

# VELOSIT® WP 120

## Highly Flexible Cementitious Waterproofing Slurry

### Application fields

VELOSIT WP 120 is a polymer modified flexible cementitious waterproofing slurry for concrete and masonry. It is a good substrate for coatings and overlays. It is very flexible (crack bridging) and a good barrier against carbon dioxide.

Typical application fields besides others are as follows:

- Waterproofing of basements and below grade parking structures
- Protective coating on dams and spillways
- Coating of tanks for manure and sewage
- Waterproofing of swimming pools (Tiled)
- Waterproofing underneath tiles, natural stone, brick and pavers
- Waterproofing of balconies
- Waterproofing of green roofs

### Properties

VELOSIT WP 120 is a highly flexible cementitious waterproofing slurry that cures

quickly. VELOSIT WP 120 creates a crack bridging and abrasion resistant coating on the substrate.

VELOSIT WP 120 can be applied by brush, trowel, roller or suitable spray equipment.

- Crack bridging
- Highly flexible, tensile elongation > 100%
- Easy to apply
- Resists 160 ft. (50m) water pressure acc. to EN 12390-8-Positive Side
- 60 min. working time
- Open to foot traffic after 3-4 hours (70°F/ 60% r.h.)
- Ready for water pressure after 3 days
- Very good adhesion to concrete and masonry
- Good resistance against aggressive media with a pH range of 3-12 and against soft water with low ion content
- Good weathering resistance
- Good sulfate resistance

# Application

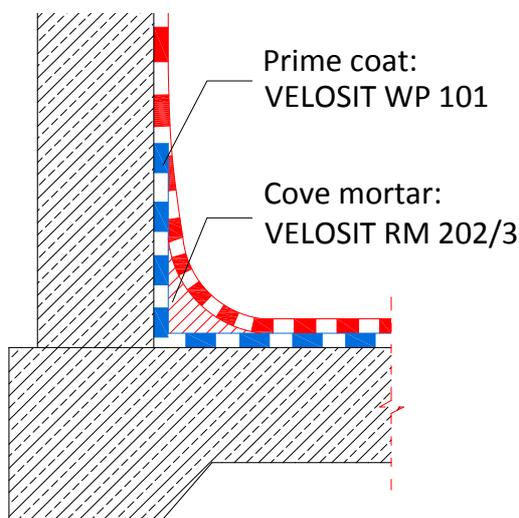
## 1.) Substrate preparation

VELOSIT WP 120 is designed for mineralic substrates like concrete, masonry or absorptive natural stones, terra cotta and wood.

Substrate must be prepared with sand blasting, shot blasting or ideally high pressure water blasting (>1450 psi/100 bar) to remove all bond breaking substances. Substrate must be pore open and load bearing. The minimum requirement for adhesive strength is 218 psi (1.5MPa) 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. Bug holes, honeycombs or other surface defects can be filled with VELOSIT WP 101 or the repair mortar VELOSIT RM 202. Before the application of VELOSIT WP 120, dampen the substrate with clean water to a saturated surface dry (SSD) condition.

Details:

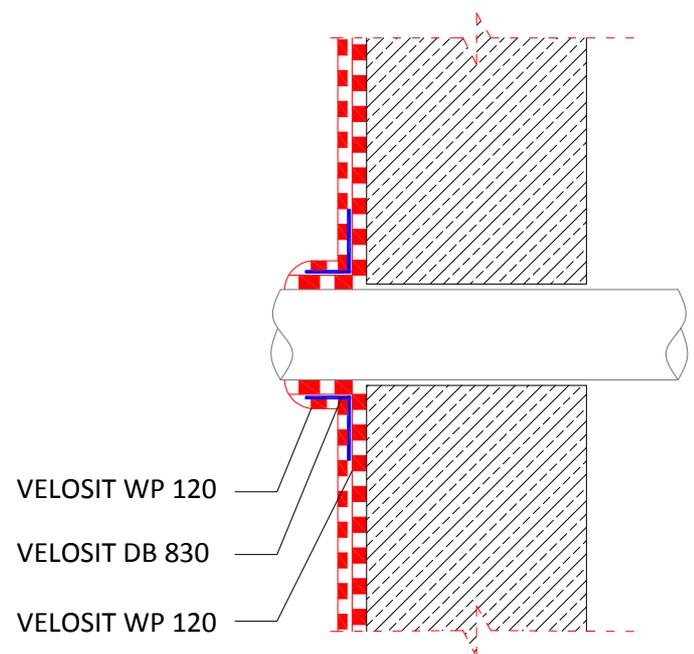
a.) The wall-slab-detail can be solved with a cove made with VELOSIT WP 101 or RM 202 or alternatively with a joint tape VELOSIT DB 830. The joint tape can be applied with VELOSIT WP



120, joint tape adhesive VELOSIT DK 701, or epoxy adhesive

b.) Negative waterproofing: In case of hydrostatic pressure, a negative side waterproofing must be applied with at least 40 mils of VELOSIT WP 101 or WP 102.

c.) Joints and dynamic cracks must be waterproofed with VELOSIT DB 830. The joint tape may be applied with VELOSIT WP 120,DK



701 or epoxy adhesive.

d.) Pipe penetrations are waterproofed with a sleeve made from VELOSIT DB 830. Cut a hole into the sleeve with a diameter approx. 1/4" (6mm) smaller than the pipe. The sleeve is made from a 5" (13 cm) piece of VELOSIT DB 830. Brush plenty of VELOSIT WP 120 onto the sanded pipe and the surrounding area. Pull the sleeve over the pipe push it with a trowel into the material. Work away from the pipe and take care not to entrap air or create wrinkles.

## 2.) Processing

Mixing: Pour the B-component of VELOSIT WP 120 into a suitable bucket and mix the powder with a slow speed drill (300-600 rpm) into the

dispersion until a lump-free mix is achieved. Add up to 1 quart of water while stirring to adjust the desired consistency. Water addition extends the cure time and should be kept as low as possible.

The product is workable for 45-60 min. at 70°F.

a.) Brush application: Apply the first coat with a masons brush in crossing applications to the pre-dampened (SSD) substrate at the specified rate. Second coat can be applied after the first coat has gained sufficient strength which is approx. 3 hours at 70°F. Colder temperatures extend, warmer temperatures and direct sunlight and wind shorten this time. It may be possible to apply the second coat after 30-45 min.

b.) If building code or specification does not require two coats, VELOSIT WP 120 can be applied in one coat by trowel. Make sure to adjust the consistency to a thixotropic workability without water addition. Apply a scratch coat of VELOSIT WP 120 to the damp (SSD) substrate to fill surface irregularities. Immediately apply the desired material amount with a notched trowel to the substrate. 80 mils dry film thickness can be achieved with a ¼" (6 mm) notch size and application at a 45° angle. Finish the surface immediately afterwards. Make sure all grooves are completely closed without air entrapment.

c.) Spray application: Use suitable spray machines such as:

- Inotec GmbH: INOMAT-M8
- HighTech GmbH: HighPump Small
- Desoi GmbH: Desoi SP-Y

Fill the product into the feed hopper of the spray machine and spray continuously. VELOSIT WP 120 can be applied in one lift if specification allows. Otherwise spray in two layers with a wait time of approx. 60 min. between coats. Long spray interruptions may result in clogging of the spray hose. The product may cure a lot faster if the hose is exposed to direct sunlight. Always empty and flush the machine after spraying or before long spray interruptions. VELOSIT WP

120 is a fast curing material and may be hard to remove if left in the machine.

### 3.) Curing

VELOSIT WP 120 does not require long term curing as it reacts relatively fast with water from the B-component. Avoid direct sun light or wind or air flow after the application. Otherwise it is mandatory to work in two coats to avoid shrinkage cracks.

### Estimating

Brush application 60 mils:

1 <sup>st</sup> coat VELOSIT WP 120:	250 sqft/kit
2 <sup>nd</sup> coat VELOSIT WP 120:	250 sqft/kit

Trowel application 80 mils:

Scratch coat VELOSIT WP 120:	500-800 sqft/kit
2 <sup>nd</sup> coat VELOSIT WP 120:	110-125 sqft

Spray application 80 mils:

VELOSIT WP 120:	95 sqft/kit
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Recommended thickness:

Dampproofing:	50 mils (1.25 mm)
< 10" (25 cm)) water:	60 mils (1.5 mm)
Hydrostatic pressure:	80 mils (2mm)
Hydrostatic pressure and water flow or light mechanical abrasion:	100 mils (2.5 mm)

Always observe building code or specification requirements!

### Cleaning

VELOSIT WP 120 can be removed in the fresh state with water. Once it has cured mechanical cleaning is required.

### Quality features

Color:	gray
Mixing ratio by weight:	100 : 50
Mixing ratio by volume:	100 : 65
Density A-comp.:	8.46 lb/gal
Substrate temperature:	40-95°F (5-35°C)
Water impermeability acc. EN 12390-8:	
- Positive side:	73 psi (5 bar)

- Negative side: 22 psi (1.5 bar)  
Tensile strength: 174 psi (1.2 MPa)  
Tensile elongation: 105%  
Crack bridging:  
Acc. DIN 28052-6: 16 mils (.4 mm)/24h  
Acc. ASTM C836: 112 mils (2.8 mm)  
S<sub>D</sub>-value<sub>water</sub>, 2mm (80 mils): 2.5 m (8'4")  
S<sub>D</sub>-value<sub>CO2</sub>, 2mm (80 mils): 230 m (750')  
Chloride ions: < 0.05%  
Carbonation resistance: passed  
Capillary water absorption: 0.02 kg/m<sup>2</sup> x h<sup>0.5</sup>  
Adhesive strength: 160 psi (1.1 MPa)

## Packaging

The A-component of VELOSIT WP 120 is available in 44 lb (20 kg) watertight plastic bags. The B-component is packaged in 2.6 gal (10 l) 22 lb (10 kg) plastic pails.

## Storage

VELOSIT WP 120 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 120 is only available for professional applicators.

Never add water to VELOSIT WP 120 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)

## Effective date

July 2014

## Manufacturer

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