

REPARATUR MALTER F4

Cement-polymers based mortar, used for structural reparations of concrete in layers with 1,0-2,0 cm thickness, with compensated shrinkage and reinforced with polypropylene fibers

In compliance with EN 1504-3 Class R4

FIELD OF APPLICATION

Reparatur Malter F4 is used for structural reparations of concrete and reinforce-concrete structures, increasing of protection layer of concrete covering steel reinforcement, reparation of damaged and segregated section on concrete (gravel pockets) etc.

PROPERTIES

- Excellent adhesion to concrete substrate;
- High strength characteristics;
- Excellent durability performances;
- Easy for preparation and application;
- No special tool is required;
- Resistant to atmospheric influences;
- Protect concrete from carbonation;
- Do not contain chlorides;

TECHNICAL FEATURES

Property	Method	Measured values	Declared values
Appearance	-	Grey powder	Grey powder
Water/material ratio	-	0,155	0.15 - 0.16
Maximal size of aggregate	-		4 mm
Specific density	EN 12190	2197 kg/m ³	(2100 - 2300) kg/m ³
Setting time			
Start of setting	EN 13294	03:13	(2÷4)h
End of setting		05:52	(5÷7)h
Compressive strength			
after 7 days	EN 12190	52,6 MPa	≥30 MPa
after 28 days		58,7 MPa	≥45 MPa
Flexural strength			
after 7 days	EN 12190	7.6 MPa	≥ 6 MPa
after 28 days		9.6 MPa	≥ 8 MPa
Adhesive bond	EN 1542	2,21 MPa	≥ 2,0 MPa
Restrained shrinkage/expansion	EN 12617-4	2.30/3.07 MPa	≥ 2,0 MPa
Thermal compatibility: Freeze-thaw cycling with de-icing salt immersion	EN 13687-1	2.77 MPa	≥2,0 MPa
Capillary absorption	EN 13057	0,1044kg · m ⁻² · h ^{-0,5}	≤ 0,5 kg · m ⁻² · h ^{-0,5}
Carbonation resistance	EN 13295	passes	passes
Elastic modulus	EN 13412	26.2 GPa	≥ 20 GPa

METHOD STATEMENT:

SUBSTRATE PREPARATION

Substrate on which Reparatur malter F4 is applied need to be clean, free of dust and oil, all labile section must be removed. Substrate also need to be saturated with water. Surface temperature on material is applied must be between 5°C and 30°C. In case of reparation of steel reinforced structures, exposed reinforcement must be mechanically cleaned from corrosion (using steel brush or sand-blasting). In order to achieve better adhesion with substrate, as well as concrete surface stabilization, prior to application of Reparatur malter F4, it is recommended to treat concrete substrate with precoating Reparatur Penetrat or Vrska U.

APPLICATION

Reparatur malter F4 is prepared by mixing with required quantity of water, 150 to 160g of water per 1,0 kg material (one bag of material - 25kg is mixed with 3,75 to 4,0kg water). Mixing is carried out with slow mixer until complete homogenization - minimum 3 minutes.

Mixture is leaved to rest for 5 minutes, than mixed again. Application is carried with metal trowel. Maximal thickness to be applied in one layer is 2,0 cm.

First few ours following the applications, material must be protected from high temperatures (above 30°C), exposure to direct sunlight and wind.

CONSUMPTION

For layer with thickness of 1.0 cm consumption is roughly 20-21 kg/m².

CLEANING

Tools and equipment are cleaned with water immediately after their use.

PACKAGING


Bags 5 kg

Bags 25 kg

STORAGE

In original closed packing, in dry premises at temperature between 5 and 35 °C. Shelf life: 12 months.

CE MARKING

 2032	
ADING AD Skopje Novoselski pat (street 1409)No.11, 1060 Skopje, Republic of North Macedonia 17 GCBK001/6 EN 1504-3:2005 REPARATUR MALTER F4 Concrete repair product for structural repair PCC mortar (based on hydraulic cement)	
Compressive strength:	Class R4
Chloride ion content:	≤ 0.05%
Adhesive bond:	≥ 2.0MPa
Carbonation resistance:	Passes
Elastic modulus:	≥ 20GPa
Thermal compatibility, part 1:	≥ 2.0 MPa
Capillary absorption:	≤ 0,5 kg*m⁻²*h^{-0.5}
Reaction to fire:	Euroclass A1

CONCRETE REPAIR

Health hazards: Reparatur Malter F4 does not contain toxic materials. Nevertheless, avoid contact of the product with skin and eyes and avoid swallowing. In case of contact with skin or eyes, rinse it immediately with clean running water. If swallowed, seek medical assistance. Additional information are provided in the Safety Data Sheet of the product.

Fire: Reparatur Malter F4 is non-flammable.

Cleaning and disposal: Loose residues of Reparatur Malter F4 should be cleaned with water. Old and used packaging should be disposed of in accordance with local rules and regulations for that type of waste. Additional information are provided in the Safety Data Sheet of the product.