

# VELOSIT® FH 921

## Siliconate Enhanced Floor Hardener



### Application fields

VELOSIT FH 921 is a siliconate enhanced concrete floor hardener. VELOSIT FH 921 improves abrasion resistance and substrate appearance whilst also reducing surface absorptivity. Typical application fields besides others are as follows:

- Strengthening of concrete floors in factories, distribution centers and warehouses
- Improving of chemical resistance against aggressive media like sewer, manure or silage
- Improving of surface sheen in polished concrete applications
- Fast track finishing of commercial floors as an alternative to coatings and sealers
- On new and existing concrete and on cementitious substrates such as VELOSIT SL 503

### Properties

VELOSIT FH 921 is a solvent-free, siliconate enhanced floor hardener based on silicate polymers.

VELOSIT FH 921 surpasses requirements of EN 1504-2 for impregnations (I) and can be used according to principle 1 acc. to EN 1504-9.

VELOSIT FH 921 can be used on interior and exterior surfaces.

- VOC and solvent free
- Low viscosity
- Improved water and oil repellency on treated concrete floors
- Easy to use
- Reduces abrasion and tire wear

### Application

#### 1.) Substrate preparation

a.) Existing concrete must be prepared with sand blasting, shot blasting or high pressure water blasting (> 100 bar/1450 psi) to remove all bond breaking substances. Substrate must be open porous and load bearing. The minimum requirement for adhesive strength is 1.5 MPa (218 psi) and for the compressive strength 25 MPa (3625 psi). Repair

blowholes, honeycombs and other surface defects with a repair mortar like VELOSIT RM 202.

b.) New concrete must be cured with water or sheet acc. to ASTM C-171. Concrete should have achieved at least 20 MPa (2900 psi) before application of VELOSIT FH 921. Let the surface dry at least 24 h after curing is terminated.

## 2.) Processing

In warm weather or at dry or windy conditions, pre-dampen the surface but avoid puddles and standing water.

Apply VELOSIT FH 921 with a sprayer (for example Gloria 410T) or pour directly onto the concrete.

Follow with a squeegee, brush or broom. Work the material into the surface and make sure concrete stays wet with VELOSIT FH 921 for 20 – 30 min.

Additional material may be sprayed onto the surface to keep the concrete wet. Automatic scrubbers may be used on larger areas. Best results are achieved if a floor polishing machine is used to work the material into the pores. Avoid puddling.

If VELOSIT FH 921 begins to gel (usually beginning near the walls and corners), remove excess material that has not penetrated into the pores with a clean, damp cloth or mop. Do not leave excess VELOSIT FH 921 on the surface as this will lead to a hard to remove white efflorescence after drying. For enhanced oil repellency and maximum sheen apply a second coat and polish to a glossy surface appearance.

VELOSIT FH921 can also be used to impregnate concrete, cementitious screeds or cementitious repair to improve the resistance against aggressive media like silage or manure in agricultural buildings. Saturate the surface 2 - 3 times with VELOSIT FH 921 and let the material dry completely before applying the following coat. Surface will get a whitish appearance and become water repellent.

## 3.) Curing

VELOSIT FH 921 does not require curing and is ready for light foot traffic after 4 hours at 23 °C (73 °F).

## Estimating

Concrete floor hardening:

VELOSIT FH 921: 0.2 kg/m<sup>2</sup> (200 ft<sup>2</sup>/gal)

## Cleaning

VELOSIT FH 921 can be removed in the fresh state with water. Once it has cured only mechanical cleaning is possible.

## Quality features

Color:	clear
Density:	1.1 kg/l
Substrate temperature:	10 – 35 °C (50 – 95 °F) <small>observe dew point!</small>
Capillary water absorption:	0.1 kg/m <sup>2</sup> x h <sup>0.5</sup>
Penetration depth:	> 5 mm

## Packaging

VELOSIT FH 921 is available in 25 kg (55 lbs) canister or 1100 kg (2420 lbs) totes.

## Storage

VELOSIT FH 921 can be stored in unopened original packs for 24 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 FH 921 is only available for professional applicators.


During and after the processing of VELOSIT FH 921 must be well ventilated, as efflorescence may occur in very high humidity.

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](http://www.velosit.de).

## Manufacturer

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VELOSIT GmbH & Co. KG Industriepark 7 D-32805 Horn-Bad Meinberg 17 <b>VELOSIT FH 921</b>	
DIN EN 1504-2 Surface protection products - Hydrophobic Impregnation	
Depth of penetration Water absorption and resistance to alkali	Class II: > 10 mm  absorption ratio < 7.5 % compared with the untreated specimen < 10 % after immersion in alkali solution
Drying rate for hydrophobic impregnation Loss of mass after freeze thaw test	Class I: > 30 % > 20 cycles