Thermal Insulation and Fireproof Millboard

IZOFLOX

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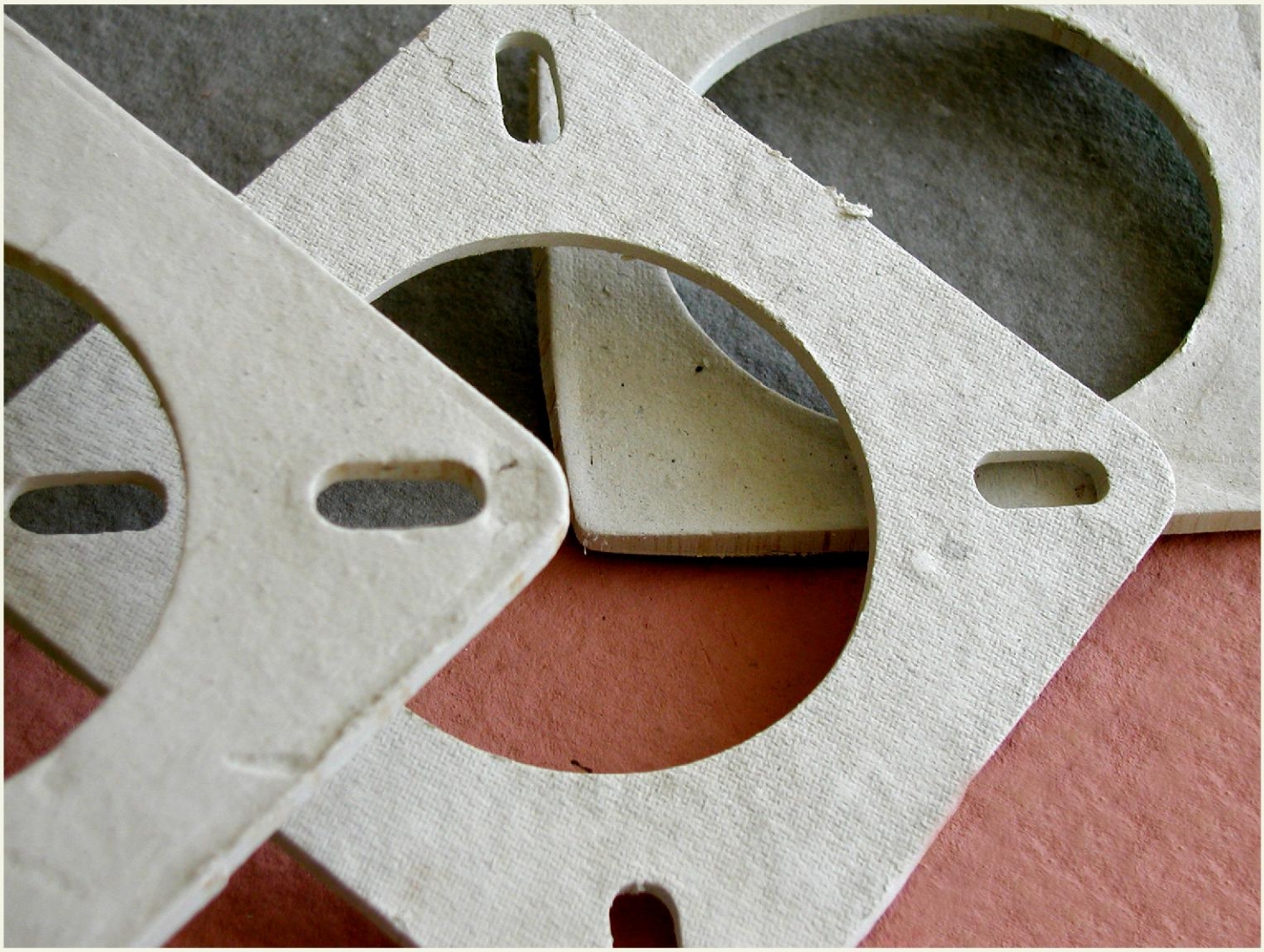

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IZOLA

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Content

Thermal Insulation and Fireproof millboards IZOFLOX

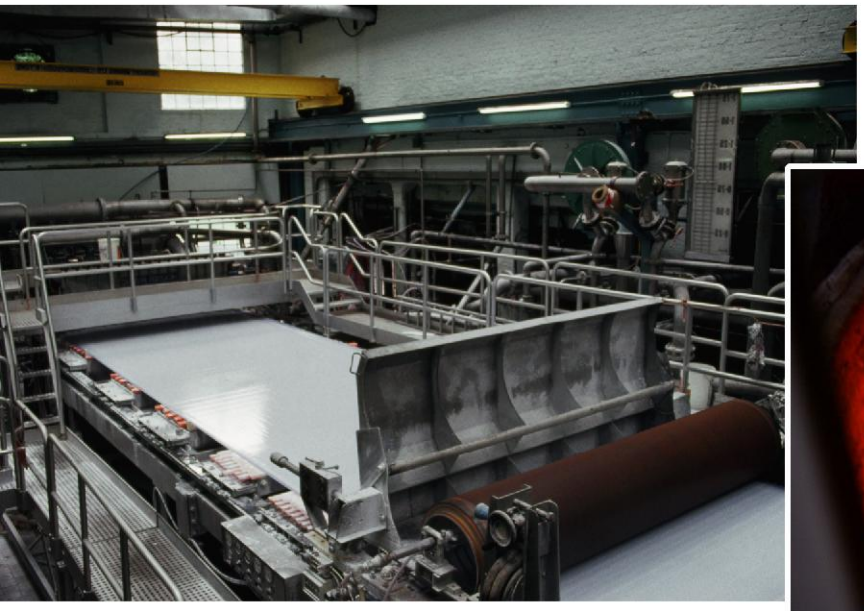
Introduction

About IZOLA

The company IZOLA was founded in 1998. The main company's business is asbestos-free, heat-insulating and sealing materials production. Heat-insulated and fireproof millboards IZOFLOX are made of high-temperature fibers, such as mullite silica, basalt, mineral, calcium-silicate fibers, connecting and mineral fillers. IZOFLOX boards are asbestos-free, moreover, cartons with "bio" prefix consist of bio-soluble fibers.

Technology

All modern industry requirements are considered in the IZOFLOX boards assortment. They have low thermal conductivity, high application temperature, thickness variety, hardness degree, lists and rolls format. Cartons are easy to cut, install and transport, have long life time and don't contain harmful asbestos fibers.

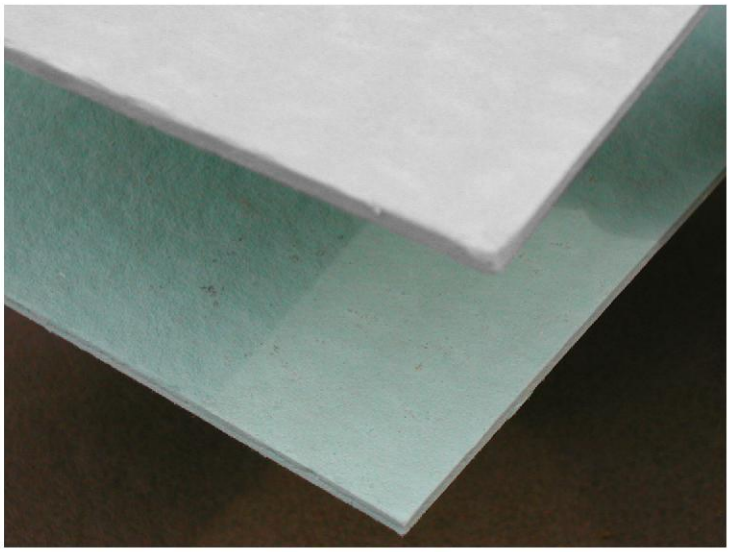


Solid Millboards

IZOFLOX-120 and IZOFLOX-120 Bio

IZOFLOX-120 and IZOFLOX-120 Bio millboards are produced by a calendering method. During the calending process, the board's shape is being formed: it consists of a few layers superimposed on each other. This method makes the carton hard and its thickness very accurate. Asbestos-free ceramic fibers are used as raw materials: mullite silica are used for IZOFLOX-120 and calcium-silicate fibers are used for IZOFLOX-120 Bio.

These products are used for furnaces lining, for mold isolating, as a burner's gasket, fireproof doors filler, in manufacturing rolls for producing flat glass, in spun casting processes and etc.



Properties and mixture	IZOFLOX-120	IZOFLOX-120 Bio
composition	mullite silica fiber (Al_2O_3 + SiO_2) binding agent and fillers	calcium silicate fiber (SiO_2: CaO+MaO) binding agent and fillers
application temperature	+1200 °C	+1200 °C
peak temperature	+1350 °C	+1300 °C
termal conduction (at +600 °C)	0,2 W/mK	0,22 W/mK
loss on ignition	22%	23%
density	1100 kg/m^3	1100 kg/m^3
color	white	white, light-blue
thicknesses	from 2 to 10 mm	from 2 to 10 mm
sheet's size	1000x1000 mm 1100x1100 mm	1000x1000 mm

IZOFLOX-120 and 120 Bio cartons advantages

- high application temperature (up to +1200 °C)
- good dielectric features
- can be formed in complex geometric shapes
- asbestos-free
- easy to install and dismount
- low temperature conduction coefficient
- resistance to heatstroke
- a big variety of thicknesses (from 2 up to 10mm)
- biosoluble fiber (IZOFLOX-120 Bio)

Forming various geometric forms

IZOFLOX-120 and IZOFLOX-120 Bio cartons, are bendable and can be formed in needed shape, unlike other thermal-heating materials. To do this, the carton must be soaked with water evenly, better to use water spray. Let it soak with a small amount of water. Then bend it to desired shape, secure it in this position and let it dry. After it's dried, you get a fire-proof product of a desired shape.

Elastic Millboards

IZOFLOX-120S and IZOFLOX-120S Bio

Asbestos-free ceramic fibers are used in the IZOFLOX-120S and IZOFLOX-120S Bio papers manufacturing process: mullite silica for IZOFLOX-120S and calcium-silicate fibers for IZOFLOX-120S Bio. Papers are flexible, elastic and delivered in rolls. They're easy to cut and to work with.

These cartons are widely used in metallurgy, for furnace lining, mold isolating. They also can be used as various high-temperature gaskets, as fireproof doors and walls fillers, or as heat-insulated protected screens as an inner layer for high-temperature compensators.

Properties and mixtures	IZOFLOX-120S	IZOFLOX-120S Bio
composition	mullite silica fiber (Al_2O_3 + SiO_2) binding agent	calcium silicate fiber (SiO_2: CaO+MaO) binding agent
application temperature	+1200 °C	+1000 °C
peak temperature	+1350 °C	+1250 °C
thermal condition (at +600 °C)	0,08 W/mK	0,16 W/mK
loss on ignition	<12%	8-12%
density	200 kg/m^3	200 kg/m^3
color	white	white, light-blue
thicknesses	from 0,5 to 6 mm	from 0,5 to 6 mm
roll's width	600; 1000; 1200 mm	600; 1000; 1200 mm

IZOFLOX-120S and 120S Bio cartons advantages

- high application temperature (up to +1200 °C)
- good dielectric features
- can be formed in complex geometric shapes
- asbestos-free
- easy to install and dismount
- low coefficient of temperature conductivity
- resistance to heatstroke
- a big variety of thicknesses
- bio-soluble fibers (IZOFLOX-120S Bio)
- durability to a direct contact with a fire

Fireproof Boards

IZOFLOX-126S and IZOFLOX-126S Bio

IZOFLOX-126S and IZOFLOX-126S Bio thermal-insulated cartons are made by vacuum pressing from asbestos-free ceramic fibers: mullite silica for IZOFLOX-126S and calcium silicate fibers for IZOFLOX-126S Bio and various mineral fillers. They have got excellent insulated features. Cartons are delivered in rolls and are easy to rip and convenient to work with.

These boards are widely used in boilers construction as a combustion chamber isolator, as a burner gasket; in metallurgy: as a furnace, doors, ladle lining, as an insulating material when fixing coke batteries and casting lines; in shipbuilding: - walls covering; in ceramics and glass manufacture – lining of light furnaces, insulation of various temperature zones.

Properties and mixture	IZOFLOX-126S	IZOFLOX-126S Bio
composition	mullite silica fiber (Al_2O_3 + SiO_2) binding agent	calcium silicate fiber (SiO_2: CaO+MaO) binding agent
application temperature	+1260 °C	+1000 °C
peak temperature	+1350 °C	+1250 °C
termal conduction (at +600 °C)	0,13 W/mK	0,20 W/mK
loss on ignition	3%	3%
density	280-450 kg/m^3	280-450 kg/m^3
color	white	white, light-blue
thicknesses	5 - 25 mm	5 - 25 mm
sheet's sizes	1000x500; 1000x750 1200x600; 1200x1000	1000x500; 1000x750 1200x600; 1200x1000

IZOFLOX-126S and 126S Bio millboards advantages

- high application temperature
- good dielectric features
- a big variety of thicknesses
- asbestos-free
- easy to install and dismount
- good noise insulation
- low coefficient of thermal conductivity
- resistance to heatstroke
- low coefficient of thermal expansion
- bio-soluble fibers (IZOFLOX-126S Bio)
- resistance to a direct fire contact
- long life time

Fireproof Boards

IZOFLOX-135

IZOFLOX-135 fireproof board consists of mullite silica fiber containing zirconium oxide and manufactured by vacuum pressing. Because the basic fiber contains zirconium oxide, the heat-insulated carton's application temperature is noticeably higher, than an analog's one. IZOFLOX-135 is delivered in rolls, it's easy to cut and to work with. It's widely used in metallurgy as furnaces and ladle lining, insulating of doors casting lines and etc.

IZOFLOX-135 is recommended for insulation of various temperature zones, where the application of traditional heat-insulated materials is limited.

Properties and mixture

composition	mullite silica fiber with zirconium oxide Al_2O_3 (39-40%) + ZrO_2 (15-17%) mineral fillers and binder agent
application temperature	+1350 °C
peak temperature	+1450 °C
thermal conduction (at +800 °C)	0,16 W/mK
loss on ignition	3%
density	320-350 kg/m^3
color	white
thicknesses	from 5 to 25 mm
sheet's sizes	1200x600; 1200x1000

IZOFLOX-135 millboard advantages

- high application temperature
- great dielectric features
- a big variety of thicknesses
- asbestos free
- resistance to a direct fire contact
- low coefficient of thermal conductivity
- resistance to heatstroke
- low coefficient of thermal expansion
- easy to install and dismount
- great noise insulation

IZOLA's new projects in fireproof millboards sphere

Right now, we're working on an introduction of newest perspective developments in the sphere of high-temperature fibers of the new types which allow to create insulated materials with higher application temperatures. New fireproof fibers are obtained from a combination of high-temperature oxides, such as Al_2O_3, ZrO_2, SiO_2, Y_2O_3, MgO. Fibers are made by an original technology, with which they are formed of viscose solutions of inorganic salts of certain chemical elements. In our opinion, the most perspective fibers in the insulation sphere are fibers with a composition of Al_2O_3+MgO, which demonstrate high temperature (up to +2000 °C), practically an unlimited length of the elementary fiber, an absence of recrystallization at high temperatures, for example the same as those traditional ceramic fibers have. The last feature means high fiber structure stability in a whole domain of the application temperature. We hope to obtain first new types of cartons in the nearest future.