

NOVABOND FR

Fire resistant mortar for fixing and grouting firebricks

- ▷ **Excellent resistance to high temperature**
 - ▷ **Resistant to water and severe weather conditions**
 - ▷ **Suitable for bonding and grouting**
 - ▷ **Easy application also on vertical surfaces**
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Description

NOVABOND FR is a cement based mortar, consisted of fireresistant cement, properly grained silica sand and special additives. It is thixotropic and of high mechanical strength, specially designed for bonding and grouting of firebricks on horizontal and vertical surfaces.

Certifications

Meets the requirements claimed by EN 998-2 as cement based mortar for masonry constructions for internal and external areas with Declaration of Performance (DoP) C04760-CPR-1645210.

Uses

NOVABOND FR is suitable for fixing and grouting coverings such as:

- Firebricks

For applications on horizontal or vertical surfaces such as:

- Fireplaces, barbeques, chimneys
- Rigid grout repairs between firebricks
- Internal and external areas

Technical Data

Product Identity

Form	Powder
Color	Grey
Chemical substance	Alumina cement, aggregates, special additives
Granulometry	D _{max} : 2,0 mm
Bulk density	1,6 ± 0,1 kg/L
Storage	6 months on dry area in the original sealed packaging

Application data (+23°C & 50% R.H.)

Mixing ratio	4,7 – 5,3 L of water for 25kg
Specific gravity of the mix	2,0 ± 0,05 kg/L
Application temperature	from +5°C up to +35°C
Pot life	> 3 hours
Heat resistance	up to 1200°C

Final performance according to EN 12004:2007+A1:2012

	Performance	
Compressive strength	≥ 20 N/mm ²	EN 1015-11
Flexural strength	≥ 5 N/mm ²	EN 1015-11
Initial shear resistance	0,15 N/mm ²	Tabulated values
Water absorption	0,3 kg/m ² min ^{0,5}	EN 1015-18
Water vapor permeability	μ 15/35	Tabulated values
Density of dry mortar	1700 kg/m ³	EN 1015-10
Thermal conductivity (λ _{1,dry} , p=50%)	0,75 W/mK	Tabulated values
Resistance to fire	A1	EN 13501

Application Procedure

Substrate Preparation

Cement based substrates have to be free of cracks, compact, clean, free of grease, oil, laitance and any substances which may compromise the adhesion of NOVABOND FR. On hot and/or windy days saturate well the substrate with water and remove excess with appropriate tool like sponge.

Preparation of the mix

Mix the content of the 25kg paper bag containing NOVABOND FR (25 kg) with 4,7 - 5,3 liters of clean and fresh water by means of appropriate electrical stirrer at low speed (500 rpm) for at least 3 – 4 min or construction mixer, until a uniform mortar free of lumps is obtained. The mix has a pot life of 3 hours. During hot periods and in general, it is recommended to avoid direct sunlight exposure of the materials (in powder or liquid form) before use, otherwise the working time is reduced. In any case avoid mixing by hand.

Application

NOVABOND FR is applied by means of metallic trowel or other similar appropriate tool, depending on the type of application. The firebricks must be compact clean without oil, grease, laitance or any substance which may compromise the adhesion of NOVABOND FR on them. Bricks of high porosity is recommended to be slightly wet before application. For joint formation is recommended to use plastic or metallic spacers or guides which can be removed after the adhesive sets and before grouting. If grouting is not done simultaneously with the bonding, in example during repair jobs, application is done by means of a rubber spatula. After grouting clean by means of a sponge soaked in water. The grouted surface should be cured in humid environment at least for a few hours. Firebricks bonded and/or grouted with NOVABOND FR can be exposed to temperatures up to +1.200⁰C, 7 days after the application.

Recommendations

Avoid using NOVABOND FR :

- In cases where the substrate and environment temperature are less than +5⁰C or higher than +35⁰C
- On surfaces like metal, wood or surfaces like polyurethane, epoxy and similar paint or coatings
- On friable or not properly cured substrates
- Over existing expansion joints

Also note the following:

- Never exceed the maximum recommended quantity of mixing water
- Protect the grouted surface from rain and frost for the first 24 hours
- Do not add cement, lime, gypsum or other binders or substances which
- May affect the mortar characteristics
- Application should be performed by professional skilled workers

Consumption

The consumption depends on the dimensions of the bricks and on the joint width. For 20x10x3 cm³ bricks and 1 cm wide joints: approx. 5 kg/m².

Cleaning

Tools, buckets, tiles etc. can be cleaned with fresh and clean water as long as, NOVABOND FR is still fresh. After hardening occurs, cleaning can take place by mechanical means.

Storage

NOVABOND FR remains stable for 6 months from production date inside its original sealed packaging, stored in protected dry area in temperature between +5°C and +35°C.

Packaging

Multi-layer paper bags of 25 kg in pallets of 1.250 kg and plastic bags of 5 kg.

Safety Instructions

For further information refer to the Safety Data Sheet of the product

Warning

The technical data and recommendations contained in this leaflet correspond to the best of our knowledge and experience. All the above mentioned information in any case should be considered as merely indicate and subject to confirmation after long term practical applications. In practice, variations in materials, substrates and on-site implementation conditions are such that no warranty can be given on their merchantability or suitability for a particular purpose, and no liability whatsoever from any legal relationship can be claimed against the Company on the basis of any written information, written suggestions tips or other forms of instructions provided. For this reason anyone interested of using the product must be sure beforehand that the product is suitable for the envisaged application. In every case the user alone is fully responsible for any consequences deriving from the use of the product. We retain the right of renewal of the data of the leaflet without warning. For the latest and valid version of the Technical Data Sheet refer to use website www.novamix.gr or directly to the following QR code of the product.



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