

# VELOSIT<sup>®</sup> CP 201

Cementitious Corrosion Protection and Concrete Primer

DATA SHEET



HYCHEM

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VELOSIT CP 201 is a cementitious corrosion protection and primer for concrete, masonry and steel. It is designed as bonding bridge for the VELOSIT RM repair mortars on critical substrates.

VELOSIT CP 201 is a shrinkage compensated cementitious slurry with very quick strength development.

VELOSIT CP 201 is the result of many years in the field testing and research. VELOSIT CP 201 can be applied by brush or suitable spray equipment.

## TYPICAL APPLICATIONS

- Interior and exterior use
- Priming of concrete and masonry for VELOSIT RM mortars
- Corrosion protection of concrete embedded steel like rebar
- Prime coat to fill blow holes, honeycombs and surface roughness
- Can be used for vibrated floor systems as a bonding bridge between tiles and mortar bed

## PROPERTIES

- Minimal shrinkage/expansion under dry resp. wet curing conditions
- 45 min. working time and 12 MPa compressive strength after 4 hours
- Final strength of more than 45 MPa after 28 days
- Very good adhesion to concrete and masonry
- Good sulfate resistance
- Good resistance against aggressive media with a pH range of 3-12 and against soft water with low ion content

## TECHNICAL DETAILS

Color	gray
Mixing ratio by weight	100 : 28
Mixing ratio by volume	100 : 40
Density	1.4 kg/l
Substrate temperature	5 - 35 °C
Compressive / flexural strength	4 hours: 12 / 3 MPa 24 hours: 20 / 5 MPa 7 days: 36 / 6 MPa 28 days: 46 / 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	2.8 MPa
Restrained shrinkage	2.8 MPa

## APPLICATION GUIDELINES

### Surface preparation

VELOSIT CP 201 is designed for mineralic substrates like concrete, masonry and steel.

### Steel

must be prepared to a purity of SA 2.5 acc. SIS 05 5900.

### Concrete substrates

must be prepared with sand blasting, shot blasting or ideally high pressure water blasting (> 100 bar) to remove all bond breaking substances.

Remove all carbonated concrete. Test with Phenolphthalein or other suitable indicator until concrete with sufficient alkalinity for rebar protection is reached. If rebar is exposed remove concrete at least 6 mm behind rebar to fully embed the steel into VELOSIT repair system.

Substrate must be rough, open porous and load bearing. The minimum requirement for adhesive strength is 2.0 MPa and for the compressive strength 30 MPa. Active water leaks must be treated and fully stopped with VELOSIT PC 222. Leaking cracks need to be sealed with a PU injection material. Before the application of VELOSIT CP 201, dampen the substrate with clean water to a saturated surface dry (SSD) condition.

Avoid puddling.

### Processing

#### Mixing

Mix VELOSIT CP 201 with 27 - 30 % potable water, i.e. 5.4 - 6.0 l water per 20 kg bag. Fill the 27 % 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 up to 3 % water under stirring until the desired consistency is achieved.

The product is workable for 45 - 60 min. at 23 °C.

#### Brush application

Apply one coat with a masons brush in crossing applications to the pre-dampened substrate at the specified rate. The VELOSIT RM repair mortar can be applied after VELOSIT CP 201 has gained sufficient strength which is after 1 - 2 hours at 23 °C. Colder temperatures extend, warmer temperatures shorten this time.

#### Spray application

Suitable spray machines are for example

- 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 CP 201 is applied in one coat.

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 CP 201 is a fast curing material and may be hard to remove if left in the machine.

#### **Curing**

VELOSIT CP 201 does not require long term curing as it reacts relatively fast with water. Overcoat with a repair system as soon as it has gained sufficient strength.

#### **COVERAGE**

Brush or spray application 1 mm:

VELOSIT CP 201: 1.6 kg/m<sup>2</sup>\*

\* 1.6 kg VELOSIT CP 201 powder + 0,4 kg water, i.e. 2 kg mixed material per mm and m<sup>2</sup>

#### **CLEAN UP**

VELOSIT CP 201 can be removed in the fresh state with water. Once it has cured acidic cleaners like muriatic acid are required.

#### **PACKAGING**

20 kg watertight plastic bags.

#### **STORAGE**

In unopened original packs for 12 months at 5 - 35 °C 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.

#### **NOTE: Customer responsibility**

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*If unsure contact Hychem for further technical advice before proceeding.*

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