

TAMCRETE® C320 Grout

Cement Based High Strength Grout Mortar

About the Product

TAMCRETE® C320 Grout is a cement based, single component, high strength grout mortar, containing mineral fillers and special chemical additives, offering high flowability.

Complies with EN 1504-3 standard as Class R4.

R4: Structural repair mortar

Areas of Application

- Installation of precast concrete elements
- Machine and equipment foundations
- Fixing of metal columns and anchor bolts
- Filling of voids, cracks and holes
- Repair of shear walls and column heads

Advantages

- High flowability
- Provides high compressive strength
- Resistant to vibration and impact
- Does not shrink during curing
- Prevents micro-crack formation
- Does not contain chloride-based additives
- Does not segregate or bleed water
- Provides high adhesion to concrete and reinforcement
- Easy to mix and apply with water only
- Resistant to freeze-thaw cycles

Technical Specifications

General Information	
Material composition	Cement, mineral fillers, silica fume and special chemical additives
Appearance	Grey powder
Density	~2.20 kg/lit
Max. particle size	≤ 3 mm
Performance Data (EN 1504-3)	
Compressive strength (EN 12190)	≥ 25 MPa (1 day), ≥ 50 MPa (7 days), ≥ 60 MPa (28 days)
Flexural strength (EN 196-1)	≥ 9 N/mm ²
Modulus of elasticity (EN 13412)	≥ 20 GPa
Bond strength to concrete (EN 1542)	≥ 2.0 N/mm ²
Capillary water absorption (EN 13057)	≤ 0.5 kg/m ² ·h ^{0.5}
Chloride ion content (EN 1015-17)	≤ 0.05%

Carbonation resistance (EN 13295)	Not inferior to control concrete
Application Data	
Application temperature	+5°C / +35°C
Mixing ratio	3.00–3.50 lt water / 25 kg
Pot life	~30 min
Application thickness	10–80 mm
Ready for service	~24 hours
Consumption	~20 kg/m ² (10 mm thickness)
Safety Information	
Reaction to fire class (EN 13501-1)	A1
Hazardous substances	Refer to SDS

The stated technical values are obtained at +23°C ambient temperature and 50% relative humidity conditions. High temperatures shorten the time, low temperatures extend it.

Application Instructions

Surface Preparation

The application surface must be sound, dry, clean, dust-free and load-bearing. The surface must be free from oil, grease, paint, rust, paraffin and similar contaminants that may adversely affect adhesion. Smooth surfaces should be roughened mechanically. The edges of repair areas should be prepared at right angles and reinforcing steel must be cleaned of rust. Formwork must be leak-proof and made of non-absorbent materials. Prior to application, the formwork should be coated with a suitable form-release agent. Highly absorbent surfaces should be saturated with water before application, but no standing water should remain on the surface.

Mixing

The amount of water specified in the technical table is poured into a clean container. TAMCRETE® C320 Grout powder is then gradually added while mixing with a mixer at 400–600 rpm until a homogeneous consistency is obtained. After resting for 3–5 minutes, it is mixed again for 1 minute and made ready for use. Water must not be added to the mixture that has started to set.

Application

The prepared material should be poured continuously into the formwork from one side only. The material must be placed so that no voids remain inside the formwork, and vibration should not be applied. The maximum application thickness per layer is 80 mm. For large-volume applications, washed aggregate of suitable particle size may be added as the thickness increases. Where greater thickness is required, 5–15 mm washed fine gravel may be added for 100 mm thickness applications. The amount of gravel added must not exceed 30% of the amount of TAMCRETE® C320 Grout. Adding gravel will reduce flowability and, since the cement content decreases, strength may be reduced by approximately 20–40%. After application, the surface must be cured properly. Application should not be carried out under conditions where there is a risk of frost, under direct sunlight, in strong winds or during rainy weather. For best results, the material temperature during application should be maintained between +10°C and +25°C.

Cleaning of Tools

All equipment used during application must be cleaned with water before it dries. Once hardened, the material can only be removed mechanically.

Storage Conditions and Shelf Life

Store in the original, unopened packaging in a cool, dry place. Under proper storage conditions, the product has a shelf life of 6 months from the date of manufacture.

Safety Precautions

During application, suitable work clothing, protective gloves, goggles, and a mask should be worn in accordance with occupational health and safety requirements. Due to the irritant effects of the uncured 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 attention immediately in case of ingestion. Food products must not be kept in the areas where the material is applied. Store out of reach of children. Refer to the Safety Data Sheet for further information.

Liability

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

KARTAS KİMYA LLC

Sumgait Industrial Park, Kimyachilar street 1, AZ 5002

Sumgait city, Azerbaijan

www.mrfix.az

Tel: +994 12 310 88 55, +994 10 347 00 10