



CERAMAX® EP 300

Epoxy Based Tile Adhesive and Grout

Product Description

CERAMAX® EP 300 is a two-component, solvent-free, epoxy based tile adhesive and grout with high resistance to chemical and mechanical exposure.

Complies with class R2T according to EN 12004-1 and class RG according to EN 13888-1.

R2: Improved reaction resin adhesive

T: Reduced slip

RG: Reaction resin grout

Fields of Application

- Interior and exterior applications, on walls and floors
- Fixing and grouting of ceramic tiles, porcelain stoneware and glass mosaic
- Chemical industry, laboratories, production and storage facilities, paper, leather and battery plants
- Food industry, slaughterhouses, dairies, restaurants, wine and beer plants, biscuit and tomato paste factories
- Hospitals and clinics; operating theatres, kitchens, showers and sanitary areas
- Swimming pools, saunas, thermal and salt water spas
- Supermarkets, shopping centres, metro stations, car parks, public toilets and water filtration plants
- Over cement based screeds and renders, and on metal substrates

Advantages

- Used as a single product for both fixing and grouting
- High chemical resistance to acids, alkalis and various solvents
- Non-porous structure does not absorb water, dirt or bacteria
- High mechanical and abrasion resistance
- Extended working time for comfortable application
- Easy to apply and easy to clean off
- Fixing and grouting with one product for joint widths of 1–12 mm
- High colour stability; no colour variation in the joints

Technical Properties

General Information	
Composition	Two-component, epoxy resin based (A: resin, B: hardener)
Appearance	Component A: coloured paste / Component B: liquid hardener
Colour	White, grey, beige, anthracite (other colours on request)
Density (mixed)	~1.70 ± 0.1 kg/l
Packaging	4.7 kg and 0.3 kg set
Performance Data – Grout (EN 13888-1)	
Abrasion resistance (EN 12808-2)	≤ 250 mm ³
Flexural strength (EN 12808-3)	≥ 30 N/mm ²

Compressive strength (EN 12808-3)	$\geq 45 \text{ N/mm}^2$
Shrinkage (EN 12808-4)	$\leq 1.5 \text{ mm/m}$
Water absorption – 240 min (EN 12808-5)	$\leq 0.1 \text{ g}$
Performance Data – Adhesive (EN 12004-2)	
Initial shear adhesion strength	$\geq 2.0 \text{ N/mm}^2$
Shear adhesion strength after water immersion	$\geq 2.0 \text{ N/mm}^2$
Shear adhesion strength after thermal shock	$\geq 2.0 \text{ N/mm}^2$
Adhesion strength after open time (20 min)	$\geq 0.5 \text{ N/mm}^2$
Slip	$\leq 0.5 \text{ mm}$
Application Data	
Application temperature	+5°C / +30°C
Service temperature	-40°C / +100°C
Mixing ratio (A / B)	94 / 6 (by weight)
Pot life	~80 min (+23°C, 200 g — DIN 16945)
Application thickness	3–5 mm (single or double buttering)
Joint width	1–12 mm
Setting time	12–24 hours
Time to full chemical resistance	7–10 days
Opening to traffic	Light traffic 24 hours, heavy traffic 48 hours
Consumption	As adhesive ~1.6–1.8 kg/m ² (per mm of thickness)
Safety Information	
Hazardous substances	See SDS

The stated technical values were obtained at +23°C ambient temperature and 50% relative humidity. Higher temperatures shorten and lower temperatures extend the stated times.

Application Instructions

Surface Preparation

The substrate must be sound, dry, even, clean, free of dust and load-bearing. It must be free of oil, paint, rust, wax and similar residues that could impair adhesion. Renders thinner than 3 mm must be completely removed by scraping. Significant defects and voids must be repaired with a suitable TAMCRETE® repair mortar at least 24 hours before application. For grouting, the joints must be dry, clean and free of all cement and adhesive residues. Do not apply on frozen or thawing substrates, on substrates at risk of rain or frost within 24 hours, in direct sunlight, in strong wind or on excessively hot surfaces. Underfloor heating systems must be switched off 24 hours before application.

Preparation of the Mix

Pour the whole of component B into the container holding component A and mix thoroughly, preferably with a low-speed mixer, until a homogeneous paste is obtained. If the components are not used in full, they must be weighed out at a mixing ratio of A / B = 94 / 6 by weight. For applications below +15°C, the product should be conditioned at +23 ± 2°C for one day beforehand to improve workability. The product must be at room temperature during application.

Application – Tile Fixing

Spread the prepared mortar onto the substrate and adjust the thickness with a notched steel trowel. The notch size is selected according to the tile format and the evenness of the substrate. To ensure proper bonding, tiles must be

bedded with pressure using a rubber mallet, leaving no voids underneath. Residues remaining on the tile surface must be removed before they dry, using warm water at room temperature and a damp sponge.

Application – Grouting

CERAMAX® EP 300 is pressed into the joints with a spatula or a grouting gun. While the work continues, the product remaining on the tile surface must be cleaned thoroughly with room-temperature water and a damp sponge before it hardens. Once cured, it is very difficult to remove. Coverings fixed with CERAMAX® EP 300 must also be grouted with CERAMAX® EP 300.

Consumption

Consumption as tile adhesive: ~1.6–1.8 kg/m² (per mm of thickness).

Consumption as grout:

Tile size	Tile thickness	3 mm joint	6 mm joint	10 mm joint
10×10 cm	6 mm	600 g/m ²	1200 g/m ²	1980 g/m ²
20×20 cm	8 mm	390 g/m ²	770 g/m ²	1280 g/m ²
25×40 cm	8 mm	250 g/m ²	500 g/m ²	835 g/m ²
33×33 cm	8 mm	235 g/m ²	465 g/m ²	780 g/m ²

Consumption values are theoretical and may vary depending on the evenness of the substrate, the joint depth and the application technique.

Chemical Resistance

Chemical	Concentration	Resistance
Resistance to acids		
Lactic acid	2.5%	+
Acetic acid	3%	+
Tartaric acid	10%	+
Citric acid	10%	+
Phosphoric acid	50%	(+)
Hydrochloric acid	0.05%	(+)
Nitric acid	50%	–
Sulphuric acid	96%	–
Oxalic acid	10%	+
Limescale remover	100%	+
Bleach	100%	+
Resistance to alkalis		
Sodium hydroxide	50%	+
Sodium hypochlorite	5%	(+)
Sodium chloride	36%	+
Potassium hydroxide	50%	+
Potassium permanganate	5%	(+)
Sodium bisulphate	10%	+

Chemical	Concentration	Resistance
Hydrogen peroxide	10%	+
Aluminium sulphate	Saturated	(+)
Sodium thiosulphate	Saturated	+
Iron chloride	10%	(+)
Resistance to solvents		
Acetone	99.5%	–
Ethanol	96%	–
Methanol	96%	–
Ammonia	96%	+
Glycerol (gliserin)	100%	+
Carbon tetrachloride	100%	–
Ethylene glycol	100%	+
Toluene	100%	–
Resistance to mineral, animal and vegetable oils		
Fuel oil	100%	+
Olive oil	100%	+
Diesel fuel	100%	+
Resistance to other chemicals		
Pool water	—	+
Sugar solution	Saturated	+

+ Resistant to the chemical listed.

(+) Resistant to the chemical listed on short-term contact. In case of contact, the surface must be cleaned within a short time.

– Not resistant to the chemical listed.

Please consult us for environments containing chemicals not listed in the table. The values were obtained under laboratory conditions at +23°C after a curing period of 28 days.

Cleaning of Tools

All equipment used must be cleaned with warm water before the product dries. Hardened material can only be removed by mechanical means.

Storage Conditions and Shelf Life

Store in the unopened original packaging in a dry, cool place, protected from moisture. Packaging must be protected from frost. When not in use, the container must be tightly closed. Stored under correct conditions, the shelf life is 24 months from the date of production.

Safety Precautions

Suitable work clothing, protective gloves, goggles and a mask complying with occupational health and safety requirements must be worn during application. Due to the irritant and sensitising effects of the material, the components must not come into contact with skin or eyes; in case of contact, rinse immediately with plenty of water and soap, and seek medical advice immediately if swallowed. Foodstuffs must not be brought into areas where the material is applied. Keep out of reach of children. For further information, refer to the Safety Data Sheet.

Liability

Our company is responsible only for the quality of the product. Any use of the product outside the scope of the written technical recommendations, including incorrect application or use under unsuitable conditions, is entirely the responsibility of the user. For further technical information, please refer to the product catalogue or contact our authorised representatives.

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