.

Consumption of tile grout can be also calculated through the following formula:
((L1 + L2) × W × T × D) / (L1 × L2), where:
L1 = Length of tile (mm) - First side
L2 = Length of tile (mm) - Second side
W = Joint width (mm)
T = Tile thickness (mm)
D = Mixed density of tile grout (kg/L)
Note: Final result will be in kg/m². All figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and wastage etc.
As a guide the following table can be used for calculating approx. area in sq.ft. per kg:

Tile dimensions	Joint width 2 mm	Joint width 3 mm	Joint width 4 mm
100 × 100 × 3	60	40	30
150 × 150 × 4	67	45	34
200 × 150 × 5	62	41	31
200 × 200 × 5	72	48	36
200 × 300 × 6	72	48	36
300 × 300 × 6	90	60	45
400 × 400 × 6	120	80	60
450 × 450 × 7	115	77	58
500 × 500 × 8	112	75	56
600 × 600 × 8	135	90	67

Consistency	Non-sag in vertical joints	(ANSI A118.3)
Ambient air temperature	+5 °C min. / +40 °C max.	
Mixing ratio	Part A : Part B = 9 : 1 (by weight)	
Substrate temperature	+5 °C min. / +40 °C max.	
Pot life	~95 minutes (100 g mass, +25 °C)	
	Water cleanability up to 95 minutes	(ANSI 118.3)
Open time	~45 minutes	(ISO 13007-2)
Setting time	< 7 days to achieve service strength	(ANSI 118.3)
Applied product ready for use	Foot traffic: ~24 hours Full cure: ~3 days Water immersion: ~7 days	
	Note: Values are obtained in laboratory condition at +25 °C. Higher temperatures will reduce the indicated waiting time, lower temperatures increase waiting time.	

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

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

EQUIPMENT

MIXING
- Electric single paddle mixer (< 400 rpm) with spiral paddle

APPLICATION
- Notched trowel
- Grouting float / Trowel
- Grout spreader

- Sponge
- Soft cloth
- Grout finishing tool

SUBSTRATE QUALITY / PRE-TREATMENT

TILE GROUT
- Check joints are dry, clean, clear of excess adhesive, contaminants and tile joint spacers.
- The adhesive bed must be set before grout application.
- Avoid any ponding / standing water on the surface or in the joint.
- Surface must not be damp to touch.
- Joints should be cleaned at least to two thirds of the depth of the tile.
- Do not clean tiles with any acid based cleaners.

TILE ADHESIVE
- The substrate can be one of the following materials: Cementitious, gypsum, paint coating, tiles, metal, glass fibre reinforced plastic. For other types of substrates, contact Sika Technical Services for additional information before use.
- Cementitious substrates must be sufficiently cured and dried (2-6 weeks).
- All substrates must be structurally stable, able to support the weight of the new tiling and provide a firm and securely fixed background.
- Surfaces must be clean, dry, free of any loose or friable particles, contaminants such as dust, dirt, oil, wax polish, grease, cement laitance or efflorescence.
- Depending on the substrate condition and contaminants to be removed from the surface, use adequate preparation techniques to remove all traces of any materials that could reduce the product's adhesion to the substrate.
- Smooth surfaces must be roughened lightly to improve adhesion. To confirm adequate surface preparation and adhesion, carry out a small trial before full application.
- Any small surface defects and variations in level, profile, or around exposed aggregates can be prefilled and levelled with an additional layer of SikaCeram®-888 Tile Grout EP to a maximum thickness of 5 mm, applied at least 24 hours before full adhesive application. For larger and thicker areas of surface re-profiling and making good, use suitable mortars from the Sika MonoTop® or SikaCeram® Floor Leveler range.
- When laying tiles on non-absorbent or substrates with limited absorbency, such as existing ceramic tiles, painted surfaces etc. Check to confirm these surfaces are all stable, firmly and securely bonded. Then use suitable degreasing / descaling products to thoroughly and completely clean the surface.
- For tiling in constantly damp or wet rooms, a suitable Sika® waterproofing product / system must be applied to the substrate before tiling.

MIXING

Important: Mix full units only
Important: Avoid over-mixing to minimise air entrainment.

1. Mix Part A (resin) for ~30 seconds.
2. Add Part B (hardener) to Part A.
3. Mix continuously for 3 minutes, until a uniform mix is achieved.
4. During the final mixing stage, scrape down the sides and bottom of the mixing container with a flat or straight edge trowel at least once to ensure complete mixing.

APPLICATION

TILE GROUT
Important: Use a soft felt to emulsify the product while cleaning in case of tiles with textured surface.
Important: Always perform a preliminary test on cleanability and staining if applying on tiles in colour contrast or any type of cladding with absorbent or porous surface.

1. Apply SikaCeram®-888 Tile Grout EP using a grout spreader, squeegee or grouting float/trowel.
2. Completely fill and compact the joints uniformly using cross-hatch techniques.
3. If required, finish grout with a grout finishing tool while grout is wet.
4. Using the same spreader/ float, remove excess grout from the tile surfaces, moving the tool diagonally across the joints.
5. When the grout is touch dry (depending on the absorbency of the tile), use a damp sponge or sponge float to clean the tile surfaces. Clean sponge regularly with clean water.
6. When grout has set hard enough in the joint (fingernail hard), polish the tile surfaces by wiping with a clean, soft dry cloth.

TILE ADHESIVE
Important: Apply sufficient adhesive to ensure adequate ‘wetting’ of the backs of the tiles.
Important: Coverage on the back of the tiles must be 100 %.
Important: Tiling must be carried out on freshly applied adhesive. Exert adequate pressure to ensure 100 % complete and uniform contact with the adhesive to achieve optimum adhesion.
Important: If a skin forms on the surface of the adhesive, immediately remove the adhesive layer with a trowel, discard material and apply a fresh layer of SikaCeram®-888 Tile Grout EP adhesive.
Important: Protect freshly applied material from extremely high or low (freezing) temperatures, rain, direct exposure to sun, for at least 12–24 hours from application.
Important: For natural stone tiles or marble, always carry out a preliminary test application first.
Important: Avoid application in direct sunlight and/or strong wind / draughts.

Note: For tiles > 900 cm^2 (30 × 30 cm), the double-spreading (buttering) technique is always recommended.

1. Apply sufficient adhesive to the prepared fixing surfaces with the flat side of trowel.
2. Comb additional adhesive with appropriate square notched trowel to the required bed thickness.
3. Wherever needed (for large tiles), back butter the tiles for full bedding.

4. Place tiles into wet, sticky adhesive and use rubber mallet to fully embed the tiles.
5. Adjust tiles if required. Provide support wherever needed.
6. Clean off surplus adhesive from tile face and between tile joints before the adhesive has dried.

CLEANING OF TOOLS

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

LOCAL RESTRICTIONS

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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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