

# REPARATUR MALTER F2

*Cement-polymers based mortar, used for structural reparations of concrete in layers 0,7-1,5 cm thick, with compensated shrinkage and reinforced with polypropylene fibers*

*In compliance with EN 1504-3 Class R4*

## FILED OF APLICATION

Reparatur Malter F2 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	-	0.153	0.15 - 0.16
Maximal size of aggregate	-	2 mm	2 mm
Specific density	EN 12190	2220 kg/m <sup>3</sup>	(2100 - 2300) kg/m <sup>3</sup>
Setting time			
Start of setting		03:28	(2÷4)h
End of setting	EN 13294	05:52	(5÷7)h
Compressive strength			
after 7 days		46,8 MPa	≥30 MPa
after 28 days	EN 12190	56,0 MPa	≥45 MPa
Adhesive bond	EN 1542	2.83 MPa	≥ 2,0 MPa
Restrained shrinkage/expansion	EN 12617-4	2.5/2.3 MPa	≥ 2,0 MPa
Thermal compatibility:			
Freeze-thaw cycling with de-icing salt immersion	EN 13687-1	2,12 MPa	≥2,0 MPa
Elastic modulus	EN 13412	21.47 GPa	≥20 GPa
Carbonation resistance	EN 13295	passes	passes
Capillary absorption	EN 13057	0,0694 kg · m <sup>-2</sup> · h <sup>-0.5</sup>	≤ 0,5 kg · m <sup>-2</sup> · h <sup>-0.5</sup>

CONCRETE REPAIR

## METHOD STATEMENT:

### SUBSTRATE PREPARATION :

Substrate on which Reparatur malter F2 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 F2, it is recommended to treat concrete substrate with precoating Reparatur Penetrat or Vrska U.

### APPLICATION

Reparatur malter F2 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 1,5 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/m<sup>2</sup> .

### CLEANING

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

### PACKAGING

Bags 6 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	
<b>ADING AD Skopje</b> <b>Novoselski pat (street 1409)No.11, 1060</b> <b>Skopje, Republic of North Macedonia</b> <b>18</b> <b>2032-CPR-11.5D</b> <b>EN 1504-3:2005</b> <b>REPARATUR MALTER F2</b> <b>Concrete repair product for structural repair PCC mortar (based on hydraulic cement)</b>	
<b>Compressive strength:</b>	<b>Class R4</b>
<b>Chloride ion content:</b>	<b>≤ 0.05%</b>
<b>Adhesive bond:</b>	<b>≥ 2.0MPa</b>
<b>Carbonation resistance:</b>	<b>Passes</b>
<b>Elastic modulus:</b>	<b>≥ 20GPa</b>
<b>Thermal compatibility, part 1:</b>	<b>≥ 2.0 MPa</b>
<b>Capillary absorption:</b>	<b>≤ 0,5 kg*m<sup>-2</sup>*h<sup>-0.5</sup></b>
<b>Reaction to fire:</b>	<b>Euroclass A1</b>

CONCRETE REPAIR

**Health hazards:** Reparatur Malter F2 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 F2 is non-flammable.

**Cleaning and disposal:** Loose residues of Reparatur Malter F2 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.