TECHNONICOL

TECHNICAL INSULATION AND FIREPROOFING

Product catalogue

KNOWLEDGE. EXPERIENCE. CRAFTSMANSHIP.

CONTENTS

About the company PAGE 2

1 SECTION PAGE 7

2 SECTION PAGE 31

3 SECTION PAGE 41

4 SECTION PAGE 47

5 SECTION PAGE 57

6 SECTION PAGE 61

Stone wool-based materials for technical insulation and fireproofing

Properties 8
Advantages 10
Industrial and civil construction 11
Residential construction 23
Application of stone wool-based materials for technical insulation and fireproofing 26
Stress-strain properties of stone wool-based materials for technical insulation and fireproofing 28

Fibreglass-based materials for technical insulation

Properties 32
Advantages 34
Industrial and civil construction 35
Application of fibreglass-based materials for technical insulation and fireproofing 38
Stress-strain properties of fibreglass-based materials for technical insulation and fireproofing 39

Components

List of components from other suppliers recommended by TECHNONICOL 42

Key reference projects featuring the use of TECHNONICOL technical insulation and fireproofing

Production sites 48
Petrochemical and energy facilities 50
Retail, entertainment, and public facilities 52
Residential facilities 54

Training and design assistance

Training centres 58
Webinars 58
Design assistance 58
Training videos and instructions 59
Calculators 59

Geography of production and contact details

Stone wool production 62
Fibreglass production 63
Regional sales and technical contacts 63

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About the company

TECHNONICOL Corporation is a leading international manufacturer of reliable and efficient construction materials and systems. We offer cutting-edge technologies combining the advancements of our own R&D centres with the latest global breakthroughs.

over
70 production sites worldwide

over
8,000 employees

700 commercial partners

In 2003

TECHNONICOL launched its heat-insulation materials based on stone wool. Since then, aside from achieving leadership in the production of roofing and heat- insulation materials, TECHNONICOL has emerged as one of the largest Russian manufacturers of stone wool-based heat-insulation materials.

Since 2023

TECHNONICOL has launched the production of fibreglass-based heat-insulation materials at its two plants: in Chudovo and Serpukhov.

Unique features

The heat-insulation produced by the company is distinguished by its high quality, as well as by the wide variety of stress-strain properties offered to customers at an optimal price point based on their preferences.

Responding to the growth in regional market demand, we have optimized the geography of our manufacturing plants.

This allows us to be flexible and deliver our products swiftly without burdening our customers with additional transportation costs.

Production

Our production facilities and equipment provide large-scale projects with the necessary quantities of heat- insulation materials and make it possible to create uniquely customized products.

Quality

All TECHNONICOL products are certified, known for their high quality, and meet global standards. All of the company's plants operate on the zero-waste principle, helping to preserve the environment.

Development

The key to the successful development of our Mineral Insulation business is our highly-skilled personnel and our use of advanced process solutions and equipment.

Technological improvement is the cornerstone to maintaining a competitive edge

Above and beyond its production capacities, TECHNONICOL boasts its own R&D centres, where work on improving the technical and functional properties of its finished products is continuous.

Our mineral insulation based on stone wool and fibreglass is very popular among our customers for its technical and functional advantages, which are embedded at the production stage.

All of our materials are produced using the advanced and high-tech equipment of the leading manufacturers.

Operational process lines are automated. Strict quality control at all production stages, from raw components to finished product testing, ensures the stability of the technical characteristics of our released materials.

Ready-to-use products are packed in shrink wrap to preserve the material. Product pallets are packed using stretch hood technology. This packing technology reduces transportation costs and labour inputs through an accelerated loading and unloading cycle. Most importantly, this type of packing allows our customers to store the material outdoors or at the construction site without exposing its physical and mechanical properties to deterioration.

The company continuously invests its time and resources into improving its production technologies and upgrading its production facilities. The result of these efforts is our wide range of heat- and sound-insulating materials based on stone wool and fibreglass, demonstrating consistently high quality and conformity to Russian and global standards every year. Our product mix includes over 3,660 of mineral insulation items.

Thanks to its competitive price, uncompromising quality and wide range of functional benefits, TECHNONICOL non-combustible mineral insulation has emerged as the optimal choice for domestic customers.

over
3,660 mineral insulation items

10 R&D centres

Stone wool-based materials

8 stone wool manufacturing plants

more than 15 mln m^3 of stone wool-based products are produced annually

Stone wool and fibreglass are types of mineral insulation that boast all of its advantages. Thanks to their variety of raw components and operational processes, these materials acquire mutually-reinforcing properties and can be used in comprehensive solutions.

The corporation's production assets include eight stone wool-based heat- insulation manufacturing plants in Russia: in Belgorod, Ryazan, Rostov-on-Don, Zainsk, Chelyabinsk, Yurga, and two plants in Khabarovsk.

Raw materials

Stone wool insulation is made from volcanic rocks in the basalt and gabbro-diabase groups. Ground and mixed in the right proportions, the raw material is placed into a furnace to melt.

Production

The stone wool plants use cupola furnaces – vertical shaft-type furnaces. The stone feedstock's melting temperature is 1,500 °C. Then, fibre is formed from the hot melt: molten stock is discharged from the furnace into the shafts that rotate and form the fibre. The fibres must tightly adhere in order to bond. Finally, the finished material becomes dense and durable.

Fibres are saturated with a binding agent for the insulation material to retain its shape, placed onto a conveyor in the form of a carpet and put into a polymerization chamber for high-temperature hardening. For stone wool, the temperature is 230 °C. Then, the mineral wool carpet is cut into slabs or mats and packed.

All items are produced using the advanced and high-tech equipment of Western Europe's leading manufacturers.

Fibreglass-based materials

Since 2023, TECHNONICOL has been producing heat- insulation materials based on fibreglass. The company is planning to increase its output by 30% by expanding and upgrading its existing production facilities.

2 fibreglass-based mineral insulation manufacturing plants

more than 4.3 mln m^3 of fibreglass-based products are produced annually

The corporation's production assets include two fibreglass-based heat-insulation production plants in Russia: in Chudovo (Novgorod Region) and Serpukhov (Moscow Region).

Raw materials

The raw materials for fibreglass-based insulation are quartz sand, field spar, dolomite, soda, borate and scrap glass. Ground and mixed in the right proportions, the raw material is placed into a furnace to melt.

Production

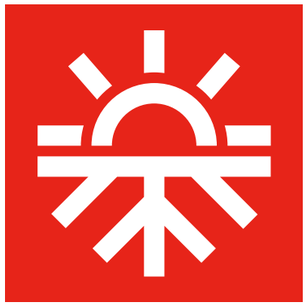
Fibreglass is produced with the use of horizontal tank furnaces. The temperature in the furnace is 1,400 °C. The feedstock melting process is followed by the fibre forming process. Fibreglass is produced by centrifugal spinning and blowing. The glass mass passes through the opening in the quick-rotating bowl and fine fibres are formed under the action of centrifugal force and air flow. By adjusting the equipment speed and air flow rate, the manufacturer obtains the necessary fibre thickness and length.

The fibres are saturated with a binding agent and put onto a conveyor as a carpet, which is then placed into a curing oven, where the binding agent is polymerized. For fibreglass, the polymerization temperature is 180-280 °C. Then, the mineral wool carpet is cut into slabs or mats and packed.

Stone wool-based materials for technical insulation and fireproofing

- Industrial and civil construction
- Residential construction
- Application
- Stress-strain properties

TECHNONICOL STONE WOOL PROPERTIES



EFFICIENT HEAT- INSULATION

TECHNONICOL stone wool is a highly-efficient heat- insulation material.

High heat-transfer resistance is achieved by trapping a large amount of inert air inside the insulation by means of tightly-woven, extremely fine stone wool fibres.

FIRE SAFETY

The main raw materials used in TECHNONICOL stone wool insulation are basalt and gabbro-diabase rocks. For this reason, all TECHNONICOL products are non-combustible. Since the fibre melting temperature exceeds 1,000° C, stone wool products can be used in a wide range of operating temperatures.

An important consideration in choosing this material is that TECHNONICOL heat- insulation does not emit any harmful or toxic substances at high temperatures.

HIGH YIELD STRENGTH

The high resistance of TECHNONICOL materials to mechanical loads is achieved thanks to the fibre's properties and the stone wool's structure. These parameters have been set for each material in the TECHNONICOL range based on the heat- insulation's specific application.

Depending on the structure, the materials support loads that vary in terms of extent, direction, and exposure duration.

This property is essential for the reliable and long-term heat insulation of the structure.

GOOD SOUND ABSORPTION

The fibrous texture of TECHNONICOL stone wool products ensures excellent acoustic and sound absorption properties. TECHNONICOL products are known for their high sound absorption level in a wide range of frequencies, which helps reduce ambient and impact noise in various sound insulating applications: partition walls, floors, and other structures.

WATER REPELLENCY

The entire line of TECHNONICOL stone wool-based heat- insulation materials is water-repellent.

During production, the fibres are coated with water-repelling additives to make the insulation waterproof.

STEAM PERMEABILITY

TECHNONICOL stone wool-based materials are highly steam-permeable, don't retain moisture coming from the premises in the form of steam generated in the course of human activity and almost always remain dry.

TECHNONICOL STONE WOOL ADVANTAGES

ENVIRONMENTAL FRIENDLINESS

Environmental care during material production is one of TECHNONICOL's top priorities and represents yet another application area for its innovations.

TECHNONICOL continuously improves its products and services, uses cutting-edge equipment and environmentally-friendly technologies. All of the products developed and manufactured by the company meet global hygienic and environmental standards, have undergone the full mandatory and voluntary certification cycle and are permitted for use in Russia and abroad.

DURABLE

The service life of TECHNONICOL stone wool heat- insulation is confirmed by tests conducted by the Research Institute of Building Physics of the Russian Academy of Architecture and Construction Sciences (RIBP RAACS).

Our stone wool materials have been tested according to GOST R 57418-2017 "Mineral Wool Heat-Insulation Materials and Products. Service Life Estimation Methods."

During the tests, RIBP RAACS experts confirmed that the service life of TECHNONICOL materials is at least 50 years.

COMPREHENSIVE SOLUTIONS

TECHNONICOL not only produces materials but offers optimal ready-to-use solutions that have proven themselves as durable and highly sought-after solutions. Good material compatibility is one of the baseline conditions for the production of a reliable insulation system. This is precisely why our experts, jointly with the leading R&D institutes, have developed professional engineering solutions – TECHNONICOL building systems. The main criteria of such systems include the compatibility of components, structural durability and high quality.

Technical insulation and fireproofing for industrial and civil construction

Wired Mat (WM)

GOST 21880-2022

Resistance to high temperatures

High fire-resistance rating

Resistance to temperature differentials, vibrations and corrosive environments

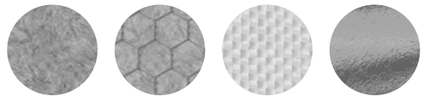
Description

Non-combustible, water-repellent, heat- and sound-insulating mat based on basalt rock. Wired Mat (WM) is a cost-effective and versatile insulation option conforming to all applicable quality standards.

Application

— Enclosing structures of residential, public and production buildings and facilities.
— Industrial, technical and power equipment.
— Storage tanks for hot and cold water, oil, petroleum products, chemical pipelines of all industries.

Options



Unfaced insulation | Metal mesh (MS) | Fibreglass cloth (ST) | Aluminium foil (F)

Dimensions*

Length: 2,000 mm
Width: 1,200 mm
Thickness (in 10 mm increments): 50–120 mm

Stress-strain properties

		WM 60	WM 80	WM 100	WM 125
Density, kg/m³		50–70	70–90	90–110	110–130
Compressibility (%), max		45	35	25	20
Elasticity (%), min		—	—	—	—
Combustibility, degree		NC	NC	NC	NC
Thermal conductivity (W/m•°C), max	λ_{50}	0.038	0.037	0.037	0.037
	λ_{125}	0.049	0.048	0.047	0.045
	λ_{300}	0.091	0.089	0.08	0.075
	λ_{400}	0.131	0.126	0.109	0.1
	λ_{500}	0.187	0.177	0.151	0.133
	λ_{650}	—	—	0.236	0.207
Organic matter content (%), max		1.5	2.0	2.0	2.0
Moisture by weight, % (max)		1.0	1.0	1.0	1.0

* Materials can be produced with other dimensions.

Logistical parameters

Length, mm	2,000	2,000	2,000	2,000
Width, mm	1,200	1,200	1,200	1,200
Thickness, mm	50	60	80	100
Mats, pcs.	1	1	1	1
Quantity per roll, m²	2.4	2.4	2.4	2.4
Quantity per roll, m³	0.120	0.144	0.192	2.400
Vehicle loading rate (volume), 90 m³	90.00	89.28	90.24	90.00

LEARN MORE

Watch video

TECHNO Mat

STO 72746455-3.2.10-2021

Non-combustibility

Wide range of operating temperatures

Versatility

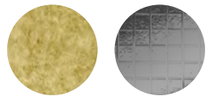
Description

Non-combustible, water-repellent, heat- and sound-insulating mat based on stone wool.
The insulating product is used at an insulated-surface temperature of up to +500 °C.

Application

— Pipelines.
— Air ducts.
— Gas ducts.
— Electric filters.
— Tanks.
— Boilers.
— Process and energy equipment, utilities, thermal networks, long-distance and industrial pipelines at an insulated-surface temperature of up to +500 °C.

Options



Unfaced insulation | Reinforced aluminium foil (FA)

Dimensions*

Length: 3,500, 4,000, 4,500 mm
Width: 1,200 mm
Thickness (in 10 mm increments): 50–100 mm

Stress-strain properties

		TECHNO Mat 40
Density, kg/m³		40 (±8)
Moisture by weight, % (max)		0.5
Combustibility, degree		NC**
Thermal conductivity (W/m•°C), max	λ_{25}	0.037
	λ_{50}	0.044
	λ_{125}	0.057
	λ_{300}	0.113
	λ_{400}	0.168
	λ_{500}	0.254
Organic matter content (%), max		1.5

* Materials can be produced with other dimensions.
** C1 – coated with reinforced aluminium foil.

Logistical parameters

Length, mm	3,500	4,500	4,000	3,500
Width, mm	1,200	1,200	1,200	1,200
Thickness, mm	50	60	80	100
Mats, pcs.	2	1	1	1
Quantity per roll, m²	8.4	5.4	4.8	4.2
Quantity per roll, m³	0.420	0.324	0.384	0.420
Vehicle loading rate (volume), 92 m³	385	385	385	385

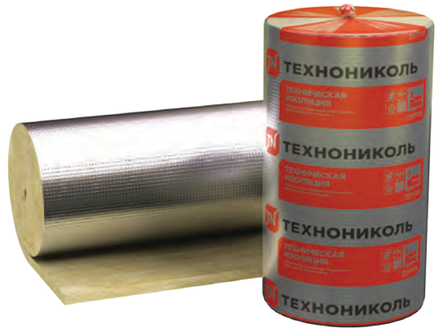
TECHNO Mat Lamel

STO 72746455-3.2.10-2021

High compressive strength

Yield strength during installation and operation

Appearance



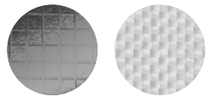
Description

Flame-retardant, water-repellent heat- and sound-insulation mat formed from stone wool strips (lamellas) turned 90° and glued to reinforced foil.
The insulation product has a higher compressive strength compared to conventional mats and lower strain during installation. It is used at an insulated-surface temperature of up to +250 °C from the stone wool side.

Application

— Air ducts.
— Ventilation equipment.
— Tanks.
— Pipelines with a diameter of over 230 mm.

Options



Reinforced aluminium foil (FA)

Fibreglass cloth (ST)

Dimensions

Length: 2,600, 3,000, 3,400, 4,000, 5,000, 6,000, 8,000 mm
Width: 1,200 mm
Thickness (in 10 mm increments): 30–100 mm

Stress-strain properties

		TECHNO Mat Lamel 35	TECHNO Mat Lamel 50
Density, kg/m³		35 (±8)	50 (±5)
Combustibility, degree		C1	C1
Thermal conductivity (W/m•°C), max	λ_{25}	0.041	0.040
	λ_{50}	0.045	0.043
	λ_{125}	0.061	0.058
	λ_{300}	0.129	0.120
	λ_{400}	0.201	0.180
	λ_{500}	0.303	0.269
	λ_{550}	0.383	0.334

Logistical parameters

Length, mm	8,000	6,000	5,000	4,000	3,000	2,600
Width, mm	1,200	1,200	1,200	1,200	1,200	1,200
Thickness, mm	30	40	50	60	80	100
Mats, pcs.	1	1	1	1	1	1
Quantity per roll, m²	9.600	7.200	6.000	4.800	3.600	3.120
Quantity per roll, m³	0.288	0.288	0.300	0.288	0.288	0.312
Vehicle loading rate (volume), 92 m³	240	240	230	240	240	220

LEARN MORE

Watch video

TECHNO Wired Mat

STO 72746455-3.2.10-2021

Resistance to high temperatures

High fire-resistance rating

Resistance to temperature differentials, vibrations and corrosive environments

Description

Non-combustible, water-repellent, heat- and sound-insulating mat based on basalt rock. The insulating product is used at an insulated-surface temperature of up to +650 °C. Wired mat GP F is certified as a fireproofing coating for air ducts.

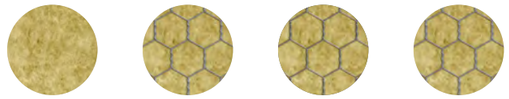
Application

— Air ducts.
— High-temperature equipment.
— Pipelines.
— Steam pipelines.
— Gas ducts.
— Electric filters.

Dimensions*

Length: 2,000 to 8,000 mm. Width: 1,200 mm
Thickness:
TECHNO Wired Mat 50 (in 10 mm increments): 50–120
TECHNO Wired Mat 80 (in 10 mm increments): 30–120
TECHNO Wired Mat 100 (in 10 mm increments): 30–120
TECHNO Wired Mat 120 (in 10 mm increments): 30–120

Options



Unfaced insulation

Zinc-plated steel mesh (OP)

Stainless steel (NP)

Galvanized steel mesh (GP)

Facing with non-reinforced aluminium foil (F) and wire backing:

Zinc-plated steel mesh (OP)

Stainless steel (NP)

Galvanized steel mesh (GP)

Facing with reinforced aluminium foil (FA) and wire backing:

Zinc-plated steel mesh (OP)

Stainless steel (NP)

Galvanized steel mesh (GP)

Stress-strain properties

		TECHNO Wired Mat 50	TECHNO Wired Mat 80	TECHNO Wired Mat 100	TECHNO Wired Mat 120
Density, kg/m³		50 (±8)	80 (±8)	100 (±10)	120 (±12)
Combustibility, degree		NC**	NC**	NC**	NC**
Thermal conductivity (W/m•°C), max	λ_{25}	0.036	0.035	0.036	0.037
	λ_{50}	—	0.038	0.038	0.039
	λ_{125}	0.055	0.050	0.045	0.045
	λ_{300}	0.114	0.093	0.079	0.075
	λ_{400}		0.130	0.110	0.104
	λ_{500}	—	0.178	0.154	0.137
	λ_{600}	—	0.260	0.226	0.207

Logistical parameters

Length, mm	2,400	2,400	2,400	2,400	2,400	2,400
Width, mm	1,200	1,200	1,200	1,200	1,200	1,200
Thickness, mm	30	40	50	60	80	100
Mats, pcs.	1	1	1	1	1	1
Quantity per roll, m²	2.880	2.880	2.880	2.880	2.880	2.880
Quantity per roll, m³	0.086	0.115	0.144	0.172	0.230	0.288
Vehicle loading rate (volume), 92 m³	1,050	780	630	525	390	315

* Materials can be produced with other dimensions.
Maximum mat thickness:
120 mm – TECHNO Plant in Chelyabinsk
100 mm – TECHNO Plant in Ryazan
** C1 – coated with reinforced aluminium foil.

LEARN MORE

Watch video

TECHNO Cylinder

STO 72746455-3.2.10-2021

High installation efficiency

High heat-saving efficiency

Steam insulation function

Description

Non-combustible, water-repellent, heat- and sound-insulating pipe based on stone wool. The insulation product features a continuous longitudinal cut on one side for convenient installation on the pipeline. Based on internal diameter and wall thickness, it can be made in the form of semi-cylinders and segments. At a temperature of +250 °C, it is possible to use it without supporting brackets or rings to reduce load on the insulation covering layer.
The material is used at an insulated-surface temperature of up to +660 °C.

Application

— Process pipelines and the round sections of air ducts.
— Cold and hot water supply pipelines

Options

Unfaced insulation

Non-reinforced aluminium foil (F)

Reinforced aluminium foil (FA)

Dimensions*

Length: 1,000,** 1,200 mm
Internal diameter: 18–324 mm
Thickness (in 10 mm increments): 20–120 mm

* Materials can be produced with other dimensions.

Stress-strain properties

		TECHNO Cylinder 80	TECHNO Cylinder 120
Density, kg/m³		80 (±8)	120 (±15)
Moisture by weight, % (max)		0.5	0.5
Combustibility		NC***	NC***
Thermal conductivity (W/m•°C), max	λ_{50}	0.037	0.036
	λ_{100}	0.046	0.043
	λ_{200}	0.069	0.062
	λ_{300}	0.106	0.088
	λ_{350}	0.130	0.106

Logistical parameters

Pipe dimensions (Internal diameter × wall thickness × length), mm	18×20 ×1,200	159×20 ×1,200	42×50 ×1,200	219×50 ×1,200	32×90 ×1,200	108×90 ×1,200
Number of cylinders per box 600×600×1,205 mm, pcs.	97	9	16	23	6	9
Number of cylinders per box 600×600×1,205 mm, m	116.40	10.80	19.20	6.90	7.20	5.40

* Materials can be produced with other dimensions.
** 1,000mm-long TECHNO Cylinder is only produced in Yurga and Khabarovsk.
*** C1 – coated with reinforced aluminium foil.

LEARN MORE

Watch video

Mineral Wool (MW)

GOST 4640-2011

Non-combustibility

No binding agent

Resistance to high temperatures

Description

Non-combustible, water-repellent, heat- and sound-insulating material made of molten gabbro-basalt or similar rocks, sedimentary rocks, volcanic slag, smelter slag, industrial silicate waste products and their mixtures without the addition of a binding agent.
The material is used at an insulated-surface temperature of up to +700 °C. It is produced in the form of a bale.

Application

— Insulation of the surfaces of equipment and pipelines with a temperature of from -180 °C to +700 °C, containing strong oxidizing agents.
— Used in the production of sound-insulation and sound-absorption products.

Options

Unfaced insulation

Dimensions

Length: 1,000 mm
Width: 1,000 mm
Thickness: 800 mm

Stress-strain properties

		MW-70
Density (kg/m³), max		70
Combustibility		NC
Thermal conductivity (W/m•°C), max	λ_{10}	0.036
	λ_{25}	0.038
	λ_{125}	0.050
	λ_{300}	0.120
Moisture by weight, % (max)		1.0

Logistical parameters

	VM-70
Length, mm	1,000
Width, mm	1,000
Thickness, mm	800
Quantity per pallet, bale	3
Weight (kg)	296

TECHNO Slab T

STO 72746455-3.2.10-2021

High heat-saving efficiency

Resistance to high temperatures

No shrinkage

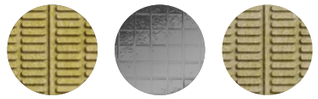
Description

Non-combustible, water-repellent, heat- and sound-insulating slab made of basalt rock-based stone wool. The slab is made ofspecial high-temperature fibre, is highly rigid and non-shrinkable. The material is used at an insulated-surface temperature of up to +700 °C.

Application

— Large-size tanks and vessels.
— Air ducts.
— Gas ducts.
— Electric filters.
— Boilers.
— Process equipment.
— Flat vertical and horizontal surfaces.
— Furnaces and utility equipment.

Options



Unfaced insulation | Reinforced aluminium foil (FA) | Fibreglass fabric (SH)

Dimensions*

Length: 1,200, 2,400 mm
Width: 600, 1,200 mm
Thickness (in 10 mm increments): 50–100 mm

Stress-strain properties

		TECHNO Slab T					
		40	60	80	100	120	150
Density, kg/m³		40 (±4)	60 (±6)	80 (±8)	100 (±10)	120 (±15)	150 (±15)
Compressive strength at 10% strain (kPa), min		–	–	10	15	20	20
Moisture by weight, % (max)		0.5	0.5	0.5	0.5	0.5	0.5
Combustibility		NC**	NC**	NC**	NC**	NC**	NC**
Thermal conductivity (W/m•°C), max	λ_{25}	0.038	0.037	0.036	0.036	0.038	0.039
	λ_{50}	0.043	0.040	0.040	–	0.040	0.043
	λ_{125}	0.057	0.053	0.050	0.051	0.049	0.051
	λ_{200}	–	0.071	0.064	–	–	0.060
	λ_{300}	0.116	0.109	0.086	0.081	0.079	0.070
	λ_{400}	0.168	0.151	0.124	–	0.103	0.095
	λ_{500}	0.262	0.217	0.174	–	0.139	0.121
	λ_{550}	0.316	–	–	–	–	–
	λ_{600}	–	0.323	–	–	–	–
	λ_{650}	–	–	0.282	–	–	–
	λ_{680}	–	–	–	–	0.219	0.182

Logistical parameters

	TECHNO Slab T		
	40	80	120
Length, mm	1,200	1,200	1,200
Width, mm	600	600	600
Thickness, mm	100	100	100
Slabs, pcs.	6	4	3
Quantity per pack, m²	4.320	2.880	2.160
Quantity per pack, m³	0.432	0.288	0.216
Quantity of slabs per pallet, pcs.	32	24	16
Quantity per pallet, m³	6.912	6.912	6.912
Vehicle loading rate (volume), 92 m³	76.032	76.032	76.032
Vehicle loading rate (volume), 120 m³	82.944	82.944	82.944

* Materials can be produced with other dimensions.
** C1 – coated with reinforced aluminium foil or fibreglass fabric.

TECHNO Slab OZM

STO 72746455-3.2.10-2021

Resistance to high temperatures

All-season installation

No need for additional protective coatings

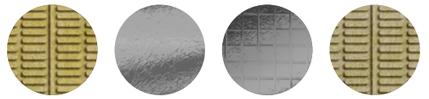
Description

Non-combustible, water-repellent, heat- and sound-insulating slab of stone wool based on basalt-rock. Fireproofing material is made of special high-temperature fibre and certified as a fireproofing composition used to enhance the fire rating of steel structures to 240 minutes and fire rating of ceiling steel sheets to 45 minutes.

Application

— Increase in the fire rating of load-bearing steel structures from 30 to 240 minutes.
— Increase in the fire rating of ceiling steel sheets to 45 minutes.

Options



Unfaced insulation | Non-reinforced aluminium foil (F) | Reinforced aluminium foil (FA) | Fibreglass fabric (SH)

Dimensions*

Length: 1,200, 2,400 mm
Width: 600, 1,200 mm
Thickness (in 10 mm increments): 30–140 mm

Stress-strain properties

		TECHNO Slab OZM
Density, kg/m³		160 (±15)
Compressive strength at 10% strain (kPa), min		25
Moisture by weight, % (max)		0.5
Combustibility		NC**
Thermal conductivity (W/m•°C), max	λ_{10}	0.037
	λ_{25}	0.039
	λ_{40}	0.047

Logistical parameters

Length, mm	1,200	1,200	1,200	1,200	1,200
Width, mm	600	600	600	600	600
Thickness, mm	30	40	50	60	70
Quantity of slabs per pack, pcs.	6	5	4	4	3
Quantity per pack, m²	4.320	3.600	2.880	2.880	2.160
Quantity per pack, m³	0.129	0.144	0.144	0.172	0.151
Quantity of packs per pallet, pcs.	52	48	48	40	44
Quantity per pallet, m³	6.739	6.912	6.912	6.912	6.652
Truck loading rate (volume) 92 m³	73.131	76.032	76.032	76.032	73.180
Truck loading rate (volume) 120 m³	80.870	82.944	82.944	82.944	79.833

* Materials can be produced with other dimensions.
** C1 – coated with reinforced aluminium foil or fibreglass fabric.

TECHNO Slab OZB

STO 72746455-3.2.10-2021

High heat-saving efficiency

Resistance to high temperatures

All-season installation

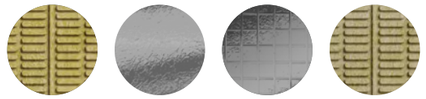
Description

Non-combustible, water-repellent, heat- and sound-insulating slab of stone wool based on basalt-rock. Fireproofing material is made of special high-temperature fibre and certified as a fireproofing composition used to enhance the fire rating of reinforced concrete structures to 240 minutes.

Application

— Increase in the fire rating of reinforced concrete structures to 240 minutes.

Options



Unfaced insulation | Non-reinforced aluminium foil (F) | Reinforced aluminium foil (FA) | Fibreglass fabric (SH)

Dimensions

Length: 1,200, 2,400 mm
Width: 600, 1,200 mm
Thickness (in 10 mm increments): 40–200 mm

Stress-strain properties

		TECHNO Slab OZB 80	TECHNO Slab OZB 110
Density, kg/m^3		80 (±8)	110 (±11)
Compressive strength at 10% strain (kPa), min		15	20
Moisture by weight, % (max)		0.5	0.5
Combustibility		NC*	NC*
Thermal conductivity (W/m•°C), max	λ_{10}	0.035	0.036
	λ_{25}	0.037	0.038
	λ_{40}	0.049	0.048

Fire rating of the TN FIREPROOFING Concrete system, minutes

40 mm	REI 240
50 mm	REI 180

Logistical parameters

Length, mm	1,200	1,200	1,200	1,200	1,200	1,200
Width, mm	600	600	600	600	600	600
Thickness, mm	50	60	80	100	150	200
Quantity of slabs per pack, pcs.	6	5	4	4	2	2
Quantity per pack, m^2	4.320	3.600	2.880	2.880	1.440	1.440
Quantity per pack, m^3	0.216	0.216	0.230	0.288	0.216	0.288
Quantity of packs per pallet, pcs.	32	32	28	24	32	24
Quantity per pallet, m^3	6.912	6.912	6.451	6.912	6.912	6.912
Truck loading rate (volume) 92 m^3	76.032	76.032	70.963	76.032	76.032	76.032
Truck loading rate (volume) 120 m^3	82.944	82.944	77.414	82.944	82.944	82.944

TECHNO Slab OZD

STO 72746455-3.2.10-2021

Resistance to high temperatures

High heat-saving efficiency

All-season installation

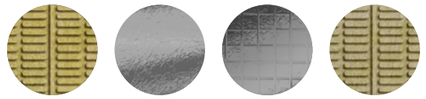
Description

Non-combustible, water-repellent, heat- and sound-insulating slab of stone wool based on basalt-rock. Fireproofing material is made of special high-temperature fibre. TECHNO FPD slab has been specially designed for the fireproofing of doors.

Application

— Filling for fire-resistant doors and gates with various fire ratings.

Options



Unfaced insulation | Non-reinforced aluminium foil (F) | Reinforced aluminium foil (FA) | Fibreglass fabric (SH)

Dimensions*

Length: 1,200, 2,400 mm
Width: 600, 1,200 mm
Thickness (in 10 mm increments): 40–160 mm

Stress-strain properties

		TECHNO Slab OZD 110	TECHNO Slab OZD 190
Density, kg/m^3		110 (±10)	180 (±15)
Compressive strength at 10% strain (kPa), min		10	20
Moisture by weight, % (max)		0.5	0.5
Combustibility		NC**	NC**
Thermal conductivity (W/m•°C), max	λ_{10}	0.037	0.038
	λ_{25}	0.040	0.042
	λ_{40}	0.048	0.047

Logistical parameters

Length, mm	1,200
Width, mm	1,200
Thickness, mm	50
Quantity of slabs per pack, pcs.	96
Quantity per pack, m^2	138.24
Quantity per pack, m^3	6.912
Quantity of packs per pallet, pcs.	1
Quantity per pallet, m^3	6.912

* Materials can be produced with other dimensions.
** C1 – coated with reinforced aluminium foil or fibreglass fabric.

LEARN MORE

Watch video

Technical Insulation for residential construction

NEW

TECHNONICOL Fireplace* Slab

STO 72746455-3.2.10-2021

Enhanced room heating efficiency

Resistance to high temperatures

No shrinkage

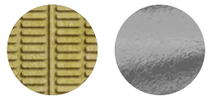
Description

Non-combustible, water-repellent, heat- and sound-insulating slab made of basalt rock-based stone wool.
The slab has been specially designed for the fireproofing of fireplaces, household ovens and chimneys.

Application

— Insulation of the external surfaces of fireplaces, household ovens and chimneys, other high-temperature equipment.
— Protection of structures located near hot fireplaces or oven surfaces.

Options



Unfaced insulation

Non-reinforced aluminium foil (F)

Dimensions

Length: 1,200 mm
Width: 600 mm
Thickness (in 10 mm increments): 30–100 mm

Stress-strain properties

		TECHNONICOL Fireplace Slab
Density (kg/m^3), max		80 (±8)
Compressive strength at 10% strain (kPa), max		10
Water absorption (vol. %), max		5
Water absorption at short-term and partial submersion (kg/m^2), max		1
Organic matter content, %, max		3
Maximum operating temperature (°C), max		600
Combustibility		NC
Thermal conductivity (W/m•°C), max	λ_{10}	0.036
	λ_{25}	0.038
	λ_{40}	0.049

* Name per STO – TECHNO K Slab

TN TECHNICAL INSULATION FIREPLACE System

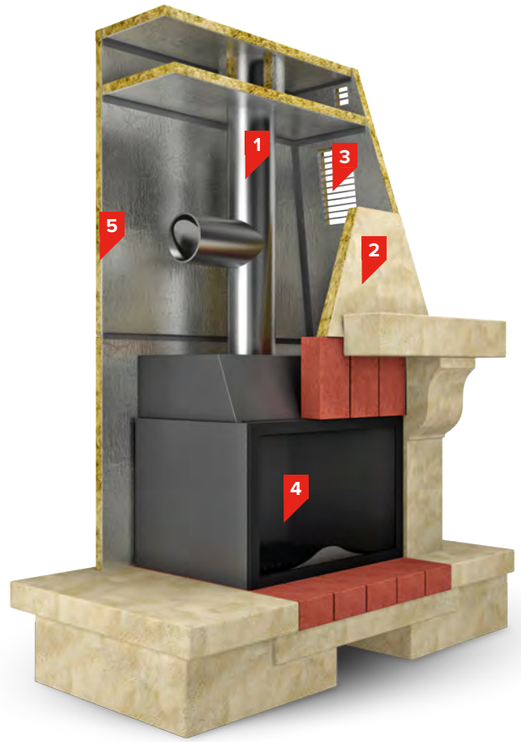
Protection against high temperatures

Prevention against exterior-finish heating

Design options

Easy installation

Use this system to prevent the overheating of external surfaces and maintain the fire safety of fireplaces, ovens and high-temperature equipment.



System composition:

1. Chimney
2. Duct
3. Ventilation grill
4. Fireplace insert
5. TECHNONICOL Fireplace Slab

Fireplace technical insulation plays a key role in the safety, durability and operating efficiency of home heating systems.

Application of TECHNONICOL stone wool-based materials for technical insulation and fireproofing

		Wired Mat (WM)	TECHNO Mat Lamel 35	TECHNO Mat Lamel 50	TECHNO Wired Mat 50	TECHNO Wired Mat 80	TECHNO Wired Mat 100	TECHNO Wired Mat 120	Mineral Wool MW-70	TECHNO Mat 40	TECHNO Cylinder 80	TECHNO Cylinder 120	TECHNO Slab T	TECHNO Slab OZM	TECHNO Slab OZB	TECHNO Slab OZD
Air ducts																
Hot air duct heat-insulation	square															
	round															
Cold air duct steam insulation	square															
	round															
Pipelines																
Pipelines with a diameter of up to 219 mm	t < 250 °C															
	250 °C < t < 640 °C															
	640 °C < t °C															
Pipelines with a diameter of from 219 to 324 mm	t < 250 °C															
	250 °C < t < 640 °C															
	640 °C < t °C															
Large-diameter pipelines > 324 mm	t < 250 °C															
	250 °C < t < 640 °C															
	640 °C < t °C															
Condensate insulation																
Sound insulation																
Tanks, boilers, furnaces and equipment																
Boilers and tanks	t < 250 °C															
	t > 250 °C															
Boilers																
Flat surfaces																
Fireplaces with cast iron inserts																
Steel chimney pipes																
Equipment and pipelines containing strong oxidizing agents (liquid oxygen)																
Fireproofing																
Fireproofing of steel structures																
Fireproofing of concrete structures																
Fireproofing of air ducts																
Fireproofing of steel sheets																
Fireproofing of fire-resistant doors																
Application temperature, °C			250	250	550	650	650	650	700	500	650	660	700			

- Use of the material is not permitted
- Use of the material is permitted but inadvisable
- Use of the material is recommended
- The material is specially designed for this application

Stress-strain properties of TECHNONICOL stone wool-based insulation materials

Parameter UoM		Fireproofing				
		Concrete		Metal	Doors and gates	
		TECHNO Slab OZB 80	TECHNO Slab OZB 110	TECHNO Slab OZM	TECHNO Slab OZD 110	TECHNO Slab OZD 190
Density, kg/m³		80 (±8)	110 (±11)	160 (±15)	110 (±10)	180 (±15)
Thermal conductivity (W/m•°C), max	λ_{10}	0.035	0.036	0.037	0.037	0.038
	λ_{25}	0.037	0.038	0.039	0.040	0.042
	λ_{40}	0.049	0.048	0.047	0.048	0.047
	λ_{50}	–	–	–	–	–
	λ_{100}	–	–	–	–	–
	λ_{125}	–	–	–	–	–
	λ_{200}	–	–	–	–	–
	λ_{300}	–	–	–	–	–
	λ_{350}	–	–	–	–	–
	λ_{400}	–	–	–	–	–
	λ_{500}	–	–	–	–	–
	λ_{550}	–	–	–	–	–
	λ_{600}	–	–	–	–	–
	λ_{650}	–	–	–	–	–
	λ_{680}	–	–	–	–	–
Compressive strength at 10% deformation (kPa), min		15	20	25	10	20
Moisture by weight, % (max)		0.5	0.5	0.5	0.5	0.5
Organic matter content (%), max		3.0	3.0	3.0	3.0	3.0
Combustibility, degree		NC*	NC*	NC*	NC*	NC*
Length, mm		1,200, 2,400	1,200, 2,400	1,200, 2,400	1,200, 2,400	1,200, 2,400
Width, mm		600, 1,200	600, 1,200	600, 1,200	600, 1,200	600, 1,200
Thickness, mm		50–200	50–200	30–70	40–160	40–160

* C1 – coated with reinforced aluminium foil, non-woven fibreglass fabric, or fibreglass cloth.

Technical insulation																				
Wired Mat				TECHNO Mat Lamel		TECHNO Slab T						TECH-NO Mat	TECHNO Wired Mat				Min-eral Wool	TECHNO Cylinder	
MW 60	MW 80	MW 100	MW 125	35	50	40	60	80	100	120	150	40	50	80	100	120	MW -70	80	120
35–50	50–75	75–100	100–125	35 (±8)	50 (±5)	40 (±4)	60 (±6)	80 (±8)	100 (±10)	120 (±15)	150 (±15)	40 (±8)	50 (±8)	80 (±8)	100 (±10)	120 (±12)	70	80 (±8)	120 (±15)
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.036	–	–
–	–	–	–	0.041	0.040	0.038	0.037	0.036	0.036	0.038	0.039	0.037	0.036	0.035	0.036	0.037	0.038	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0.038	0.037	0.037	0.037	0.045	0.043	0.043	0.040	0.040	–	0.040	0.043	0.044	–	0.038	0.038	0.039	–	0.037	0.036
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.046	0.043
0.049	0.048	0.047	0.045	0.061	0.058	0.057	0.053	0.050	0.051	0.049	0.051	0.057	0.055	0.050	0.045	0.045	0.050	–	–
–	–	–	–	–	–	–	0.071	0.064	–	–	0.060	–	–	–	–	–	–	0.069	0.062
0.091	0.089	0.08	0.075	0.129	0.120	0.116	0.109	0.086	0.081	0.079	0.070	0.113	0.114	0.093	0.079	0.075	0.120	0.106	0.088
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.130	0.106
0.131	0.126	0.109	0.1	0.201	0.180	0.168	0.151	0.124	–	0.103	0.095	0.168	–	0.130	0.110	0.104	–	–	–
0.187	0.177	0.151	0.133	0.303	0.269	0.262	0.217	0.174	–	0.139	0.121	0.254	–	0.178	0.154	0.137	–	–	–
–	–	–	–	0.383	0.334	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	0.316	–	–	–	0.219	–	–	–	0.260	0.226	0.207	–	–	–
–	–	0.236	0.207	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	0.323	0.282	–	–	0.182	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	10	15	20	20	–	–	–	–	–	–	–	–
1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	0.5	0.5
1.5	2.0	2.0	2.0	2.5	2.5	2.5	2.5	3.0	3.0	3.0	3.0	1.5	1.5	2.0	2.0	2.0	0	4.5	3.5
NC*	NC*	NC*	NC*	C1	C1	NC*	NC*	NC*	NC*	NC*	NC*	NC*	NC*	NC*	NC*	NC*	NC	NC*	NC*
2,000	2,000	2,000	2,000	2,600, 2,800, 3,000, 3,400, 4,000, 5,000, 6,000, 8,000	2,600, 2,800, 3,000, 3,400, 4,000, 5,000, 6,000, 8,000	1,200, 2,400	1,200, 2,400	1,200, 2,400	1,200, 2,400	1,200, 2,400	1,200, 2,400	3,000, 3,500, 4,000, 4,500, 5,000	2,400, 4,800	2,400, 4,800	2,400, 4,800	2,400, 4,800	1,000	1,000, 1,200	1,000, 1,200
1,200	1,200	1,200	1,200	1,200	1,200	600, 1,200	600, 1,200	600, 1,200	600, 1,200	600, 1,200	600, 1,200	1,200	1,200	1,200	1,200	1,200	1,000	Internal diameter, mm, 18–324	
50–120	50–100	50–100	50–100	30–100	30–100	50–100	50–100	50–100	50–100	50–100	50–100	50–100	30–100	30–100	30–100	30–100	800	20–120	20–120

Fibreglass-based materials for technical insulation

- Industrial and civil construction
- Application
- Stress-strain properties

TECHNONICOL fibreglass properties

NON-COMBUSTIBILITY

TECHNONICOL fibreglass-based mineral insulation is made of non-combustible raw materials molten at a temperature of 1,400 °C and classified as non-combustible.

EASY INSTALLATION

During installation, the material is tightly fit to the insulated surface and frame without any holes or gaps.
No trimming or high-precision cutting is required. For this reason, installation is faster.

The material doesn't crumble or break because its fibres are long and elastic.

CONVENIENT TRANSPORTATION

The stability of the fibre form makes it possible to compress the material without damaging it.

Fibreglass materials are compressed in the pack up to seven-fold, making it possible to save space during material transportation and storage. After opening, it fully returns to its original form. This is a convenient solution for construction teams and private developers because it makes it easier to transport the compact packaging and install the insulation.

LIGHT WEIGHT

The production technology we use makes it possible to obtain fine and flexible fibres. This, in turn, makes it possible to produce low-density, lightweight materials boasting the optimal combination of thermal conductivity, compressibility and shape stability.

Easily mounted from wall to wall, the materials are suitable for non-load-bearing structures such as framework walls, sloping roofs and partition walls.

Production technology for fibreglass-based heat-insulation

FIBRISFLEX TECHNOLOGY

Products made using FIBRISFLEX with high elasticity and shape stability

In the construction-innovation world, new technologies are constantly emerging that redefine our perception of heat-insulation and sound-insulation materials.

Continuously investing its time and resources into improving its production technology, TECHNONICOL has launched a line of fibreglass-based heat-insulation materials using FIBRISFLEX technology. The mineral insulation produced using this technology boasts high flexibility and elasticity.

FIBRISFLEX is used for the production of heat-insulation and sound-insulating material made of molten minerals containing natural and safe components such as quartz sand, field spar, dolomite, soda and borate.

These components undergo melting in a special furnace and then are blown through special equipment to produce fine, long fibres.

The specific chemical composition and fibre forming process make fibreglass-based mineral insulation highly elastic, resistant to compression and capable of quickly resuming its original shape after unpacking.

Thanks to these properties, material produced using FIBRISFLEX technology retains its shape in structures, ensuring long-term protection against thermal losses and noise.

Technical insulation for industrial and civil construction

NEW

TECHNONICOL TECHMAT

STO 72746455-3.2.18-2024

Non-combustibility

Light weight

Excellent sound absorption

Description

Non-combustible fibreglass-based heat- and sound-insulation mat. The lightweight mat is used widely and boasts excellent sound-insulation properties. The material is used at an insulated-surface temperature of up to +330 °C.

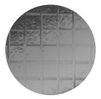
Application

— Pipelines.
— Air ducts.
— Furnaces.
— Industrial equipment and vessels.
— Structures of various vehicles, cabins and interiors.
— Railway rolling-stock, household and industrial refrigerators.
— Sound-insulating and sound-absorption structures.

Options

Unfaced insulation

Mats M-10; M-11; M-15; M-20; M-25; M-30



Reinforced aluminium foil (FA)

Mats M-11; M-15; M-25

Dimensions

Length: 5,000; 8,000; 8,500; 9,000; 11,000; 20,000 mm
Width: 900; 1,200; 1,220 mm
Thickness: 50–150 mm

Stress-strain properties

		M-11	M-15	M-20	M-25	M-30
Density (kg/m³), max		10–13	13.5–18	19–23	20–25	33–38
Compressibility (%), max		90	70	60	60	45
Sorptive moisture over 72 h (wt. %), max		4	4	4	4	5
Organic matter content (wt. %), max		5.5	5.5	5.5	5.5	5
Combustibility		NC*	NC*	NC	NC*	NC
Thermal conductivity at a temperature of 10±2°C (W/m•°C), max	λ_{10}	0.04	0.037	0.035	0.034	0.032
	λ_{25}	0.042	0.036	—	0.034	—
	λ_{50}	0.049	0.041	—	0.039	—
	λ_{125}	0.074	0.061	—	0.057	—
	λ_{200}	0.111	0.091	—	0.083	—
	λ_{300}	0.194	0.159	—	0.138	—

* C1 – coated with reinforced aluminium foil

NEW

TECHNONICOL TECHSLAB

STO 72746455-3.2.18-2024

Non-combustibility

Light weight

Excellent sound absorption

Description

Non-combustible fibreglass-based heat- and sound-insulation slab. The lightweight slab is used widely and boasts excellent sound-insulation properties.

Application

— Pipelines.
— Air ducts.
— Furnaces.
— Industrial equipment and vessels.
— Structures of various vehicles, cabins and interiors.
— Railway rolling-stock, household and industrial refrigerators.
— Sound-insulating and sound-absorption structures.

Options

Unfaced insulation

Dimensions

Length: 1,000; 1,200; 1,250 mm
Width: 600; 610 mm
Thickness: 50 mm

Stress-strain properties

		PT-15	PT-20	PT-30	PT-32
Density (kg/m³), max		13.5–18	19.5–25	27–33	30–35
Compressibility (%), max		70	60	50	60
Sorptive moisture over 72 h (wt. %), max		5	5	5	5
Organic matter content (wt. %), max		5.5	7	7.5	7.5
Thermal conductivity at a temperature of 10±2°C (W/m•°C), max	λ_{10}	0.037	0.034	0.033	0.032

Application of TECHNONICOL fibreglass-based materials for technical insulation

Material type	Product	Thermal conduc-tivity, λ_{10}	Pipelines	Air ducts	Industrial equipment	Water, railway and road transport	Sound-absorption structures
Mats	TECHNONICOL TECHMAT M-11	0.040					
	TECHNONICOL TECHMAT M-11 FA	0.040					
	TECHNONICOL TECHMAT M-15	0.037					
	TECHNONICOL TECHMAT M-15 FA	0.037					
	TECHNONICOL TECHMAT M-20	0.035					
	TECHNONICOL TECHMAT M-25	0.034					
	TECHNONICOL TECHMAT M-25 FA	0.034					
	TECHNONICOL TECHMAT M-30	0.032					
Slabs	TECHNONICOL TECHSLAB PT-15	0.037					
	TECHNONICOL TECHSLAB PT-20	0.034					
	TECHNONICOL TECHSLAB PT-30	0.033					
	TECHNONICOL TECHSLAB PT-32	0.032					

Recommended application scope

Permitted application scope

Stress-strain properties of TECHNONICOL fibreglass-based insulation materials

Parameter UoM		Technical insulation								
		TECHNONICOL TECHMAT					TECHNONICOL TECHSLAB			
		M-11	M-15	M-20	M-25	M-30	PT-15	PT-20	PT-30	PT-32
Density (kg/m^3), max		10–13	13.5–18	19–23	20–25	33–38	13.5–18	19.5–25	27–33	30–35
Thermal conductivity at a temperature of 10±2 °C (W/m•°K), max	λ_{10}	0.04	0.037	0.035	0.034	0.032	0.037	0.034	0.033	0.032
	λ_{25}	0.042	0.036	—	0.034	—	—	—	—	—
	λ_{50}	0.049	0.041	—	0.039	—	—	—	—	—
	λ_{125}	0.074	0.061	—	0.057	—	—	—	—	—
	λ_{200}	0.111	0.091	—	0.083	—	—	—	—	—
	λ_{300}	0.194	0.159	—	0.138	—	—	—	—	—
Compressibility (%), max		90	70	60	60	45	70	60	50	60
Sorptive moisture over 72 h (wt. %), max		4	4	4	4	5	5	5	5	5
Organic matter content (wt. %), max		5.5	5.5	5.5	5.5	5	5.5	7	7.5	7.5
Combustibility		NC	NC	NC	NC	NC	NC	NC	NC	NC
Length, mm		5,000, 8,000, 8,500, 9,000, 11,000, 20,000	5,000, 8,000, 8,500, 9,000, 11,000, 20,000	5,000, 8,000, 8,500, 9,000, 11,000, 20,000	5,000, 8,000, 8,500, 9,000, 11,000, 20,000	5,000, 8,000, 8,500, 9,000, 11,000, 20,000	1,000, 1,200, 1,250	1,000, 1,200, 1,250	1,000, 1,200, 1,250	1,000, 1,200, 1,250
Width, mm		900, 1,200, 1,220	900, 1,200, 1,220	900, 1,200, 1,220	900, 1,200, 1,220	900, 1,200, 1,220	600, 610	600, 610	600, 610	600, 610
Thickness, mm		50–150	50–150	50–150	50–150	50–150	50	50	50	50

Components

* Not supplied by TECHNONICOL

Ceresit CT 190 plaster and adhesive mix

GOST R 54359-2017

Application

— Used for fastening mineral wool slabs

Stress-strain properties

Bulk density, kg/dm³	1.3±0.1
Mixing water amount, l/25 kg of dry mixture	6.5–6.8
Density of ready-to-use mixture, kg/dm³	1.5±0.1
Flowability per the cone test (Fc), cm	9.0±1.0
Consumption time (hours), min	1.5
Application temperature, °C	+5 to +30
Open-pot time (minutes), min	30
Compressive strength at the age of 28 days (MPa), min	8.0
Adhesion to concrete at the age of 28 days (MPa), min	0.7
Adhesion to mineral wool slab at the age of 3 days	Break along the mineral wool slab
Adhesion to metal at the age of 28 days (MPa), min	0.45
Frost-resistance of cured mortar, cycles (F100), min	100
Operating temperature, °C	–50 to +70
Combustibility group	NC
Consumption of dry mixture for slab fastening to surface, kg/m²	0.7–2.0

Note:
material consumption depends on the base's smoothness and the application method used for slab fastening

Packing

	Ceresit CT 190 plaster and adhesive mixture
Weight of 1 bag, kg	25
Number of bags per pallet, bale	36
Net/gross weight, kg	900/930

Wall 4 metal disk anchor and Termoclip fastener

Application

— Fastening of TECHNO Slab OZB to reinforcedconcrete constructions and concrete structures

Stress-strain properties

Wall 4 disk anchor

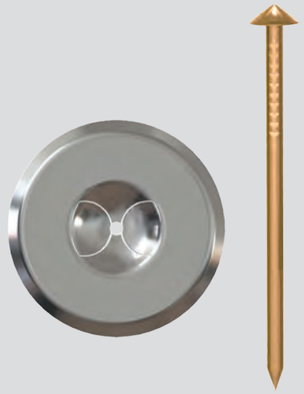
Anchor length, mm	80	110	140	170	200	250
Spacing, mm	50	50	50	50	50	**50**
Thickness of fastened material, mm	30	60	90	120	150	**200**
Hole diameter, mm	8	8	8	8	8	**8**
Disk element diameter, mm	35	35	35	35	35	**35**
Recommended working length of the drill, mm	100	150	200	200	250	**300**

Force applied to tear anchor from concrete, kN	1.4
Force applied to tear anchor from brick, kN	1.2

Disk fastener

Diameter of the disk fastener, mm	**80**

Metal welded pin CT/WP2 and washer PW2 termoclip



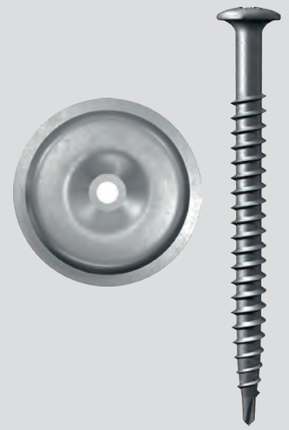
Application

— Used for fastening fireproofing and heat-insulation materials to the metal structures of air ducts.

Dimensions

Pin length: 19, 25, 32, 42, 51, 63, 76, 89, 105, 114, 125, 140 mm
Washer diameter: 30, 38 mm

Self-drilling self-tapping self-locking screw EDS-B 4.8 and steel washer TE 1/C termoclip



Application

— Fastening of TECHNO Slab OZM to the base of corrugated metal sheeting

Dimensions

Screw length: 50, 60, 70, 80, 100, 120, 160, 200 mm
Screw diameter: 4.8 mm
Washer diameter: 50 mm

Physical and mechanical properties for screw selection

Drill pass-through, mm	2.5
Drill speed, rpm	1,500

Aluminium tape, types AST (aluminium selfadhesive tape), ASIT (aluminium selfadhesive installation tape)

Application

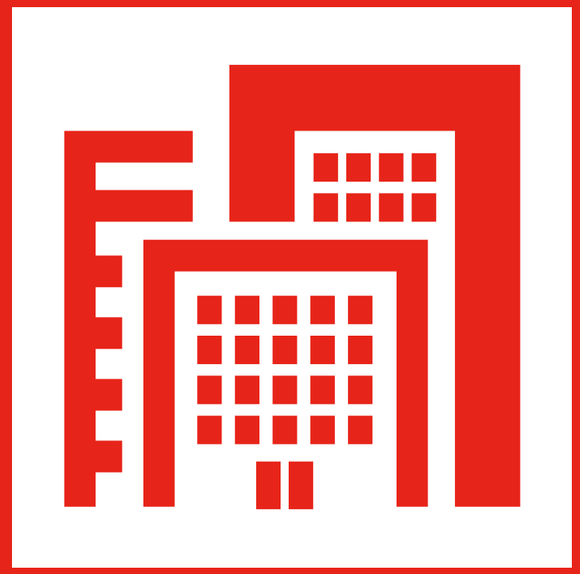
— Sealing the joints of foiled heat-insulation materials for the purposes of steam insulation

Dimensions

Length: 50 m
Width: 50/75/100 mm

Stress-strain properties

Parameter	Value per type			
	LAMS	LAMS-N	LAS	LAS-A
Adhesion to stainless steel (g/cm), min	500	500	500	500
Longitudinal tensile strength (N/50 mm), min	100	100	70	100
Adhesion temperature, °C	+5…+50	-15…+50	min –5	min –5



Key reference projects featuring the use of TECHNONICOL technical insulation and fireproofing

Key reference projects featuring the use of TECHNONICOL technical insulation and fireproofing

Production sites

City	Facility	Product
Tula Region, Novomoskovsk	EuroCHEM NAK Azot Plant	▪ TECHNO Wired Mat ▪ TECHNO 40 Mat ▪ TECHNO Cylinder
Perm Krai, Berezniki	EuroCHEM Plant	▪ TECHNO Wired Mat ▪ TECHNO Cylinder
Karachay-Cherkessia, Cherkessk	Cemros JSC	▪ Wired Mat WM-100 ▪ Wired Mat WM-80 (MS)
Amur Region, Uglegorsk	Vostochny Cosmodrome	▪ Wired Mat WM-75 ▪ TECHNO Cylinder
Volgograd Region, Volgograd	Volzhsky Pipe Plant	▪ TECHNO Cylinder ▪ TECHNO Wired Mat
Volgograd Region, Volgograd	Caustic JSC	▪ Wired Mat WM-100 ▪ Wired Mat WM-100 (MS)
Volgograd Region, Kotelnikovsky District,	Gremyachensky MPP, EuroCHEM	▪ TECHNO 40 Mat ▪ TECHNO 100 Mat ▪ TECHNO 80 Cylinder
Vologda Region, Cherepovets	Severstal PJSC	▪ TECHNO Wired Mat ▪ TECHNO Cylinder ▪ Lamella Mat ▪ Wired Mat (WM)
Orenburg Region, Orsk	Orsknefteorgsintez PJSC	▪ Wired Mat WM-100 ▪ TECHNO 40 Mat
Krasnodar Krai, Novorossiysk	Novorossiysk Ship-Repair Yard	▪ TECHNO Cylinder
Uzbekistan, Navoi Region	Shale Processing Plant	▪ Wired Mat WM-80 (MS)
Altai Krai, Zarinsk	Altai-Cake OJSC	▪ Wired Mat WM-80
Kemerovo Region, Novokuznetsk	EVRAZ Western Siberia Steel Works JSC	▪ TECHNO T Slab ▪ TECHNO Wired Mat ▪ TECHNO 80 Cylinder
Krasnoyarsk Krai, Norilsk	Norilsk Nickel MPP PJSC	▪ TECHNO 40 Mat ▪ TECHNO 120 Cylinder ▪ TECHNO Wired Mat
Belgorod Region, Gubkin	Lebedinsky MPP	▪ TECHNO Wired Mat ▪ TECHNO Lamella Mat ▪ TECHNO Cylinder
Lipetsk Region, Lipetsk	Novolipetsk Steel Works (NLMK)	▪ TECHNO Wired Mat ▪ TECHNO Cylinder ▪ Wired Mat (WM) ▪ TECHNO Slab OZB ▪ TECHNO T Slab
Leningrad Region, Ust-Luga	Gas Processing Complex for Ethane-Containing Gas Processing, Gazprom PJSC	▪ TECHNO Wired Mat
Leningrad Region, Vistino	Stable Gas Condensate Fractionation and Transshipment Complex, NOVATEK PJSC	▪ TECHNO Wired Mat ▪ TECHNO Cylinder
Novgorod Region, Veliky Novgorod	ACRON PJSC	▪ TECHNO Wired Mat ▪ Wired Mat (WM)
Bashkortostan, Ufa	Ufa Tank-Manufacturing Plant	▪ TECHNO T 80 Slab
Bashkortostan, Ufa	Bashneft Oil Company JSC Bashneft-Ufaneftekhim Branch	▪ Wired Mat WM-100 ▪ Wired Mat WM-125 ▪ TECHNO 40 Mat
Primorsky Krai, Bolshoi Kamen	Zvezda Shipbuilding Complex	▪ TECHNO Cylinder
Irkutsk Region, Stary Akulshet	Taishet Anode Factory, RUSAL	▪ TECHNO Cylinder
Zabaykalsky Krai, Gazimuro-Zavodsky District	Kultuminsky MPP	▪ TECHNO Cylinder
Kazakhstan, Saran	Tyre Plant	▪ Wired Mat (WM) ▪ TECHNO Slab OZM
Kazakhstan, Atyrau	Kazakhstan Petrochemical Industries Inc. LPP	▪ TECHNO Cylinder

Key reference projects featuring the use of TECHNONICOL technical insulation and fireproofing

Petrochemical and energy facilities

City	Facility	Product
Tomsk Region, Tomsk	NPK Tomskneftehim (TNKH)	▪ TECHNO Cylinder
Khabarovsk Krai, Komsomolsk-on-Amur	Komsomolsk Refinery	▪ Wired Mat MP-75
Tyumen Region, Tyumen	Antipinsky Refinery	▪ TECHNO Wired Mat ▪ TECHNO Cylinder
Murmansk Region, Polyarniye Zori	Kola NPP	▪ TECHNO Cylinder
Krasnodar Krai, Temryuksky District	Ammonia and Mineral Fertilizer Transshipment Complex TOAZ	▪ TECHNO Cylinder ▪ TECHNO Wired Mat
Krasnodar Krai, Afipsky	Afipsky Refinery	▪ TECHNO Wired Mat ▪ Wired Mat MP-80 ▪ TECHNO T 80 Slab
Volgograd Region, Volgograd	Volgograd TPP-2	▪ TECHNO Cylinder
Volgograd Region, Volgograd	LUKOIL-Volgogradneftepererabotka LLC	▪ TECHNO Wired Mat
Murmansk Region, Belokamenka	NOVATEL Centre for the Construction of Large-Capacity Offshore Structures (CCLCOS Kola Shipyard)	▪ TECHNO Wired Mat ▪ TECHNO Cylinder ▪ TECHNO Slab OZB
Omsk Region, Omsk	Omsk Refinery	▪ Wired Mat WM-80 ▪ TECHNO Wired Mat ▪ TECHNO 120 Cylinder
Krasnoyarsk Krai, Achinsk	Achinsk Refinery	▪ Wired Mat WM-60 ▪ Wired Mat WM-80 ▪ TECHNO Slab OZM ▪ TECHNO 120 Cylinder
Novosibirsk Region, Novosibirsk	Siberian Energy Company OJSC	▪ Wired Mat WM-125 ▪ Wired Mat WM-100 (MS)
Vologda Region, Cherepovets	FosAgro PJSC	▪ TECHNO Wired Mat ▪ TECHNO Cylinder ▪ Wired Mat (WM)
Ryazan Region, Ryazan	RNPK JSC	▪ TECHNO Wired Mat ▪ TECHNO Cylinder ▪ Wired Mat (WM)
Kursk Region, Kurchatov	Kursk NPP	▪ TECHNO Wired Mat ▪ TECHNO Cylinder ▪ TECHNO Slab OZM
Leningrad Region, Ust-Luga	GAZPROM Gas Chemical Complex, part of the Ethane-Containing Gas Processing Complex	▪ TECHNO Wired Mat
Leningrad Region, St. Petersburg	GAZPROM TGC-1	▪ TECHNO Wired Mat
Bashkortostan, Oktyabrsky	NPP OZNA-Engineering LLC	▪ TECHNO 40 Mat ▪ TECHNO Cylinder
Bashkortostan, Ufa	Bashkortostan Heating Distribution Networks LLC	▪ Wired Mat WM-125 (F)
Bashkortostan, Sterlitamak	Bashkortostan Soda Company JSC	▪ Wired Mat WM-100
Primorsky Krai, Vladivostok	Vladivostok TPP-2	▪ TECHNO Wired Mat
Irkutsk Region, Ust-Kut	Irkutsk Polymer Plant	▪ TECHNO Wired Mat ▪ TECHNO Cylinder
Sakhalin Region, Noglinsky Municipal District	Kirinskoye gas condensate field	▪ TECHNO 40 Mat
Sakhalin Region, Ilyinsky	Sakhalin RPP-2	▪ Wired Mat WM-75 ▪ TECHNO Cylinder
Sverdlovsk Region, Reftinsky	Reftinsky RPP	▪ TECHNO T Slab
Kazakhstan, Astana	TPP-3	▪ Wired Mat WM-100 (ST)
Kazakhstan, Pavlodar	Pavlodar Petrochemical Plant	▪ TECHNO Wired Mat 80

Key reference projects featuring the use of TECHNONICOL technical insulation and fireproofing

Retail, entertainment, and public facilities

City	Facility	Product
Moscow	Sheremetyevo Airport, Terminals B and C	▪ TECHNO Cylinder ▪ TECHNO 40 Mat
Moscow	Big Sports Arena Luzhniki	▪ TECHNO Slab OZM
Moscow	Olympic Complex	▪ TECHNO Slab OZM ▪ TECHNO Wired Mat 80 (GP) (F)
Moscow	VTB Arena Stadium	▪ TECHNO Slab OZM
Moscow	Skolkovo Medical Cluster	▪ TECHNO Cylinder
St. Petersburg	St. Petersburg Stadium (Krestovsky)	▪ TECHNO Wired Mat ▪ TECHNO Lamella Mat
Rostov Region, Rostov-on-Don	Rostov Arena Stadium	▪ TECHNO Wired Mat ▪ TECHNO Cylinder
Rostov Region, Rostov-on-Don	Roofed football arena	▪ TECHNO Wired Mat
Uzbekistan, Tashkent	SOLIDEX Medical Cluster	▪ TECHNO Wired Mat
Volgograd Region, Volgograd	Volgograd Circus	▪ TECHNO Cylinder
Russia, Republic of Crimea	Artek International Children's Centre	▪ TECHNO Cylinder
Krasnodar Krai, Krasnodar	Secondary school for 1,100 students	▪ TECHNO Cylinder
Kemerovo Region, Kemerovo	Museum, Theatrical and Educational Complex	▪ TECHNO Slab OZM
Krasnoyarsk Krai, Krasnoyarsk	Lyceum	▪ TECHNO T Slab
Krasnoyarsk Krai, Krasnoyarsk	Yemelyanovo Airport, New Passenger Terminal	▪ TECHNO Slab OZM
Rozovka, Omsk Region	Villa Resort Recreational Hotel	▪ TECHNO Slab OZM
Volgograd	Volgograd Arena Stadium (Victory)	▪ TECHNO Wired Mat ▪ TECHNO Cylinder
Bryansk Region, Bryansk	School for 1,225 students	▪ TECHNO Slab OZM ▪ TECHNO Slab OZB
Yaroslavl Region, Yaroslavl	Volleyball Centre	▪ TECHNO Slab OZM
Leningrad Region, Beloostrov	Beloostrov High-Technology Clinic (SOGAZ Medical Centre)	▪ TECHNO Wired Mat ▪ TECHNO Cylinder ▪ TECHNO Slab OZB
Leningrad Region, St. Petersburg	Hollywood Mall	▪ TECHNO Wired Mat ▪ TECHNO Cylinder
Kaliningrad, Oktyabrsky Island	Opera and Ballet Theatre on Oktyabrsky Island	▪ TECHNO Slab OZB ▪ TECHNO Slab OZM
Kaliningrad Region, Kaliningrad	Kaliningrad Stadium (Baltic Arena)	▪ TECHNO Wired Mat ▪ TECHNO Cylinder
Udmurt Republic, Izhevsk	Ice Stadium	▪ TECHNO Slab OZM
Udmurt Republic, Izhevsk	Martial Arts Centre	▪ TECHNO Slab OZM
Penza Region, Penza	Leroy Merlin Mall	▪ TECHNO Slab OZB ▪ TECHNO Slab OZM
Samara Region, Samara	Samara Arena Stadium (Space Arena)	▪ TECHNO Wired Mat ▪ TECHNO Cylinder
Tambov Region, Tambov	Tambov Regional State Institution Sports School No. 1 Football Academy	▪ TECHNO Wired Mat ▪ TECHNO Cylinder
Voronezh Region, Voronezh	Chizhov Gallery Centre	▪ TECHNO Mat 80 (GP) (F)
Altai Krai, Barnaul	Galaxy Shopping Mall	▪ TECHNO Slab OZB
Astana, Kazakhstan	Nazarbayev University	▪ TECHNO Lamella Mat ▪ TECHNO Wired Mat
Kazakhstan, Astana	Hazret Sultan Mosque	▪ TECHNO Wired Mat 80

Key reference projects featuring the use of TECHNONICOL technical insulation and fireproofing

Residential facilities

City	Facility	Product
Moscow	Federation Tower RC	▪ TECHNO Wired Mat
Moscow	Pride RC	▪ TECHNO Wired Mat
Moscow	Wife RC	▪ TECHNO Wired Mat
Moscow	SHIFT RC	▪ TECHNO Slab OZB ▪ TECHNO Slab OZM
Moscow	TopHILLS RC	▪ TECHNO Cylinder
Moscow	Fili Grad RC	▪ TECHNO Cylinder
Leningrad Region, St. Petersburg	Graffiti RC	▪ TECHNO Cylinder
Leningrad Region, St. Petersburg	Tapiola RC	▪ TECHNO Slab OZB ▪ TECHNO Slab OZM
Leningrad Region, St. Petersburg	Leningrad Perspective RC	▪ TECHNO Cylinder
Leningrad Region, St. Petersburg	Nauka RC	▪ TECHNO Cylinder
Ryazan Region, Ryazan	Yuzhny RC	▪ TECHNO Cylinder
Ryazan Region, Ryazan	Biryuzovy Park RC	▪ TECHNO Cylinder
Ryazan Region, Ryazan	Solotchinsky Quarter RC	▪ TECHNO Cylinder
Kaliningrad Region, Kaliningrad	Eco-Quarter Russian Europe	▪ TECHNO Cylinder ▪ TECHNO Slab OZB
Volgograd Region, Volgograd	Club House on Zhukova RC	▪ TECHNO Slab OZB
Udmurt Republic, Izhevsk	Znak RC	▪ TECHNO 80 Cylinder
Far East, Yuzhno-Sakhalinsk	Uyun Park RC	▪ TECHNO Cylinder
Novosibirsk Region, Novosibirsk	Inskiye Kholmy RC	▪ TECHNO Slab OZB
Altai Krai, Barnaul	2036 Quarter RC	▪ TECHNO Slab OZB
Krasnoyarsk Krai, Krasnoyarsk	Portovy RC	▪ Wired Mat MP-100
Nizhny Novgorod Region, Nizhny Novgorod	Marshal Grad RC	▪ TECHNO Cylinder
Yamal-Nenets Autonomous Okrug, Novy Urengoy	Tundrovy RC	▪ TECHNO Cylinder
Krasnodar Krai, Sochi	Poseidon RC	▪ TECHNO Slab OZB 80
Tatarstan, Naberezhniye Chelny	Sunrise City RC	▪ TECHNO Slab OZM ▪ TECHNO Cylinder
Voronezh Region, Voronezh	Uchitel RC	▪ TECHNO Cylinder
Perm Region, Perm	Gulliver RC	▪ TECHNO Slab OZB
Krasnodar Krai, Krasnodar	Yantarny RC	▪ TECHNO 80 Cylinder
Amur Region, Blagoveshchensk	Sunflowers RC	▪ Wired Mat WM-75
Amur Region, Chigiri	Yuzhny RC	▪ Wired Mat WM-75
Novosibirsk Region, Novosibirsk	Novomarusino RC	▪ TECHNO Cylinder
Almaty, Kazakhstan	Ile de France RC	▪ TECHNO Lamella Mat
Almaty, Kazakhstan	Eastern PARK RC	▪ TECHNO Cylinder
Astana, Kazakhstan	Bi City Seoul RC	▪ TECHNO Cylinder

Training and design assistance

Training and design assistance

TECHNONICOL devotes a great deal of attention to training builders in innovative technologies and the unique application features of new materials, creating numerous training tools that facilitate the construction process.

21
training centres

TECHNONICOL CONSTRUCTION ACADEMY

WEBINARS

DESIGN ASSISTANCE

Training centres

TECHNONICOL Construction Academy consolidates and studies the experience of thousands employees and customers, develops and shares knowledge and skills involving the design and installation of insulation systems.

High-quality training is provided by 21 training centres in Moscow, St. Petersburg, Yekaterinburg, Kazan, Ryazan, Novosibirsk, Ufa, Kumertau, Krasnodar, Khabarovsk, Cheboksary, Astana, Minsk, Belgorod, Naberezhnye Chelny, Tashkent and Almaty.

All construction experts, design company and contractor employees, as well as commercial partner representatives are welcome to take part in the training. After the training, they are awarded certificates.

Training at TECHNONICOL training centres means:

— acquiring skills in the application of cutting-edge materials and equipment;
— improving labour efficiency and work quality;
— minimizing claims from customers and supervisory authorities in work acceptance.

Webinars

Some of the most efficient training tools used at TECHNONICOL Construction Academy are:

— online courses: independent study of construction and business subjects;
— webinars: free lectures and workshops by the company's experts;
— mobile app TN Learn: training that's always at your fingertips, offering the possibility of remote team training.

These types of training are convenient in that they allow trainees to study virtually anywhere: you can get the information you need at any location supporting Internet access. This dramatically saves time and business trip expenses during the training process.

Participation in online webinars is free. After completion, participants are awarded a TECHNONICOL Academy certificate.

Design assistance

TECHNONICOL provides support to design institutes and contractors at all construction stages: from design to facility operation.

A wide range of electronic services ensures the most convenient use of TECHNONICOL materials and solutions. The company provides online support in the following areas:

— design of insulation systems and justification of their selection;
— engineering analysis;
— selecting a package of technical solutions;
— reviewing design documentation;
— data preparation for the cost estimate department.

The BIM library includes a collection of models for REVIT and ARCHICAD design software that are continuously improved and updated.

TECHNONICOL experts also assist in installation, the engineering survey of buildings and structures and provide repair consultations.

Training videos and instructions

TECHNONICOL training tools include presentation videos on its technical insulation products and solutions, as well as installation instructions.

These videos and instructions offer the opportunity to learn the main points of the system's installation stages, the necessary components and equipment and the technical characteristics of the materials.

Each training tool is a professional visual aid making it possible to properly select the appropriate heat-insulation material for various structures and avoid subsequent problems stemming from the improper installation of heat-insulation.

USEFUL VIDEOS

Calculators

To make the calculations easier, TECHNONICOL has developed online calculators.

The fireproofing calculator for metal structures helps in designing modern buildings. The reliability and durability of structures depend on proper calculations since metal loses strength when heated, which may cause structural collapse during a fire. Accurate calculations minimize risks and improve project safety. The metal thickness calculator for the fireproofing of metal structures helps find the optimal solutions for the protection of your facilities, taking the necessary material data into account.

The insulation thickness calculator solves the issue of selecting the optimal insulation thickness for energy savings. For rated heat flow calculations, heat insulation thickness is determined based on the limited density of heat flow through the pipeline/tank wall. Heat flow density increases with an increase in the temperature difference between the heat carrier and the ambient environment. The increased thickness of the insulation layer and selection of a material with lower thermal conductivity, respectively, reduce the density of heat flow through the barriers and, consequently, heat losses.

All of the yielded results can be printed out or saved in PDF and EXCEL formats.

CALCULATOR FOR THE FIREPROOFING PARAMETERS OF STEEL STRUCTURES

TECHNICAL INSULATION THICKNESS CALCULATOR

Russian standards

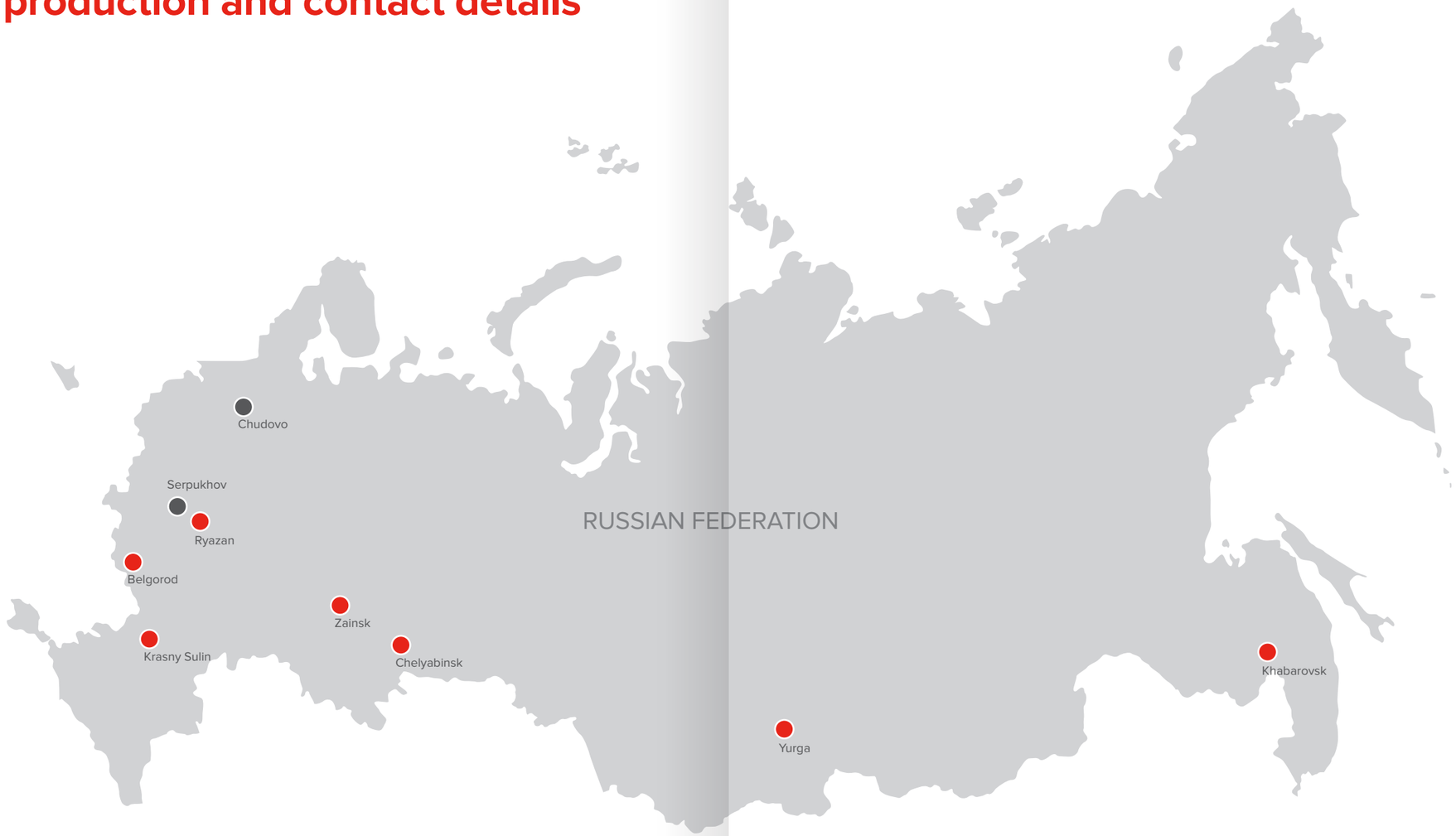
Conformity to technical regulations

Rosizol quality mark

Founded in 2002, the Association of Russian Manufacturers of Advanced Mineral insulation Rosizol, to which TECHNONICOL belongs, has developed the Rosizol Quality Mark. This mark confirms and guarantees material conformity to the highest quality standards.

Geography of production and contact details

Geography of production and contact details



Stone wool-based materials for technical insulation and fireproofing

Production sites

- 21 Vostochny Industrial Terminal, bldg. 58, Ryazan, Russia
- 7 Avtozavodskaya St., Zainsk, Republic of Tatarstan, Russia
- 1 km NE from Sodruzhestva No. 1 St., Krasny Sulin, Rostov Region, Russia
- 14 Rabochaya St., Belgorod, Russia
- 8 60-Letiya Oktyabrya Prospekt, Khabarovsk, Khabarovsk Krai, Russia
- 5 Valdaiskaya St., Chelyabinsk, Russia
- 1 1st Zheleznodorozhnaya St., Yurga, Russia

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For notes

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