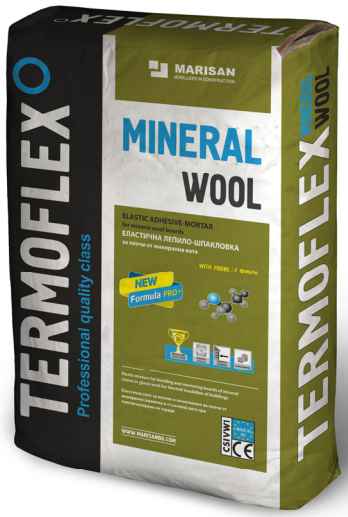
TERMOFLEX® ADHESIVE AND REINFORCING MORTAR FOR MINERAL WOOL

adhesive mortar reinforced with fibers
for bonding and plastering mineral wool boards
for thermo-insulation of buildings

Scope of use



TERMOFLEX® ADHESIVE AND REINFORCING MORTAR FOR MINERAL WOOL is a high quality adhesive-plastering solution for bonding mineral (stone and glass) wool boards so as for application of an armored plastering layer on them with an incorporated fiberglass mesh. The mortar has excellent adhesion to all types of mineral bases and ensures extremely strong bonding of the wool to them. It is strongly steam permeable and resistant to freezing and temperature changes. The cellulose fibers that the mortar contains increase its strength and resistance of the whole thermal insulation system to damages, cracks and blows.

TERMOFLEX® ADHESIVE AND REINFORCING MORTAR FOR MINERAL WOOL is an element of the integrated thermal insulation systems TERMOFLEX® MINERAL and is suitable both for newly erected buildings and old buildings – during the process of renovation and improvement of their thermal insulation. The air-drawing additives in the mortar increase its thermo-insulation characteristics with more than 10%.

Properties	
very high adhesion to mineral wool	excellent adhesion to mineral bases
resistant to cracks and blows	high vapor permeability
contains fibers	hydro and frost resistance

Composition

Homogenous cement-based powder, modified with high quality polymers and cellulose additives.

Packaging and Indicative consumption

Package:

25 kg paper bags

Indicative consumption:

from 2,5 kg/m^2 to 4,5 kg/m^2 when plastering depending on the plaster thickness

from 5,5 kg/m^2 to 8,0 kg/m^2 when bonding depending on the smoothness of the base and the method for application of the adhesive mortar

about 1,5 kg/m^2 at preparatory plastering

Expiration date and Storage

Store and transport in tightly sealed original packaging in dry and cool place (best on pallets). Keep away from moisture!

The product is good for use 12 months after production date of an unopened original packaging.

Instructions for Use

Base Preparation

1) When applying armored plaster

The surface of the applied thermo insulation layer should be smooth, without steps and irregularities. Joints between the boards should be filled and sealed with mineral wool stripes. Before plastering additional mechanical reinforcing of the boards should be performed with dowels.

2) When bonding Thermo-insulation boards

TERMOFLEX® ADHESIVE AND REINFORCING MORTAR FOR MINERAL WOOL bonds to all mineral bases, which are bearing and do not contain separating substances (grease, bitumen, dust). The base should be clean, dry and stable, without cracks and leveled in advance. All flimsy areas and layers with low mechanical resistance should be preliminary removed. Irregularities greater than 20 mm should be leveled with lime-cement rough coat TERAFLEX® MASTER FIX three days prior to mounting of thermal insulation boards. All types of dirt, leftovers from separating substances and steam impermeable paint coverings should be completely removed (with high pressure sprayer). Areas covered with mould and mildew should be mechanically scrubbed (with a steel wire brush), and then disinfected with a proper detergent. Carbonized areas of the base should be swept and brushed off. Old walls without any coverings or with strong enough coverings should be dusted off with a brush, pressure washed with water and then let dry completely. When working with bases steeped with moisture, the source of moisture should be removed and then the base should be let dry completely.

All slightly crumbly and sandy bases should be primed and strengthened with NANOGRUND® – DEEPLY PENETRATING PRIMER WITH NANO PARTICLES at least 4-5 hours prior to bonding. Highly absorbent bases (lightweight concrete walls or gypsum blocks) should be primed with POPOGRUND® – POROUS

BASE PRIMER. Priming is not necessary when having gypsum boards, cement plasters and mortars (plastered at least 1 month prior), concrete (poured at least 3 months prior).

When mounting thermal insulation boards on areas subject to high water pressure (base boards, ground and underground walls, roofs, terraces and others), the installation of hydro insulation system HYDRO and SPLIT PROTECTION^2 is mandatory prior to mounting.

Mixture preparation

In a clean stainless steel container pour about 6,25 l clean water with no additives and gradually add the contents of the bag (25 kg). Stir the ready mixture with an electric stirrer until reaching homogenous mixture without lumps. Add water or dry mixture if needed for reaching the necessary density. Leave the mixture to "mature" for about 10 min until all filling agents dissolve, and then stir again. The ready-made mixture is ready for work and keeps its properties for about 2 hours at 20-25˚C.

Do not mix with cement, sand and other materials, because that leads to deterioration of the adhesive's qualities!

Application

1) When applying armored plaster

The mortar should be applied on the whole surface of the thermo-insulation boards with a notched trowel. The thickness of the layer should be 3-5 mm. while the mortar is still damp, the armored mesh should be laid up to bottom in vertical stripes, which should overlap 10 mm. The net should be embedded in the layer in such a way so that at thickness ≤ 4 mm is should be positioned in the middle of the layer and at layer thickness > 4 mm – in its upper third. I**t is absolutely forbidden the laying of the net first and then the application of the mortar, because that inhibits the bonding of the material to the boards and damages the stability of the whole thermo-insulation system.** The mesh which is used should be protected from the dissolving alkalescency of the mortar (it should be alkaline resistant).

All covered but visible surfaces of the front of the thermo-insulation boards (for example the lower end of the system) should be covered with the mortar.

2) When bonding Thermo-insulation boards

Prior to bonding of the boards preparatory plastering should be executed. For that purpose apply a thin layer (less than 1 mm) TERMOFLEX ADHESIVE AND REINFORCING MORTAR FOR MINERAL WOOL the whole outer surface (the back) of the thermo insulation board. After drying of the preparatory plaster you may proceed to the bonding of the boards.

The prepared mortar should be applied at a 4-5 cm strip along the board edges and at a few spots (3 to 6) in the middle with a diameter 7-8 cm. Then immediately mount the board to the wall evenly pressing on it. After pressing, the mortar should cover at least 50 % of the board's surface.

No mortar should get in the grouts between the boards or on their frontal sides and if that happens it should be removed. Wrongly installed areas or too big grouts should be sealed with the same insulation material.

Board alignment should be performed bottom-up. The boards should be placed horizontally lengthwise the façade, tightly one next to another without leaving any space between them. Formation of cross-like

grouts between the boards should not be allowed and for that reason they should pass each other horizontally with half a board. It should not be allowed for the grouts between the boards to continue the lines of the façade openings (windows, doors, etc.). Along the edges of the building the thermal-insulation boards should be crossed over in a notch like manner, which guarantees secure grip in those areas.

The surface of the already applied thermal insulation layer should be smooth, without steps or irregularities. Inequalities between the board levels should be removed through grinding. After TERMOFLEX® ADHESIVE MORTAR FOR EPS bonds (about 2 days) the boards should be grinded (if necessary) and then mechanically anchored. The number of dowels depends on the specific conditions of the construction site, but should not be less than 6 per square meter. The greatest pressure is concentrated along the outer edges of the building; therefore within a 2-meter strip of the edge the minimum number of dowels should be not less than 8 per square meter.

Attention!

Boards made from mineral (stone and glass) wool should be plastered twice - once for preparation and one more time for armoring!

Wait for the preparatory plaster to dry!

Bonding and plastering of the boards of the boards should be performed at dry weather and temperature of the base and the environment from +5ºC up to +30ºC and air humidity below 65%.

The time for complete hardening of the base depends on the weather conditions (temperature and air humidity), but is not less than 72 hours and may last for up to 14 days.

The impact-resistance of the system depends on the right execution of the fiberglass mesh armored layer.

For more information and detailed description of all necessary operations, which should be performed refer to "Technological instruction for constructing thermal insulation systems TERMOFLEX® ".

Hazard description:

Does not contain dangerous chemical substances!

Quantity of soluble chrome (VI) within the ready-made mass of the product is ≤ 0,0002%.

Risk and Safety Statements	
R 36/37/38	Irritating to eyes, respiratory system and skin
S 08	Keep container dry
S 24/25	Avoid contact with skin and eyes

Hazard symbol:

Xi – Irritating product; contains cement.

Classification

Complies with the requirements of European and Bulgarian standards and measures up to:

European Standard	Class	Testing protocols
EN 13500 EN 998-1 EN 12004	CS IV W1 T2 C2TE	№ 1126/15.12.2007 № 1140/18.12.2007 № 1146/19.12.2007 № PIT-EC-010-7/19.12.2007

Technical data

Testing protocols are issued by Notified Body (NB 1950) for compliance evaluation with Research Institute of Building Materials NIISM Ltd., Sofia.

Parameter	Measure	Testing method	Testing result
Mixing proportions (water/dry mix)			6,25 l water for 25 kg dry mix
Bulk density of hardened mortar	kg/m^3	EN 1015-10	1640
Compressive strength at 28 day	N/mm^2	EN 1015-11	20,1
Flexural strength at 28 day	N/mm^2	EN 1015-11	5,3
Adhesive strength with the base (concrete)	N/mm^2	EN 1015-12	1,4
Adhesive strength with the main coating (with the reinforcement) with mineral wool sheet	kPa	EN 13494 ETAG-004 (EOTA)	60
Tensile adhesive strength on MW: - after 28 day in standard conditions - after 3 cycles of conditioning	kPa	EN 13494 ETAG-004 (EOTA) EN 1062-11	 60 60
Open time: tensile adhesion strength	N/mm^2	EN1346+A1	2,5 after 30 min
Slip	mm	EN1308+A1	0,3
Water permeability: Liquid-water transmission rate W	kg/(m^2*min^{0,5})	EN 1515-18	0,35 class W1
Water vapor diffusion: Water vapor transmission rate V	g/(m*d*Pa)	EN 1515-19	2,8*10^{-4}
Reaction to fire	-	EN 13501-1	class A1