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 that allows volume restoration and surface finishing of concrete or plaster in a single solution.

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
- Repairing missing portions of screeds and plasters
- 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
- Excellent thixotropy that allows the product to be applied without formwork
- Excellent adhesion to concrete and reinforcement bars
- Levelling of cement-based surfaces
- Easy processing and quick spray application

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
- Remove any film or cement latex and, in any case, make the entire surface evenly rough
- Clean each exposed reinforcement bar from rust and apply protective SANOFER (see relative data sheet) on the cleaned bars
- Thoroughly soak the surfaces with water, keeping them damp from when the application process begins

Preparing the mixture

The preparation of the mixture should be done according to the following method:

- Pour the mixing water into a mortar mixer (4÷4.5 l per bag equivalent to 16÷18% in weight)

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• 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
Mixing in a concrete mixer or with a planetary mixer is possible as an alternative, while complying with the above instructions.

Application
Apply FLEXOMIX 30 in layers not exceeding 2 mm, using a trowel or a spatula; wait at least 60 minutes between one layer and another when thicker layers are applied; it is recommended to roughen the surface of the base layer in order to optimise the grip of the next layer.
In case of applications on large surfaces, use a reinforcing mesh, fixed with anchoring to the support or by means of CONNETTORE 20 (see relative 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.

Finishing
FLEXOMIX 30 finishing can be carried out with a sponge float when the mortar begins to harden.
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 CP SYSTEM, X-LIME (see relevant technical data sheets) 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 area protected from sunlight, humidity and from temperatures below 5°C.
FLEXOMIX 30 in the original packaging has a storage time of 18 months

WARNINGS - IMPORTANT NOTES

Do not add water to extend the pot life.
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 surfaces (> 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
Maximum aggregate size	1.0 mm
Workability time at +20 °C	20'
Application temperature	from +5°C to +30°C
Mixture ratio	100 parts powder 16-18 parts liquid

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Specification	Values
Specific weight	> 1.65 kg/l

Feature	Test method	Performance requirements UNI EN 1504-3 Class R3	Declared performance (*)	Certified performance (**)
Shrinkage	-	-	controlled	-
Flexural strength *after 1 day* *after 7 days* *after 28 days*	 UNI EN 196-1 UNI EN 196-1 UNI EN 12190	 - - -	 > 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 50 un/freezing cycles)	UNI EN 13687-1	≥ 1.5 MPa	-	2.41 MPa
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

Refer to the related Safety Data Sheet.

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EN 1504-3:2006
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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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LEGAL NOTES

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