FIBROeRASO

PRODUCT DESCRIPTION

FIBROeRASO is a semi-rapid thixotropic mortar with medium modulus of elasticity and high dimensional stability, based on sulfoaluminate cement and reinforced with synthetic microfibres, suitable for structural repairs, smoothing and protection of reinforced concrete with an excellent surface finish.

UNI EN 1504-3 CLASSE R4

UNI EN 1504-2

PRODUCT APPLICATION

- Structural restoration to thickness and protective millimetre levelling of reinforced concrete structures such as pillars, beams and floors
- To repair exposed and prefabricated concrete walls
- Renovation of cornices and balcony risers
- Wall repair and finishing
- Restoration and structural reinforcement of large works such as viaducts and dams

ADVANTAGES

- High impermeability
- Easy workability and rapid application
- High resistance to carbonation
- Excellent adhesion to concrete and reinforcement bars
- Excellent protection against the aggression of atmospheric chemical agents
- High dimensional stability thanks to an incisive control of shrinkage phenomena in the plastic and hardened stage
- Practicality in case of operations with the mobile basket
- Light colour
- It allows both the thickness restoration and the surface finish in a single quick solution

PREPARATION AND APPLICATION

The preparation and installation data refer to normal environmental conditions (temperature +20°C; relative humidity 60%).

Preparing the surfaces

Perfect adhesion of the product to the surface, which is absolutely necessary to ensure repair resistance, depends on the quality of the surface preparation on which the mortar is to be applied. Therefore, the following steps must be carried out in advance:

- Carefully remove all deteriorated parts by pressure washing, sanding or bush-hammering

• Roughen the surface, removing any oils, film or cement slurry
• Should the surfaces require an incisive fixative effect, apply PROFIX 30 (see relevant technical data sheet)
• Clean each exposed reinforcement bar from rust and apply protective SANOFER (see relative data sheet) on the cleaned bars
• In the absence of PROFIX 30, thoroughly soak the surfaces with pressurised water in order to also achieve final cleaning, keeping them moist from the start of the application
• Perform an adhesion test in case of painted surfaces

Preparing the mixture
The preparation of the mixture should be done according to the following method:
• Pour the mixture water into a container (3.2÷3.4 L per bag equivalent to 16-17% in weight)
• Slowly add the product and simultaneously mix with a drill-mixer
• Mix the mixture for approximately 2-3 minutes, avoiding adding water in the initial stages when the consistency of the mixture is still “damp earth”.
At the end check its workability and if necessary, add a little water to adjust the workability (small variations in added water will not alter the characteristics of the product).
Mixing by hand is not recommended as it would require an excessive amount of water, and mixing in a concrete mixer or with a planetary mixer is also to be avoided in case of high temperatures.

Application
Apply FIBROeRASO with a trowel in thicknesses between 1 and 40 mm in a single coat; wait at least 30 minutes between one layer and another when thicker layers are applied and insert suitable reinforcement mesh on horizontal surfaces.
In the case of vertical surfaces, an alkali-resistant fibre mesh or XNET or FLEXONET (see the relative technical data sheets) can be inserted between two coats if the product is used as a smoothing coat.
In case of applications on large surfaces, provide for alternating areas and/or the use of a reinforcement mesh fixed to the substrate by means of dowels or via the CONNECTOR 20 (see relevant technical data sheet).

Sprayed application
The product can also be applied with a plastering machine with levelling wands after separately mixing the product (for more information contact the Volteco Technical Service).
In this case, always follow the previous application indications.
At high temperatures, check that the consistency of the mix is suitable for use in the machine.

Finishing
FIBROeRASO finishing can be carried out with a sponge float when the mortar begins to harden.
The surface obtained will be highly similar to that of a smooth fine-grain finish.
In the event of solar radiation, high temperatures or the presence of wind, it is recommended to cure FIBROeRASO by spraying water on its surface in the 12-24 hours following application.
Once trowelling is complete, and in any case not before at least 4 hours have elapsed following application, FIBROeRASO can be protected directly with CP1 and/or CP0 coating (see the relative technical data sheets), especially if the surfaces are subject to thermodynamic movements, or with any suitable coating/painting.




References available at www.volteco.com

CONSUMPTION AND YIELD

17,5 kg/m^2 per centimetre of applied thickness.
A bag of FIBROeRASO yields about 11.7 l of mortar.

PACKAGING AND STORAGE

FIBROeRASO is packed in 20 kg bags.
The products must be stored in a dry area protected from sunlight, humidity and from temperatures below 5°C.
FIBROeRASO in the original packaging has a storage time of 18 months

FIBROeRASO

WARNINGS - IMPORTANT NOTES

Product maturation slows down with temperatures of 5-10°C, therefore it is advisable to use lukewarm water when mixing.
In the presence of a high temperature or wind, keep the surface damp so as to guarantee a proper curing process.
When applying the product on large horizontal areas (> 9 m^2), set-up sectioning joints across the overall thickness.
The preparation and installation data refer to normal environmental conditions (temperature +20°C; relative humidity 60%).

PHYSICAL AND TECHNICAL SPECIFICATIONS

Specification	Values
Appearance	grey powder
Mixture consistency	thixotropic
Application temperature	from +5°C to +30°C
Workability time at +20 °C	20'
Maximum aggregate size	0.6 mm
Specific weight	> 1.90 kg/l
Mixture ratio	100 parts powder 16-17 parts liquid

Feature	Test method	Performance requirements UNI EN 1504-2	Declared performance (*)	Certified performance (**)
Bond strength	UNI EN 1542	≥ 1 MPa	≥ 2.0 MPa	2.17 MPa
Capillary absorption	UNI EN 1062-3	≤ 0.1 $kg*m^{-2}*h^{-0.5}$	≤ 0.1 $kg*m^{-2}*h^{-0.5}$	0.01 $kg*m^{-2}*h^{-0.5}$
Water vapour permeability (equivalent thickness: Sd)	UNI EN 7783-2	Class 1 - Sd ≤ 5 m	-	Sd = 0.52 m

Feature	Test method	Performance requirements UNI EN 1504-3 Class R4	Declared performance (*)	Certified performance (**)
Shrinkage	-	-	Controlled	-
Flexural strength *after 3 h* *after 1 day* *after 7 days* *after 28 days*	UNI EN 196-1	 - - -	 > 1.0 MPa > 3.5 MPa > 5.5 MPa > 6.5 MPa	 - - -
Compressive strength after 28 days	UNI EN 12190	≥ 45 MPa	≥ 45 MPa	50.7 MPa
Chloride ions content	UNI EN 1015-17	≤ 0.05%	-	0.01%
Adhesion to the concrete	UNI EN 1542	≥ 2.0 MPa	> 2.0 MPa	2.17 MPa
Compressive modulus of elasticity after 28 days	UNI EN 13412	> 20 GPa	-	21.1 GPa
Resistance to carbonation	UNI EN 13295	dk < control concrete (0.45 MC)	-	fulfilled requisite
Capillary absorption coefficient	UNI EN 13057	≤ 0.5 $kg*m^{-2}*h^{-0.5}$	< 0.5 $kg*m^{-2}*h^{-0.5}$	0.35 $kg*m^{-2}*h^{-0.5}$
Thermal compatibility Part 1 (adhesion after 50 un/freezing cycles)	UNI EN 13687-1	≥ 2.0 MPa	-	2.26 MPa
Reaction to fire	UNI EN 13501-1	Classification	-	Euroclass A1

The quoted data are obtained in a laboratory at +20°C and 60% RH.
* Performance thresholds guaranteed by VOLTECO
** Performance values certified by accredited third parties

SAFETY

Refer to the related Safety Data Sheet.

FIBROeRASO

CE	VOLTECO S.p.a Via delle Industrie, 47 - 31050 Ponzano Veneto (I)
21 **DOP 0032** **EN 1504-3:2006** **1370-CPR-1299** **FIBROeRASO** Structural and non-structural repairs: CC repair mortar for the restoration of concrete, structural strengthening and the preservation or restoration of passivity	
Reaction to fire: Class A1 Compressive strength: Class R4 ≥ 45 MPa Chloride ions content: ≤ 0.05% Adhesion: ≥ 2.0 MPa Resistance to carbonation: dk ≤ concrete ref. (MC 0.45) Modulus of elasticity: ≥ 20 GPa Thermal compatibility: • Part 1: Un/freezing cycles: ≥ 2.0 Mpa Capillary absorption: ≤ 0.5 $kg*m^{-2}*h^{-0.5}$ Hindered shrinkage/expansion: NPD Coefficient of thermal expansion: NPD Hazardous substances: See SDS	

CE	VOLTECO S.p.a Via delle Industrie, 47 - 31050 Ponzano Veneto (I)
21 **DOP 0037** **EN 1504-2:2005** **1370-CPR-1299** **FIBROeRASO** Protection systems of the concrete surface. Moisture content control (MC) and increased resistivity (IR) coating	
Reaction to fire: Class A1 Water vapour permeability: Class I Capillary absorption and permeability to water: < 0.1 $kg*m^{-2}*h^{-0.5}$ Adhesion: ≥ 1 N/mm^2 Hazardous substances: See SDS	

LEGAL NOTES

Note for buyer/installer:
This document prepared by Volteco S.p.A. is provided as an aid and guideline for the buyer/installer.
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