



webervetonit RB 50/5

Shotcrete

- Strength 50-60 MN/m²

About this product

Salt and frost resistant, class R4 shotcrete for structural repair of concrete. It is specially designed to be applied by dry mix process. Maximum grain size 5 mm. Also available with smaller grain size (RB 50/3 K) or with fibres (RB 50/5 K).

Product attributes

- High strength

Application characteristics

- Sprayable

Area of use

Product intended for structural repair of concrete as cementitious shotcrete mortar for concrete repair according principles 3.3. or 7.1. Product fulfills the requirements of R4-class according to SFS-EN 1504-3. It is suitable for bridge repair, reinforcement of foundations, application areas where formwork is difficult like tunnels, repair of damaged concrete, increasing of protective concrete layer for reinforcement steel and for concrete structures with special shapes.

Substrate

Concrete substrate is cleaned and coarsened carefully. Damaged concrete should be removed by high pressure water blasting. Reinforcing steel where exposed should be cleaned by abrasive action to bright metal and if necessary, protected with weber REP 05 Anti-corrosion mortar, see separate product datasheet. If necessary, the substrate is moistened the day before application and lightly again just before the work is started. The substrate must be damp when application of shotcrete is started.

Substrate type

- Concrete

Mixing

RB 50/5 Shotcrete is mixed with water. To prevent dusting and to ensure consistent quality of the sprayed layer it is recommended to pre-wet the mortar before application. Recommended moisture content after pre-wetting is about 6 weight-%. Pre-wetting can easily be done with Weber's silo-mixing equipment.

Work instructions

Application is done according to BY 41: BETONIRAKENTEID-EN KORJAUSOHJEET 2007 and Silko-manual by Finnish Road Authority. The temperature of substrate and air must be over +5 °C. The surface of the shotcrete can be left as sprayed structure, evened along level lining or scratched. Level lining

Product specification

Material consumption	25-27 kg/m ² /10 mm layer, including approx. 20% waste.
Mixed volume	Approx. 480 l/1000 kg
Binder	CEM I 52,5 N
Aggregate	Natural sand 0-5 mm
Adhesion strength 28 days	> 2.0 MPa (EN 1542)
Compressive strength 28 days	Approx. 50-60 MN/m ² , depending on water content and after-treatment (EN 12390-3)
Restrained shrinkage/expansion	Adhesion strength after test > 2.0 MPa (EN 12617-4)
Fire class	A1 (EN 13501-1)
Frost resistance	Salt-frost resistant (EN 13687-1)
Carbonation resistance	Pass (EN 13295)
Chloride content	< 0.05% (SFS-EN 1015-17)
Capillary absorption	≤ 0.5 kg/(m ² h ^{0.5}) (SFS-EN 13057)
Equipment recommendations	Weber Mortar Station
Storage conditions	Shelf life is 12 months from the date of production (unopened package, in dry conditions)
Package	1000 kg large sack. Bulk in a silo.
Certifications	CE

must be removed and cavities filled before floating to prevent colour differences of final surface. Scratched surface corresponds to surface defined in InfraRYL 42020.3.8.4. Due to that, it is not necessary to spray surface with more finer surface layer afterwards. The surface structure can be assured with a preliminary test.

After-treatment

The concrete is wetted and evaporation is prevented, using a plastic cover for at least 7 days. After-treatment should be started immediately after application by protecting the fresh surface from sunlight and wind. After-treatment can also be done by using suitable aftercare products. If necessary the working area should be weather-protected to minimise the affect of climate variations.

Disclaimer

As there are different conditions at every opportunity, Weber can not be held responsible for anything other than the information provided under the heading "Product Specification". Examples of information and circumstances, which are outside Saint-Gobain (whether specifically stated or not) include storage, construction, processing, interoperability with other products, workmanship and local conditions.