



VELOSIT® SC 241

LIGHT WEIGHT SCREED

Product Description

VELOSIT SC 241 is a cementitious light weight screed mix. It is mixed on site creating a rapid hardening overlayment with significantly lower weight than regular screeds.

VELOSIT SC 241 is a shrinkage compensated ready for use screed formulation with very quick strength development.

VELOSIT SC 241 is the result of many years in the field testing and research. VELOSIT SC 241 is ready to receive flooring systems within 24 hours.

Typical Applications

- Interior and exterior use
- Bonded screeds
- Decoupled screeds on insulation or membranes
- Restoration of structures with limited static loads

Properties

- Minimal shrinkage/expansion under dry resp. wet curing conditions minimizing the risk of microcracking
- Excellent workability
- Ready for covering with ceramic tiles after 6 hours, for moisture sensitive floor coverings after 24 hours
- Final strength of more than 40 MPa after 28 days
- Open to foot traffic after 6 hours
- Very good adhesion to properly prepared concrete
- Excellent water resistance, no strength loss under water
- High tensile strength allowing thin applications on decoupled screed applications
- Good weathering resistance
- Good sulfate resistance

Technical Details

Color	Light grey
Water demand	13 – 15%
Density	1.1 kg/l
Substrate temperature	5 – 35°C
Initial set	100 min.
Final set	150 min.
Compressive / flexural strength (1:4)	6 hours: 10 / 2 MPa 24 hours: 25 / 4 MPa 7 days: 34 / 6 MPa 28 days: 41 / 7 MPa
Adhesive strength*	Primed with CP 201: 1.6 MPa

* acc. EN 1542. Adhesion depends very much on proper surface preparation!



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APPLICATION GUIDELINES

Surface preparation

VELOSIT SC 241 is designed for concrete substrates. Steel may be coated with a suitable bonding bridge.

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 high pressure water blasting (> 100 bar) to remove all bond breaking substances. Substrate must be rough, open porous and load bearing. The minimum requirement for adhesive strength is 1.0 MPa and for the compressive strength 20 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. Leaking cracks need to be sealed with a PU injection material.

Priming

Steel

Apply a corrosion protection coat on rebar with VELOSIT CP 201. Other steel areas can be primed with Hychem E100SS or E500P with a full broadcast. Steel may expand and contract differently under temperature changes than a cementitious mortar. Thus steel application is only recommended if steel is embedded in larger concrete bodies or the temperature is not subject to major changes.

Concrete substrates

Must be primed with VELOSIT CP 201 and the screed can be applied wet in wet with VELOSIT SC 241 immediately after priming.

De-coupled screeds

Insulation boards (EPS, XPS etc.)

Must be laid out on a solid substructure that prevents future settlement. A PE membrane is mandatory to avoid the screed mortar entering the joints and building bridges to the substrate. Use de-coupling strips on the wall termination.

Existing membranes like bitumen sheets

Can be covered directly with a VELOSIT SC 241 based screed.

Wooden substrates

Must be covered with a de-coupling membrane (for example PE sheet).

Processing

Mixing

VELOSIT SC 241 requires 13 – 15% potable water, i.e. 2.6 3.0 l water per 20 kg bag. Fill the 13% mixing water (7.8 l per 3 bags) into a frefall mixer and add 3 bags of VELOSIT SC 241 and mix for 2 min. Check the consistency and add water to adjust the desired consistency (total water not to exceed 9.0 l). Small volumes can be handmixed in a suitable bucket. Add the calculated water amount and add the powder mix afterwards with a slow speed drill (300 – 600 rpm) into the water until a lumpfree mix is achieved. Never add more than a total of 3.0 liters of water per bag.

Do not over water the product!

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



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Trowel application

Pour VELOSIT SC 241 screed onto the prepared substrate and level with a rake to the desired thickness. Finish with a screed trowel and compact the surface. Make sure to work in sections that can be finished within 45 min.

Pump application

Suitable mortar pumps are for example:

- Brinkmann GmbH: Estrichboy 450 series
- Putzmeister GmbH: Mixokret M 740

Add the required amount of water into the drum and shovel 7 – 8 bags of VELOSIT SC 241 and mix for 1 – 2 min. Pump onto the prepared substrate and level with a rake. Finish with a screed trowel and compact the surface. Make sure to work in sections that can be finished within 45 min. Control the slump with a slump cone regularly. Long pump interruptions may result in clogging of the pump hose. The product may cure a lot faster if the hose is exposed to direct sunlight. Always empty and flush the machine after pumping or before long pump interruptions. VELOSIT SC 241 is a fast curing material and may be hard to remove if left in the machine.

Never overcoat joints or untreated cracks as this will most likely result in surface cracks!

Curing

VELOSIT SC 241 based screed do not require curing. Protect the applied product for 24 hours against direct sun light, wind and temperature changes exceeding 5°C.

Estimating

Volume yield:

20 kg VELOSIT SC 241 result in approx. 15.4 liter cured screed.

Consumption per m²:

1 cm thickness: 13 kg
4 cm thickness: 52 kg
5 cm thickness: 65 kg

Clean up

VELOSIT SC 241 can be removed in the fresh state with water. Once it has cured acidic cleaners like muriatic acid and mechanical cleaning are required.

Packaging

20 kg watertight plastic bags.

For large project VELOSIT SC 241 is also available in 75 kg kits consisting of a 25 kg binder concentrate and 2 x 25 kg light weight filler.

Storage and shelf life

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.



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Warranties and Disclaimers

Hychem warrants that this product shall conform to the technical specifications published in the product literature. The quality and fitness of the product is dependent upon the proper use and application of the product by the applicator. Hychem has no role in the application of the finished polymer other than to manufacture and supply its components. It is vital that the person applying this product understands the product and is fully trained and certified in the use of spray equipment and application of sol-gel materials. There are no warranties that extend beyond the description on the face of this instrument, except when provided in writing, directly by Hychem and executed under seal by a company officer.

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