

VELOSIT® DK 701

Special Adhesive for Joint Tapes and Waterproofing Membranes



Application fields

VELOSIT DK 701 is a cementitious adhesive for joint tapes and membranes on typical construction substrates like dry wall, concrete and masonry. Typical application fields besides others are as follows:

- Fast installation of joint tapes over cracks and joints
- Full adhesion of waterproofing membranes geotextiles
- Bonding of construction board edges
- Installation of drain and insulation elements
- Adhesion of sound dampening boards

Properties

VELOSIT DK 701 is a shrinkage compensated cementitious special adhesive with very quick strength development. VELOSIT DK 701 gains strength very quickly even if cured without air contact.

VELOSIT DK 701 surpasses the requirements of EN 12004 class C2FE S1.

VELOSIT DK 701 is applied with a notched trowel.

- Minimal shrinkage/expansion under dry resp. wet curing conditions
- Hydrophobic
- Resists 15 m (50 ft.) water pressure acc. to EN 12390-8. With joint tape overlaps even 50 m (160 ft.) are achieved depending on the joint tape
- 20 min. working time and 0.5 MPa (73 psi) adhesive strength after 4 hours
- Open to foot traffic after one hour
- Ready for water pressure after 24 h
- Very good adhesion to concrete (concrete failure)
- No cracking if applied too thick
- Good weathering resistance
- Potable water approved
- Good sulfate resistance

Application

1.) Substrate preparation

VELOSIT DK 701 is designed for mineralic substrates like concrete, masonry or absorptive natural stones, but also for gypsum or gypsum fiber boards.

Substrate must be prepared to remove all bond breaking substances. Substrate must be open porous and load bearing. The minimum requirement for adhesive strength is 1.0 MPa (145 psi) and for the compressive strength 20 MPa (2900 psi). Lower strength values can be accepted if lower adhesive strength is acceptable. Gypsum boards give a 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 DK 701 or the repair mortar VELOSIT RM 202. Before the application of VELOSIT DK 701 on concrete or masonry, dampen the substrate with clean water to a saturated surface dry (SSD) condition. All other substrates must be primed with VELOSIT PA 911.

2.) Processing

Mixing: Mix VELOSIT DK 701 with 40 - 45% potable water, i.e. 4.0 – 4.5 l (1.1 – 1.2 gal.) water per 10 kg (22 lb.) pail. 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. The product is workable for 20 min. at 23°C. Apply the desired amount VELOSIT DK 701 with a notched trowel. 2 mm (80 mils) adhesive thickness can be achieved with a 6 mm (1/4 inch) notch size and application at a 45° angle. Insert the joint tape or membrane quickly and finish with a smooth trowel. A good contact is achieved when some adhesive is pushed from underneath the membrane. Overlaps can be troweled in one working step. Always observe manufacturers recommendations for the overlap width!

3.) Curing

VELOSIT DK 701 does not require curing as it reacts very fast with water. The surface is carefully trafficable after 1 hour.

Estimating

Trowel application 2 mm:

VELOSIT DK 701: 1.8 kg/m²*
(3.7 lbs/10ft.²)

Other thickness requirements: 0.9 kg* VELOSIT DK 701 per m² for 1 mm adhesive thickness on smooth substrates. Depending on surface roughness application rates can be significantly higher.

* 0.9 kg VELOSIT DK 701 powder + 0.4 kg water, i.e. 1.3 kg mixed material per mm and m² (1.9 lbs. per 40 mil dft and 10 sq.ft.)

Cleaning

VELOSIT DK 701 can be removed in the fresh state with water. Once it has cured acidic cleaners like muriatic acid are required.

Quality features

Color: gray
Mixing ratio by weight: 100 : 45
Mixing ratio by volume: 100 : 55
Density: 1.1 kg/l
Substrate temperature: 5 – 35°C*
(40-95°F)

Water impermeability acc. EN 12390-8:

- Positive side: 1.5 bar (22 psi)
Capillary water absorption: 0.05 kg/m² x h^{0,5}
Adhesive strength, dry: 1.2 MPa (174 psi)
Adhesive strength, wet: 1.1 MPa (160 psi)
Adhesive str., freeze/thaw: 1.2 MPa (174 psi)
Fire rating EN13501-1: Class A1

Packaging

VELOSIT DK is available in 20 kg (44 lb.) watertight plastic bags or 10 kg (22 lb.) plastic pails.

Storage

VELOSIT DK 701 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.

Used product containers must be emptied completely after use. They can be returned to VELOSIT GmbH & Co. KG on request.

Recommendations

VELOSIT DK 701 is only available for professional applicators.

Never add water to VELOSIT DK 701 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.

Effective date

July 2014

Manufacturer

VELOSIT GmbH & Co. KG
Industriepark 7
32805 Horn-Bad Meinberg
Germany