

# VELOSIT® WP 102

## Rapid Cementitious Waterproofing Slurry

### Application fields

VELOSIT WP 102 is a cementitious waterproofing slurry for concrete and masonry. It is a good substrate for coatings and overlays. It is especially strong against negative side water pressure. Typical application fields besides others are as follows:

- Waterproofing of basements and below grade parking structures
- Waterproofing of potable water structures
- Waterproofing of elevator pits
- Waterproofing against rising dampness in walls
- Negative side waterproofing underneath flexible waterproofing membranes
- Prime coat to fill blow holes, honeycombs and surface roughness

### Properties

VELOSIT WP 102 is a shrinkage compensated cementitious waterproofing slurry with a fast set

and very quick strength development. VELOSIT WP 102 gains strength a more quickly than the current standard products, reducing or completely eliminating the need for days of water curing and protection. VELOSIT WP 102 creates a rigid abrasion resistant coating layer on the substrate. VELOSIT WP 102 can be applied by brush, trowel.

- Minimal shrinkage/expansion under dry resp. wet curing conditions
- Hydrophobic
- Resists 400 ft (130 m) water pressure CRD-C48-73
- 15 min. working time and 2175 psi (15 MPa) compressive strength after 2 hours
- Final strength of more than 7250 psi (50 MPa) after 28 days
- Open to foot traffic after 1-2 hours
- Ready for water pressure after 24 h
- Very good adhesion to concrete and masonry
- Water curing only under hot and dry conditions required for max. 2 hours
- No cracking if applied too thick

- Good resistance against aggressive media with a pH range of 3-12 and against soft water with low ion content
- Good weathering resistance
- Potable water approved
- Good sulfate resistance

## Application

### 1.) Substrate preparation

VELOSIT WP 102 is designed for mineralic substrates like concrete, masonry or absorptive natural stones.

Substrate must be prepared with sand blasting, shot blasting or ideally high pressure water blasting (>1450 psi/100bar) to remove all bond breaking substances. Substrate must be open porous and load bearing. The minimum requirement for adhesive strength is 218 psi (1.5 MPa) and for the compressive strength 3625 psi (25 MPa). Lower strength values can be accepted if lower adhesive strength is acceptable. Active water leaks must be treated and fully stopped with VELOSIT PC 221/222. Leaking cracks need to be sealed with a suitable VELOSIT IR injection material. Bugholes, honeycombs or other surface defects can be filled with VELOSIT WP 102 or the repair mortar VELOSIT RM 202. Before the application of VELOSIT WP 102, dampen the substrate with clean water to a saturated surface dry (SSD) condition.

### 2.) Processing

Mixing: Mix VELOSIT WP 102 with 17 -20% potable water, i.e. 1.1 – 1.3 gal (4.3-5 l) water per 55 lb (25 kg) bag. Fill 17% mixing water (1.1 gal per bag) 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 to adjust the desired consistency. The product is workable for 15 min. at 70°F/ 23°C

a.) Brush application: Apply the first coat with a masons brush in crossing applications to the pre-dampened substrate at the specified rate. Second coat can be applied after the first one has gained sufficient strength which is after 1 hours at 70°F/23°C. Colder temperatures extend, warmer temperatures shorten the recoat time.

b.) If building code or specification does not require two coats, VELOSIT WP 102 can be applied in one coat by trowel. Make sure to adjust the consistency to a thixotropic workability. Apply a scratch coat of VELOSIT WP 102 to the damp substrate to fill surface irregularities. Immediately apply the desired material amount with a notched trowel to the substrate. 80 mils (2 mm) dry film thickness can be achieved with a 1/4 inch (6mm) notch size and application at a 45° angle. Finish the surface immediately afterwards. Make sure all grooves are completely closed without air entrapment.

c.) VELOSIT WP 102 can be used as a repair mortar for small repairs and especially as a cove mortar. Apply a slurry coat of VELOSIT WP 102 to at on the slab and approx. 10" (25 cm) on the lower section of the wall. The cove mortar can be produced with less water addition and can be applied wet in wet onto the slurry coat.

### 3.) Curing

VELOSIT WP 102 does not require long term curing as it reacts relatively fast with water. Only under hot weather or very dry conditions water curing for 2 hours is required.

## Estimating

Brush application 80 mils (2 mm):  
 1<sup>st</sup> coat VELOSIT WP 102: 168 sqft/bag  
 2<sup>nd</sup> coat VELOSIT WP 102: 168 sqft/bag

Trowel application 80 mils (2 mm):  
 Scratch coat VELOSIT WP 102: 300-550 sqft/  
 bag  
 2<sup>nd</sup> coat VELOSIT WP 102: 83-92 sqft/bag

Spray application 80 mils (2 mm):



VELOSIT WP 102: 83 sqft/bag

## Cleaning

VELOSIT WP 102 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 : 18  
Mixing ratio by volume: 100 : 28  
Density: 13.34 lb/gal  
Substrate temperature: 40 – 95°F  
(5-35°C)  
Water impermeability acc. EN 12390-8:  
- Positive side: 190 psi (13 bar)  
- Negative side: 72 psi ( 5 bar)  
Compressive / flexural strength:  
2 hours: 2175/290 psi (15/2 MPa)  
24 hours: 3480/725 psi (24/5 MPa)  
7 days: 5510/870 psi (38/6 MPa)  
28 days: 7685/1015 psi (53/7 MPa)  
Chloride ions: < 0.05%  
Carbonation resistance: passed  
Capillary water absorption: 0.1 kg/m<sup>2</sup> x h<sup>0,5</sup>  
Adhesive strength: 232 psi (1.6 MPa)  
Restrained shrinkage: 218 psi (1.5 MPa)  
Fire rating EN13501-1: Class A1

## Packaging

VELOSIT WP 102 is available in 55 lb (25 kg) watertight plastic bags.

## Storage

VELOSIT WP 102 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 WP 102 is only available for professional applicators.

Never add water to VELOSIT WP 102 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. Velosit USA LLC warrants this product for a period of 1 year from the date of installation to be manufactured without defects and to be consistent with printed technical characteristics. Velosit USA LLC makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties expressed or implied.

Please always use the latest version of this data sheet available from our website [www.velosit-usa.com](http://www.velosit-usa.com)

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