

VELOSIT® TA 704

Thin & Medium Bed Tile Adhesive
C2 TE, normal setting



Application fields

VELOSIT TA 704 is a non-sag cementitious tile adhesive with extended open time for a wide variety of tiles and natural stones on typical construction substrates like dry wall, screeds, concrete and masonry. Typical application fields include fixing of:

- Tiles
- Glass and porcelain mosaic
- Terrazzo
- Dark marble

besides these on:

- On cementitious, magnesite and gypsum-based floor screeds
- On gypsum board walls, plaster, concrete and masonry
- Butt bonding of construction panels
- On heated or unheated substrates
- In wet rooms, showers and kitchens
- Porcelain tiles up to 0.25 m² (2.5 ft.²)

- Interior, exterior and under water applications
- On walls and floors

Properties

VELOSIT TA 704 is a C2TE cementitious tile adhesive with normal strength development.

VELOSIT TA 704 is applied with a notched trowel.

Typical properties:

- Long pot life
- Surpasses the requirements of EN 12004, Class C2 TE
- extended open time of 30 min. and open to foot traffic after 16 hours*
- Very good adhesion to most construction substrates
- Creamy workability

*at 23°C and 50 % rel. humidity

Application

1.) Substrate preparation

VELOSIT TA 704 is designed for mineralic substrates like concrete, masonry or absorptive natural stones, in addition to gypsum or gypsum fibre boards.

Substrate must be pore-open and of load bearing capacity. Surfaces must be prepared by removing all bond-breaking substances. Minimum adhesive and compressive strength requirements of 1.0 MPa (145 psi) and 20 MPa (2900 psi) respectively. Lower strength values may be accepted if lower adhesive strength is acceptable to the consultant/supervising engineer. Gypsum boards give good adhesion but due to the substrate strength, only 0.2-0.3 MPa (15 – 22 psi) can be achieved.

Active water leaks must be treated and fully stopped with VELOSIT PC 221. Leaking cracks need to be sealed with a PU injection material.

Blowholes, honeycombs or other surface defects can be filled with VELOSIT TA 704 or a repair mortar such as VELOSIT RM 202. Where required (i.e. in swimming pools, water tanks etc.) apply a seamless waterproofing system such as VELOSIT WP 120.

Screeds must have sufficiently cured. The moisture content determined with a CM device must be less than 2 % on cementitious screeds and underlayments and less than 0.5 % on calcium sulphate based screeds (< 0.3 % on heated screeds). On rapid setting screeds refer to manufacturers requirements.

When laying large formats on magnesia and anhydrite screeds, prime with VELOSIT PR 301 (according to the technical data sheet).

When laying tiles on heated screeds based on cement and calcium sulphate in accordance with DIN 18560, the relevant heating protocols must be observed.

Prime magnesia and anhydrite screeds with VELOSIT PR 301 (according to technical data sheet).

When laying glass mosaic, we recommend the addition of VELOSIT LE 910 to achieve the required elasticity and increased adhesion.

Absorptive substrates must be primed with VELOSIT PA 911.

Prime non-absorptive substrates with VELOSIT SG 915.

2.) Processing

Mixing: Mix VELOSIT TA 704 with 27 – 32 % potable water, i.e. 6.7 – 8 l (1.8 – 2.1 gal.) water per 25 kg (55 lb.) bag. Fill the complete mixing water into a suitable bucket and mix the powder with a slow speed drill (300-600 rpm) into the water until a lump-free mix is achieved. Add more water under stirring until the desired consistency is achieved. Allow the product to stand for 2 min. and mix again for 1 to 2 minutes. The product is workable for 2-3 hours at 23 °C. Depending on environmental conditions the pot life is 2.5-3 hours.

By addition of VELOSIT LE 910 to the mixing water the flexibility of VELOSIT TA 704 may be improved. With a 1:4 mix VELOSIT TA 704 achieves the requirements for class S1 acc. to EN 12002, with a 1:1 mix even S2 can be achieved.

Application:

Apply the desired amount of VELOSIT TA 704 with a notched trowel on the substrate and push the tiles or natural stones into the adhesive bed. For exterior and swimming pool applications also apply VELOSIT TA 704 to the back side of the tile (“buttering & floating” method). Tile position can be corrected for several minutes. The time depends on the absorptivity of the tile back.

DIN 18157 Part 1 is binding for thin-bed installation. When laying outdoors, the adhesive bed must be protected from the weather for at least 24 hours.

3.) Curing

VELOSIT TA 704 does not require curing as it reacts very fast with water. The surface is carefully trafficable after 16 hours.

Estimating

Application rate, notched trowel:

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|--------------------------------|--|
| VELOSIT TA 704 - 6 mm notches: | 2.4 kg/m ² * (4.9 lbs/10ft. ²) |
| - 8 mm notches: | 3.0 kg/m ² * (6.2 lbs/10ft. ²) |
| - 10 mm notches: | 3.6kg/m ² * (7.4 lbs/10ft. ²) |

Other thickness requirements:

1.4 kg* VELOSIT TA 704 per m² for 1 mm adhesive thickness on smooth substrates. Depending on surface roughness application rates can be significantly higher.

* 1.4 kg VELOSIT TA 704 powder + 0.4 kg water, i.e. 1.8 kg mixed material per mm and m² (2.9 lbs. per 40 mil dft and 10 sq.ft.)

Cleaning

VELOSIT TA 704 can be removed in the fresh state with water. Once cured, acidic cleaners like muriatic acid are required.

Quality features

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|------------------------------|----------------------------|
| Color: | Grey |
| Mixing ratio by weight: | 100 : 27 |
| Mixing ratio by volume: | 100 : 39 |
| Density: | 1.4 kg/l |
| Substrate temperature: | 5 – 35 °C* (40 – 95 °F) |
| Pot life: | > 120 min. |
| Open time: | 30 min. |
| Adhesive strength, dry: | > 1.0 MPa (>145 psi) |
| Adhesive strength, wet: | > 1.0 MPa (>145 psi) |
| Adhesive str., freeze/thaw: | > 1.0 MPa (>145 psi) |
| Adhesive str., warm storage: | > 1.0 MPa (>145 psi) |
| Fire rating EN13501-1: | Class E |

Packaging

VELOSIT TA 704 is available in 25 kg (55 lbs.) watertight plastic bags.

Storage

VELOSIT TA 704 can be stored in unopened original packs for 12 months at 5 – 35°C (40 – 95°F) in a dry storage place protected against sunlight.

Safety

Please observe the actual valid material safety data sheet and follow the described safety measures for handling of the product.

Recommendations

VELOSIT TA 704 is only available for professional applicators.


Never add water to VELOSIT TA 704 when it has started to set. Stiffened material must be disposed.

All described product features are determined under controlled laboratory conditions according to the relevant international standards. Values determined under job site conditions may deviate from the stated values.

Please always use the latest version of this data sheet available from our website www.velosit.de.

Manufacturer

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| VELOSIT GmbH & Co. KG Industriepark 5 – 7 D-32805 Horn-Bad Meinberg 23 VELOSIT TA 704 | |
| Cement-based mortar for increased demands in interior and exterior areas for tiling and board-laying work C2 EN 12004 | |
| Bonding strength as Tensile adhesion strength after dry storage: Durability as tensile adhesion strength after water storage: after warm storage: Tensile adhesion strength after alternating frost/thaw storage: Reaction to fire: | ≥ 1 N/mm ² ≥ 1 N/mm ² ≥ 1 N/mm ² ≥ 1 N/mm ² E |