REPAIR MORTARS

FLEXOMIX 30

PRODUCT DESCRIPTION

FLEXOMIX 30 is a cement-based modified polymer mortar with a low modulus of elasticity, thixotropic and fibre-reinforced, for the volumetric repair of re-built reinforced concrete in a single solution, with an excellent surface finish.

UNI EN 1504-3
CLASSE R3





PRODUCT APPLICATION

- To level the surface of deteriorated beams and columns
- To renovate balcony bands
- To restore superficial concrete defects such as loose stone foundations, chipped parts, etc
- To repair deteriorated concrete covers
- To level waterproofed surfaces with PLASTIVO and/or AQUASCUD

ADVANTAGES

- High impermeability
- Good resistance against the aggression of atmospheric chemical agents
- Low modulus of elasticity that is capable of following the movements of the structure
- Structural repair of concrete
- Excellent adhesion to concrete and reinforcement bars
- Levelling of cement-based surfaces
- Easy processing and quick spray application without formwork

PREPARATION AND APPLICATION

Preparing the surfaces

Adhesion of FLEXOMIX 30 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 sand-blasting or bush-hammering
- Roughen the surface, removing any film or cement slurry
- Clean each exposed reinforcement bar from rust and apply protective SANOFER on the cleaned bars
- Thoroughly soak the surfaces with water, keeping them damp from when the application process begins

Preparing the mixture

FLEXOMIX 30 is ready to use; mixing water must be added as follows:

- Pour the mixing water into a mortar mixer (4÷4.5 l per bag equivalent to 17% in weight)
- Slowly add the product while the mixer is on
- Mix the mixture for approximately 3 minutes, then check its workability. If necessary, add a little water

to adjust the workability (small variations in added water will not alter the characteristics of the product)
• Continue mixing the mixture for another 3 minutes

Application
Apply FLEXOMIX 30 in layers not exceeding 2 cm, using a trowel or a spatula; wait at least 60 minutes between one layer and another when thicker layers are applied and insert suitable reinforcement mesh on horizontal surfaces.

Finishing
A sponge float can be used for the FLEXOMIX 30 finish, approx. 40-50 minutes (at +22°C) after product application.
Following the float finish, and in any case not before a minimum of 24 hours after product application, FLEXOMIX 30 can be finished directly with CP1 or a suitable finishing product/system.






References available at www.volteco.com

CONSUMPTION AND YIELD

16 kg/m^2 per centimetre of applied thickness.
A bag of FLEXOMIX 30 yields about 16 l of mortar.

PACKAGING AND STORAGE

FLEXOMIX 30 is packed in 25 kg bags.
The products must be stored in a dry place protected from sun and humidity.

WARNINGS - IMPORTANT NOTES

The product must be used within 20 minutes after mixing.
Do not add water to extend the pot life.
Do not apply the product at temperatures below +5°C.
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.

PHYSICAL AND TECHNICAL SPECIFICATIONS

Specification	Values
Appearance	grey powder
Workability time at +20 °C	20'

Specification	Test method	Performance requirements UNI EN 1504-3 Class R3	Declared performance (*)	Certified performance (**)
Specific weight	-	-	> 1.65 kg/l	-
Shrinkage	-	-	controlled	-
Flexural strength *after 1 day* *after 7 days* *after 28 days*	 UNI EN 196-1 UNI EN 196-1 UNI EN 196-1	 - - -	 > 2.5 MPa > 3.5 MPa > 5.5 MPa	 - 10.4 MPa -
Compressive strength after 28 days	UNI EN 12190	≥ 25 MPa	≥ 35 MPa	43.2 MPa
Adhesion to the concrete	UNI EN 1542	≥ 1.5 MPa	> 1.5 MPa	1.62 MPa
Chloride ions content	UNI EN 1015-17	≤ 0.05%	-	0.01%
Compressive modulus of elasticity after 28 days	UNI EN 13412	> 15 GPa	-	20 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$^{-0.5}$	< 0.3 kg*m^{-2}*h$^{-0.5}$	0.14 kg*m^{-2}*h$^{-0.5}$
Thermal compatibility Part 1 (adhesion after	UNI EN 13687-1	≥ 1.5 MPa	-	2.41 MPa

FLEXOMIX 30

Specification	Test method	Performance requirements UNI EN 1504-3 Class R3	Declared performance (*)	Certified performance (**)
50 un/freezing cycles)				
Thermal compatibility Part 2 (adhesion after 30 thunder cycles)	UNI EN 13687-2	≥ 1.5 MPa	-	2.71 MPa
Thermal compatibility Part 4 (adhesion after 30 dry thermal cycles)	UNI EN 13687-4	≥ 1.5 MPa	-	2.50 MPa
Slipping resistance	UNI EN 13036-4	Class I: >40 units with wet test Class II: >40 units with dry test Class III: >55 units with wet test	-	Dry: class II Wet: class I
Reaction to fire	UNI EN 13501-1	Classification	-	Euroclass A2

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

This is a non-toxic alkaline product.
It is recommended to use a mask and gloves while working.
Accidental contact with eyes, rinse thoroughly with water and seek medical advice.

CE

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FLEXOMIX 30
Structural and non-structural repairs: PCC repair mortar for the restoration of concrete, structural strengthening and the preservation or restoration of passivity

Reaction to fire: Class A2,s1-d0
Compressive strength: Class R3 ≥ 25 MPa
Chloride ions content: ≤ 0.05%
Adhesion: ≥ 1.5 MPa
Resistance to carbonation: dk ≤ concrete ref. (MC 0.45)
Modulus of elasticity: ≥ 15 GPa
Thermal compatibility:
• Part 1: Un/freezing cycles: ≥ 1.5 MPa
• Part 2: Thunderstorm cycles (thermal shock): ≥ 1.5 MPa
• Part 4: Dry cycles: ≥ 1.5 MPa
Slip resistance: dry class II; wet class I
Capillary absorption: ≤ 0.5 $kg*m^{-2}*h^{-0.5}$
Hindered shrinkage/expansion: NPD
Coefficient of thermal expansion: NPD
Hazardous substances: See SDS

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