



TECHNICAL INSULATION AND FIREPROOFING

Product catalogue

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About the company

TECHNONICOL is a leading international producer of reliable and efficient building materials and systems. The company offers the market state-of-the-art technologies that combine the advancements of our own Research Centres with cutting-edge global expertise. More than 500 mln people around the world live and work in buildings constructed with the use of TECHNONICOL materials.

69
production
sites

21
training centres

700
commercial
partners

In 2003, TECHNONICOL joined the stonewool-based heat-insulation materials market. Since then, aside from becoming a leader in the production of roofing and waterproofing materials, TECHNONICOL has also emerged as one of Russia's largest manufacturers of stonewool-based heat-insulation materials. Above and beyond its superior quality, our heat insulation is distinctive for its broad gradation of technical and physical characteristics, which let the consumer choose the optimal material in terms of price and technical specifications. We have optimised the geography of our manufacturing plants to keep pace with growth in demand on the regional markets. This lets us be flexible and swift in our product deliveries without passing additional transportation costs on to our customers.

Our production capacity and equipment allow us to supply the required volumes of heat-insulation materials for even the largest structures while making made-to-order products that suit the customer's individual needs. The company's manufacturing plants produce not just general-construction heat-insulation and soundproofing materials, but also specialised materials for the fireproofing of building structures and air ducts, as well as technical insulation for piping, ductwork, equipment, reservoirs and large tanks.

All TECHNONICOL products are certified, known for their superior quality and conform to the relevant world standards.

All of the company's enterprises operate according to the environmentally-friendly waste-free production principle.



8

stonewool
manufacturing
plants

Over
15 mln m³ in
annual product
output – total
manufacturing
capacity of our
plants

The key to the dynamic development of our Mineral Insulation business is our highly-qualified staff, coupled with the use at our production facilities of cutting-edge technological solutions and equipment.

Operational geography

The company's production assets encompass 8 plants in Russia for the manufacture of stonewool-based heat-insulation materials, namely, in: Belgorod, Ryazan, Rostov-on-Don, Zainsk, Chelyabinsk, Yurga and Khabarovsk.

The geographical location of our plants lets us minimise transportation costs and optimise the logistics process.

Technological excellence – the key to ensuring competitiveness

The popularity among consumers of TECHNONICOL stonewool materials is explained by their numerous technical and performance advantages, which are embedded in each product at the initial manufacturing stage.

All of our materials are made from igneous basaltic rock with the use of advanced high-tech equipment by the leading Western European manufacturers.

The production processes on the manufacturing line are fully automated, while strict quality control at all stages of production, from the inspection of raw components to the testing of finished products, ensures the consistently high quality of all of the materials that we produce.

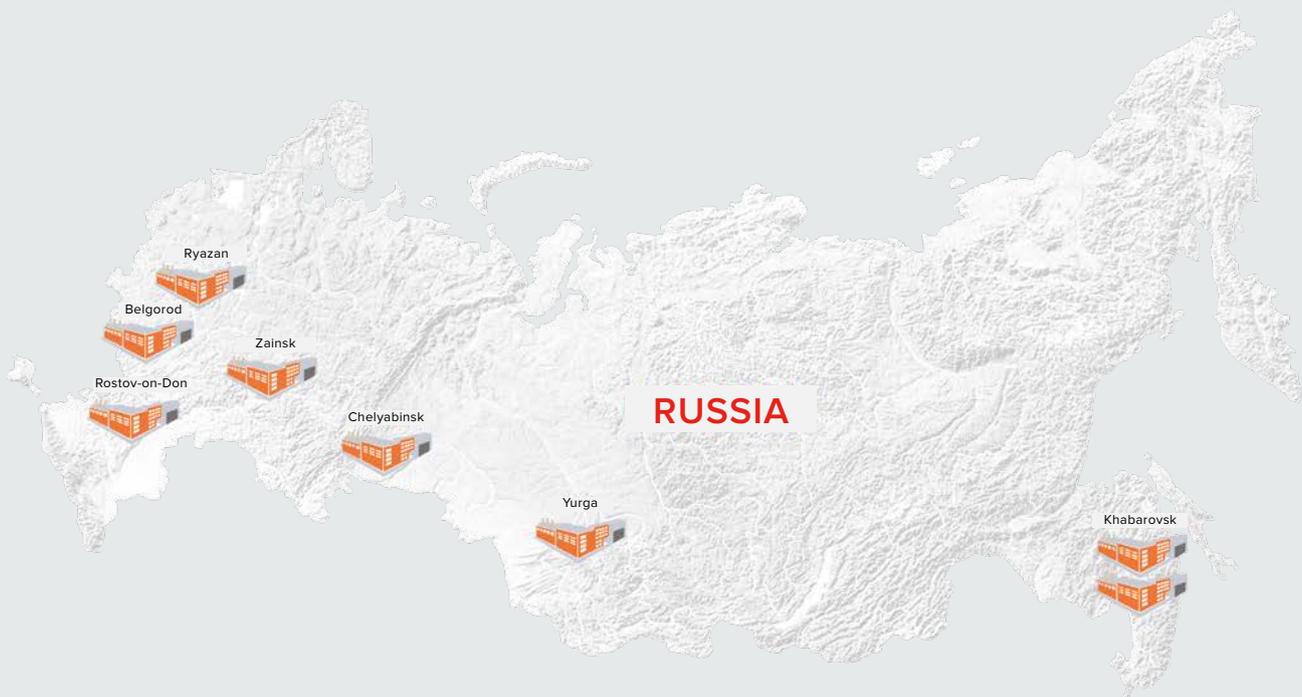
Our ready-to-use products are packed in shrinkwrap, which safeguards the

integrity of the materials. Each product pallet is packed according to stretch-hood technology. This packing technology reduces both transportation and labour costs by increasing loading-and-shipping speed. But most importantly – this type of packing lets our customers store the material at outdoor storage or construction sites without detriment to their stress-strain properties.

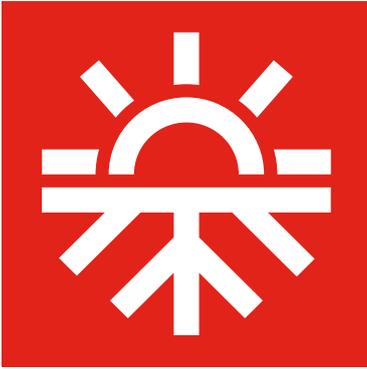
TECHNONICOL doesn't just boast production capacity, but also the company's own Research Centre, where work is constantly underway to improve upon the already-impressive technical and performance qualities of our finished products.

The company continuously invests its time and resources into refining its production processes and modernising its manufacturing capacity. These efforts have resulted in a wide-ranging product line of stonewool-based insulation materials, which are characterised by their consistently superior quality and adherence to the requirements of both Russian and international standards.

Thanks to its competitive price, uncompromising quality and wide-ranging performance advantages, non-combustible TECHNONICOL insulation has emerged as the preferred choice among consumers. You can gauge all of the advantages offered by non-combustible TECHNONICOL insulation even today simply by contacting our representatives.



Properties of technical insulation and fireproofing by TECHNONICOL



EFFICIENT HEAT INSULATION

TECHNONICOL stonewool is a highly-efficient heat-insulation material.

High heat-transfer resistance is achieved through the retention of a large quantity of static air inside the insulation, thanks to the tightly-interwoven microfibrils of the mineral wool. For this reason, materials made from stonewool efficiently protect pipes from freezing while minimising heat loss during energy transmission. In this way, energy costs are minimised as the efficiency of various heating equipment improves.

High heat-transfer resistance thanks to air retention inside the insulation



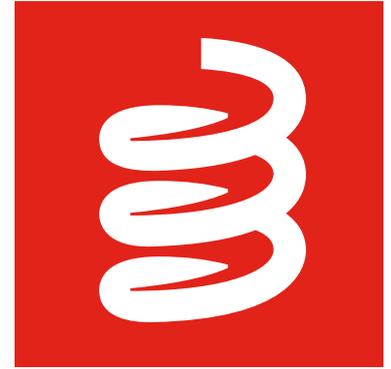
FIRE SAFETY

The primary raw material used in the production of TECHNONICOL stonewool is gabbro-basaltic igneous rock. As a result, all TECHNONICOL products are non-combustible. The melting point of the fibres exceeds 1,000 °C, which allows stonewool products to be used within a wide range of operating temperatures.

Fireproofing materials create a heat-insulating barrier on the surface of structures and shield them from the destructive effects of high temperatures during a fire without combusting, thereby eliminating damage to the structure, its strength and other properties and preserving the load-bearing capacity and overall integrity of enclosing structures. This results in more time for the evacuation of people and retrieval of documents and property during a fire.

An important factor in the choice of heat insulation is the consideration that, under the impact of high temperatures, TECHNONICOL insulation doesn't emit harmful substances or toxins.

Fibre melting point – over 1,000 °C



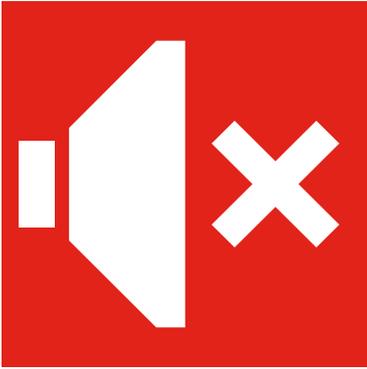
HIGH YIELD STRENGTH

The outstanding resistance of TECHNONICOL materials to mechanical loads is provided by the unique properties of the fibre and the structure of the stonewool. These parameters were established individually for each product in the TECHNONICOL line, based on the heat insulation's scope of application.

Depending on the structure, the material absorbs varying loads in terms of force, direction and duration of impact. In order to maintain its shape, thickness and reliable adherence to structures, heat-insulation materials must boast a high yield strength. This property, in turn, is necessary for the reliable and long-term insulation of a structure without loss of quality as time passes.

Stonewool is good at withstanding the thermal expansion of pipes and equipment, as well as the vibration of air ducts and microvibrations of pressurised equipment and pipes.

High yield strength



GOOD SOUND ABSORPTION

The fibrous structure of products made from TECHNOMICOL stonewool provides for the material's outstanding acoustic and soundproofing properties. TECHNOMICOL products boast a high sound-absorption coefficient at a wide range of frequencies, thereby facilitating a reduction in noise levels when used in various types of structures: pipes, air ducts and equipment across an array of different industries.

High sound-absorption coefficients allow for the effective reduction of noise levels



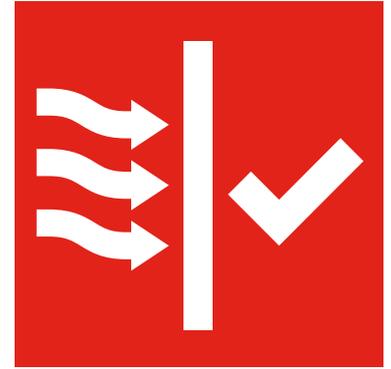
WATER REPELLENCY

All stonewool-based heat-insulation materials by TECHNOMICOL have been treated with hydrophobic agents, giving the insulation its water-repelling properties.

The presence of moisture in insulation has a negative impact on its heat-insulating properties and service life. In case of getting soaked through, insulation requires expensive and time-consuming remediation efforts, most of which end in replacement of the heat-insulation material in its entirety.

In cases where moisture comes into contact with the insulation of hot-running equipment or pipes, it naturally evaporates.

Superior resilience to temporary moisture impacts



VAPOUR PERMEABILITY

Materials based on TECHNOMICOL stonewool boast a high degree of vapour permeability and do not retain the moisture emanating from adjacent premises in the form of the vapour released in the course of everyday human activity, virtually always remaining dry.

For cooling equipment/pipes, we've developed special materials coated with reinforced aluminium foil, which creates a vapour barrier.

Good vapour permeability



BIO-RESISTANCE

TECHNONICOL products fully meet the relevant bio-resistance criteria, as is evidenced not only by numerous tests and experiments, but also by field studies.

TECHNONICOL stonewool-based materials are capable of withstanding the impacts of a range of different macro- and microorganisms: the material is not life-sustaining for bacteria, mould or fungi, nor does it represent an attractive living environment for insects and rodents.

High resistance to the impacts of microorganisms and rodents



CHEMICAL RESISTANCE

TECHNONICOL products are made from basaltic rock. The natural minerals in this group are distinctive for their high level of chemical resistance to the impacts of various substances: lubricants, solvents and paints, as well as acidic and alkaline environments.

TECHNONICOL materials based on basaltic igneous rock can confidently be used in conjunction with all types of building materials, and can also be used for the filtration of corrosives in a number of different chemical industries.

Chemically neutral in relation to other building materials



ENERGY EFFICIENCY

TECHNONICOL develops, manufactures and markets construction materials and systems that make it possible to minimise heat loss and enhance the thermal insulation of pipes and equipment, while also improving upon the fire-resistance of building structures. By integrating energy-efficient technologies and materials, we achieve a significant reduction in heat loss through the enclosing structures of buildings.

TECHNONICOL conducts research on the energy efficiency of heat-insulation and fireproofing systems using stonewool-based technical insulation and fireproofing materials. The use of such systems and materials makes it possible to dramatically reduce the energy consumption of heating networks and increase equipment efficiency while also significantly reducing fire-resistance.

Facilitates energy savings

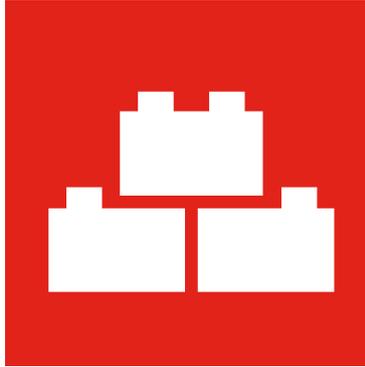


BASALT-BASED

The primary raw material used in the production of stonewool heat-insulation slabs is gabbro-basaltic rock – igneous formations resulting from volcanic eruptions. This unique raw material is natural, environmentally-friendly and safe.

To obtain high-quality fibre, batch composition is carefully screened at the plant.

Made primarily from a molten mixture of igneous rock



EASY INSTALLATION

Stonewool slabs are easy to cut using readily-available tools: a knife or fine-toothed saw. It's easy to make cutouts of the required dimensions and install them in the existing structure, and just as easy to ensure the quality control of the installation process.

Easy to cut and install



DIMENSIONAL STABILITY

Stonewool slabs are manufactured with guaranteed-stable geometric dimensions thanks to the automation and mechanisation of the production process.

Precise and stable geometric dimensions allow the slabs to be installed tightly against one another or to the existing framework of a building structure, depending on the installation specifications.

Guaranteed stability of geometric dimensions

Advantages of technical insulation and fireproofing by TECHNONICOL



ENVIRONMENTAL FRIENDLINESS

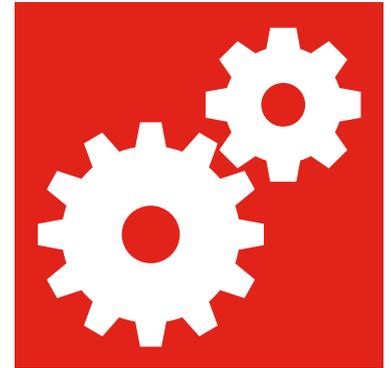
Caring for the environment in the production of our materials is a top business priority for TECHNONICOL, as well as another opportunity for innovation. As one of Russia's leaders in the production of stonewool, TECHNONICOL is constantly refining its products and services, integrating cutting-edge environmental-conservation equipment and technologies. All of the products developed and manufactured by the company meet the applicable international sanitary and ecological standards, are non-toxic to human health and the environment, have undergone the full cycle of both compulsory and voluntary certification and have been cleared for use in Russia and abroad.



DURABILITY

The durability of building structures depends on a number of factors: correct calculations at the design and structural-engineering stage, expert assembly-and-installation work, observance of the relevant transportation and storage conditions for the corresponding building materials, and so on.

Years of experience, modern equipment, the constant refinement of our technologies and the practical integration of advancements developed at our own Research and Technology Centre let TECHNONICOL manufacture consistently high-quality stonewool products that maintain their performance claims throughout the entire service life of the respective facilities and equipment. The safety and quality of TECHNONICOL stonewool products are confirmed by all of the required certificates, studies and test reports.



COMPREHENSIVE SOLUTIONS

Technical insulation and fireproofing materials by TECHNONICOL provide for the reliable insulation of pipes, equipment and building structures in even the most adverse conditions and are capable of withstanding both the impacts of high temperatures as well as constant temperature fluctuations, accompanied by the thermal expansion of the insulated facility or by vibrations.



Technical insulation

WIRED MAT (MP) / TECHNO MAT /
TECHNO MAT LAMEL / TECHNO WIRED MAT /
TECHNO CYLINDER / TECHNO SLAB T /
MINERAL WOOL (MW)

Wired Mat (MP)

GOST 21880-2022

Non-combustibility

Wide range of operating temperatures

Versatility

Application

— Heat-insulation and soundproofing of the enclosing structures of residential, public and commercial buildings and facilities, for industrial, technical and power equipment, reservoirs for the storage of hot and cold water, oil and petroleum products, chemical piping in all industrial sectors at an insulated surface temperature of from $-180\text{ }^{\circ}\text{C}$ to $+700\text{ }^{\circ}\text{C}$.

Description

— Heat-insulation material made from basaltic stonewool and a low-phenol binder with a water-repelling admixture. Made uncoated or with facing (backing) made from:

- metal mesh (marked MM);
- fibreglass cloth (marked FC);
- non-woven fibreglass canvass (marked NFC);
- aluminium foil (marked F).

Completed projects



Vaninsky Refinery,
Vanino, Khabarovsk
Region



**Podsolnukhi Residential
Complex,**
Blagoveshchensk



Geometric 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/m ³	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 ² ·C (max)	λ_{10}	0.038	0.035	0.034	0.032
	λ_{25}	0.040	0.037	0.038	0.039
	λ_{100}	—	0.047	0.044	0.042
	λ_{200}	—	0.068	0.061	0.055
	λ_{300}	—	0.101	0.082	0.072
	λ_{400}	—	0.138	0.114	0.100
	λ_{500}	—	0.183	0.153	0.129
λ_{600}	—	0.236	0.201	0.161	
Organic matter content, % (max)	1.5	2.0	2.0	2.0	
Moisture by weight, % (max)	1.0	1.0	1.0	1.0	

* C1 for NFC facing

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, m ²	2.4	2.4	2.4	2.4
Quantity per roll, m ³	0.120	0.144	0.192	2.400
Load rate (t.f.), volume, 90 m ³	90.00	89.28	90.24	90.00



TECHNO Mat

STO 72746455-3.2.10-2021

Non-combustibility

Wide range of operating temperatures

Versatility

Application

— Heat-insulation and soundproofing of pipes, air ducts, gas flues, electric filters, reservoirs, boilers, process and power equipment, flat vertical and horizontal surfaces at various industrial facilities, engineering system equipment, heating networks, pipelines and industrial pipes at an insulated surface temperature of up to +500 °C.

Description

— Non-combustible heat-insulating and soundproofing mat made from igneous-basaltic stonewool. Made uncoated or with facing (backing) made from reinforced aluminium foil (marked AF).

Completed projects



EuroChem
Gremyachesky MPP,
Gremyachaya Railway
Station, Volgograd
Region



LUKOIL-
Nizhgorodnefteorgsintez,
Kstovo,
Nizhny Novgorod Region



Geometric 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/m ³		40 (±8)
Moisture by weight, % (max)		0.5
Combustibility, degree		NC*
Thermal conductivity, W/m·°C (max)	λ ₂₅	0.038
	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

* 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, m ²	8.4	5.4	4.8	4.2
Quantity per roll, m ³	0.420	0.324	0.384	0.420
Load rate (t.f.), volume, 92 m ³	385	385	385	385



TECHNO Mat Lamel

STO 72746455-3.2.10-2021

High compressive strength

High yield strength during installation and service

Decorative appearance



Application

— Heat- and vapour-insulation of air ducts, ventilation equipment, reservoirs and pipes with a diameter of over 230 mm and flat surfaces. Suitable for use at an insulated-surface temperature of up to +250 °C (on the stonewool-facing side).

Description

— Flame-retardant heat-insulating and soundproofing mat made of stonewool strips (lamina) elongated to 90° and glued to aluminium foil. The result is a product that boasts an elevated compressive strength compared to traditional mats with less deformation during installation. In its standard format, the mat is coated with reinforced aluminium foil.

Completed projects



Europolis Shopping Mall,
St. Petersburg



St. Petersburg Stadium,
St. Petersburg

Geometric 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/m ³	35 (±8)	50 (±5)
Combustibility, degree	C1	C1
Thermal conductivity, W/m·°C (max)	λ ₂₅	0.040
	λ ₅₀	0.045
	λ ₁₂₅	0.061
	λ ₃₀₀	0.129
	λ ₄₀₀	0.201
	λ ₅₀₀	0.303
	λ ₅₅₀	0.383

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, m ²	9,600	7,200	6,000	4,800	3,600	3,120
Quantity per roll, m ³	0.288	0.288	0.300	0.288	0.288	0.312
Load rate (t. f.), volume, 92 m ³	240	240	230	240	240	220



TECHNO Wired Mat

STO 72746455-3.2.10-2021

Resistant to high temperatures

High degree of fire-resistance

Resistant to temperature fluctuations, vibrations and harsh chemical environments

Application

- Heat-insulation, soundproofing and fireproofing of air ducts, insulation of hot-running equipment, pipes, steam conduits, gas flues, electric filters and other process equipment.
- Suitable for use at an insulated-surface temperature of up to +650 °C.
- Wired mat GP F is certified as a fireproofing coating for air ducts.

Description

- Non-combustible heat-insulating and soundproofing wired mat made from igneous-basaltic stonewool. The mat is faced (backed) on one side with zinc-plated mesh (marked ZM), stainless-steel mesh (marked SS) or galvanized mesh (marked GM) and stitched with metal wire. The mat is produced with one-sided facing (backing) in either reinforced (marked AF) or unreinforced (marked F) foil.

Completed projects



Planeta Shopping Centre,
Novokuznetsk



Talan Towers Mixed-Use Complex,
Astana, Kazakhstan



Geometric dimensions

Length: 2,400 mm

Width: 1,200 mm

Thickness:

TECHNO Wired Mat 50 (in 10 mm increments): 50–100

TECHNO Wired Mat 80 (in 10 mm increments): 30–100

TECHNO Wired Mat 100 (in 10 mm increments): 30–100

TECHNO Wired Mat 120 (in 10 mm increments): 30–100

Stress-strain properties

	TECHNO Wired Mat 50	TECHNO Wired Mat 80	TECHNO Wired Mat 100	TECHNO Wired Mat 120	
Density, kg/m ³	50 (±8)	80 (±8)	100 (±10)	120 (±12)	
Combustibility, degree	NC*	NC*	NC*	NC*	
Thermal conductivity, W/m·°C (max)	λ ₂₅	0.036	0.034	0.034	0.036
	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	

* C1 – coated with reinforced aluminium foil

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, m ²	2.880	2.880	2.880	2.880	2.880	2.880
Quantity per roll, m ³	0.086	0.115	0.144	0.172	0.230	0.288
Load rate (t.f.), volume, 92 m ³	1,050	780	630	525	390	315



TECHNO Cylinder

STO 72746455-3.2.10-2021

Quick installation

No clumping

Superior heat-saving efficiency

Vapour-insulating function

Application

- Heat insulation of circular process pipes and air ducts.
- Vapour insulation of cooling pipes. At temperatures of up to +250 °C, can be used without support brackets/ ringsealing the insulation's outer coating.
- Suitable for use at an insulated-surface temperature of up to +650 °C.

Description

- Non-combustible heat-insulating and soundproofing hollow cylinder made from igneous-basaltic stonewool. The cylinders feature a continuous longitudinal slit on one side for ease of installation on pipes. Can be produced uncoated or with facing (backing) made of unreinforced (marked F) or reinforced (marked AF) aluminium foil. Depending on the inner diameter and thickness of the wall, can be fabricated in the form of semicylinders and segments.

Completed projects



Rostov Arena,
Rostov-on-Don



Volgograd Arena,
Volgograd



Geometric dimensions

Length: 1,000*; 1,200 mm

Inner diameter: 18–324 mm

Thickness (in 10 mm increments): 20–120 mm

Stress-strain properties

	TECHNO Cylinder 80	TECHNO Cylinder 120	
Density, kg/m ³	80 (±8)	120 (±15)	
Moisture by weight, % (max)	0.5	0.5	
Combustibility, degree	NC*	NC*	
Thermal conductivity, W/m·°C (max)	λ ₂₅	0.038	0.043
	λ ₅₀	0.039	0.037
	λ ₁₀₀	0.049	0.044
	λ ₂₀₀	0.076	0.064
	λ ₃₀₀	0.118	0.094
	λ ₃₅₀	0.150	0.113

* C1 – coated with reinforced aluminium foil

Logistical parameters

Cylinder dimensions (inner 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 in a box 600 × 600 × 1,205 mm (pcs)	97	9	16	23	6
Number of cylinders in a box 600 × 600 × 1,205 mm (m)	116.40	10.80	19.20	6.90	7.20	5.40



РОСИЗОЛ
ВЫСОКОЕ КАЧЕСТВО
ТЕПЛОИЗОЛЯЦИИ



* TECHNO 1,000 mm-long cylinder is only produced in Yurga and Khabarovsk.

Mineral Wool (MW)

GOST 4640-2011

Non-combustibility

No binding agents

Resistant to high temperatures

Application

— Mineral wool can be used as a heat-insulating material in construction and industry for the insulation of surfaces with a temperature of from $-180\text{ }^{\circ}\text{C}$ to $+700\text{ }^{\circ}\text{C}$, and also as a material used in the fabrication of soundproofing and sound-dampening products.

Description

— Mineral wool is non-combustible heat-insulating and soundproofing material derived from a molten alloy of gabbro-basalt igneous rock and related analogues, sedimentary rock, volcanic cinder, smelter slag, industrial silicate waste and co-occurring mixtures without the addition of a binding agent, produced in the form of briquettes.

Completed projects



**Talnakhsкая
Processing Plant,**
Norilsk, Krasnoyarsk
Region



Geometric dimensions

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

Stress-strain properties

	MW-70
Combustibility, degree	NC
Thermal conductivity, $\text{W/m}\cdot^{\circ}\text{C}$ (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

	MW-70
Length, mm	1,000
Width, mm	1,000
Thickness, mm	800
Quantity per palette, briquettes	3
Weight, kg	296

TECHNO Slab T

STO 72746455-3.2.10-2021

Superior heat-saving efficiency

Resistant to high-temperature impacts

Non-shrink

Application

— Heat insulation of large tanks and reservoirs, as well as air ducts, gas flues, electric filters, boilers, technological equipment, flat vertical and horizontal surfaces, furnaces and utility equipment. Suitable for use at an insulated-surface temperature of up to +700 °C.

Description

— Non-combustible, water-repellent heat-insulating and soundproofing rigid slabs made from igneous-basaltic stonewool. Special high-temperature fibre is used in the production of the slab. Can be produced uncoated or with facing (backing) made of reinforced aluminium foil (marked AF) or glass-fibre mat (marked GFM).

Completed projects



EVRAZ West-Siberian Metal Plant,
Novokuznetsk



ZapSib-2 (ZapSibNeftekhim),
Tobolsk, Tyumen Region



Geometric 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	TECHNO Slab T 60	TECHNO Slab T 80	
Density, kg/m ³	40 (±4)	60 (±6)	80 (±8)	
Compressive strength at 10 % deformation, kPa (min)	—	—	10	
Moisture by weight, % (max)	0.5	0.5	0.5	
Combustibility, degree	NC*	NC*	NC*	
Thermal conductivity, W/m·°C (max)	λ ₂₅	0.038	0.036	0.035
	λ ₅₀	0.043	0.040	0.040
	λ ₁₂₅	0.057	0.053	0.050
	λ ₂₀₀	—	0.071	0.064
	λ ₃₀₀	0.116	0.109	0.086
	λ ₄₀₀	0.168	0.151	0.124
	λ ₅₀₀	0.262	0.217	0.174
	λ ₅₅₀	0.316	—	—
	λ ₆₀₀	—	0.323	—
	λ ₆₅₀	—	—	0.282

Stress-strain properties

	TECHNO Slab T 100	TECHNO Slab T 120	TECHNO Slab T 150	
Density, kg/m ³	100 (±10)	120 (±15)	150 (±15)	
Compressive strength at 10 % deformation, kPa (min)	15	20	20	
Moisture by weight, % (max)	0.5	0.5	0.5	
Combustibility, degree	NC*	NC*	NC*	
Thermal conductivity, W/m·°C (max)	λ ₂₅	0.036	0.037	0.039
	λ ₅₀	—	0.040	0.043
	λ ₁₂₅	0.051	0.049	0.051
	λ ₂₀₀	—	—	0.060
	λ ₃₀₀	0.081	0.079	0.070
	λ ₄₀₀	—	0.103	0.095
	λ ₅₀₀	—	0.139	0.121
	λ ₆₀₀	—	0.219	0.182

* C1 – coated with reinforced aluminium foil

Logistical parameters

	TECHNO Slab T 40	TECHNO Slab T 80	TECHNO Slab T 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, m ²	4.320	2.880	2.160
Quantity per pack, m ³	0.432	0.288	0.216
Number of slabs per palette, pcs	32	24	16
Quantity per palette, m ³	6.912	6.912	6.912
Load rate (t.f.), volume, 92 m ³	76.032	76.032	76.032
Load rate (t.f.), volume, 120 m ³	82.944	82.944	82.944



Fireproofing

TECHNO SLAB OZM / TECHNO SLAB OZB /
TECHNO SLAB OZD

TECHNO Slab OZM

STO 72746455-3.2.10-2021

Elevated degree of fire-resistance

Moisture resistance

Doesn't require the application of additional protective coatings

Application

- Increasing the fire-resistance of load-bearing metal structures from a maximum fire-resistance rating of 30 minutes to 240 minutes and providing corrugated sheeting with a maximum fire-resistance rating of up to 30 minutes.
- Certified as a fireproofing composition to ensure the fire-resistance of metal structures up to 240 minutes and corrugated sheeting up to 45 minutes.

Description

- Non-combustible, water-repellent, flame-retardant, heat-insulating and soundproofing slabs made from igneous-basaltic stonewool. Can be produced uncoated or with facing (backing) made of reinforced aluminium foil (marked AF) or glass-fibre mat (marked GFM).

Completed projects



Luzhniki Sports Arena,
Moscow



VTB Arena,
Moscow



Geometric 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/m ³		160 (±15)
Compressive strength at 10 % deformation, kPa (min)		25
Moisture by weight, % (max)		0.5
Combustibility, degree		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 per pack, slabs (pcs)	6	5	4	4	3
Quantity per pack, m ²	4.320	3,600	2.880	2.880	2.160
Quantity per pack, m ³	0.129	0.144	0.144	0.172	0.151
Quantity per palette, pack (pcs)	52	48	48	40	44
Quantity per palette, m ³	6.739	6.912	6.912	6.912	6.652
Lorry load rate, volume, 92 m ³	73.131	76.032	76.032	76.032	73.180
Lorry load rate, volume, 120 m ³	80.870	82.944	82.944	82.944	79.833



TECHNO Slab OZB

STO 72746455-3.2.10-2021

Elevated degree of fire-resistance

Superior heat-saving efficiency

Resistant to high-temperature impacts

Year-round installation

Application

- Increasing the fire-resistance rating of reinforced-concrete structures to 240 minutes.

Description

- Non-combustible, water-repellent, heat-insulating and soundproofing slabs made from igneous-basaltic stonewool. Can be produced uncoated or with facing (backing) made of reinforced aluminium foil (marked AF) or glass-fibre mat (marked GFM).

Completed projects



Galaktika Shopping Mall,
Barnaul



Akademicheskoy Shopping Mall,
Yekaterinburg



Geometric 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 % deformation, kPa (min)	15	20
Moisture by weight, % (max)	0.5	0.5
Combustibility, degree	NC	NC
Thermal conductivity, W/m·°C (max)	λ ₁₀	0.035
	λ ₂₅	0.037
	λ ₄₀	0.049
		0.038
		0.048

Fire-resistance indicators of the TN-FIREPROOFING Concrete system, minutes

40 mm	REI 180	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 per pack, slabs (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 per palette, pack (pcs)	32	32	28	24	32	24
Quantity per palette, m ²	6.912	6.912	6.451	6.912	6.912	6.912
Lorry load rate, volume, 92 m ³	76.032	76.032	70.963	76.032	76.032	76.032
Lorry load 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

Resistant to high-temperature impacts

Application

- Fill for fire doors and gates with varying maximum fire-resistance ratings.

Description

- Non-combustible, water-repellent, heat-insulating and soundproofing slabs made from igneous-basaltic stonewool. Can be produced uncoated or with facing (backing) made of reinforced aluminium foil (marked AF) or glass-fibre mat (marked GFM).

Completed projects



Poseidon Residential Complex,
Sochi



Tapiola Residential Complex,
St. Petersburg



Geometric dimensions

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

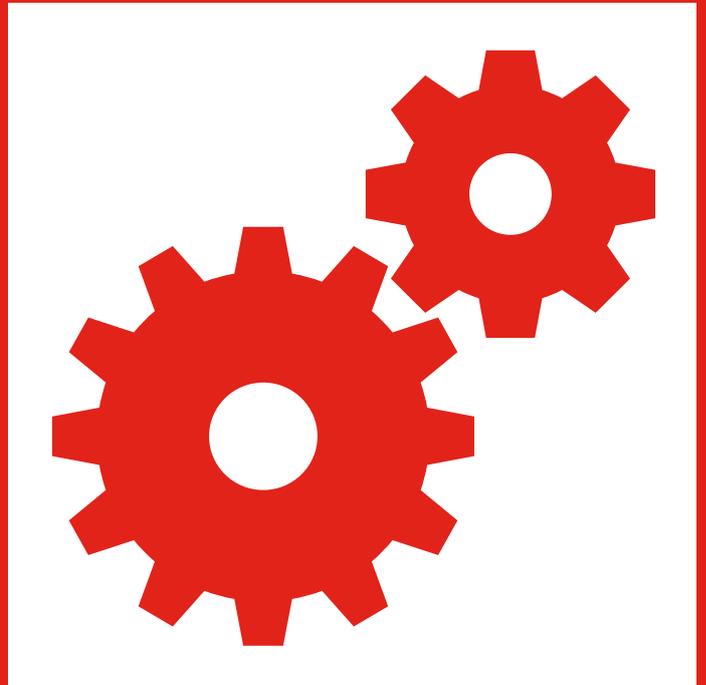
Stress-strain properties

	TECHNO Slab OZD 110	TECHNO Slab OZD 190	
Density, kg/m ³	110 (±10)	180 (±15)	
Compressive strength at 10 % deformation, kPa (min)	10	20	
Moisture by weight, % (max)	0.5	0.5	
Combustibility, degree	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 per pack, slabs (pcs)	96
Quantity per pack, m ²	138.24
Quantity per pack, m ³	6.912
Quantity per palette, pack (pcs)	1
Quantity per palette, m ³	6.912





Components*

CERESIT PLASTER-AND-ADHESIVE MIX /
TERMOCLIP METAL ANCHOR
AND FASTENER /
TERMOCLIP WELDED METAL PIN
AND WASHER /
TERMOCLIP SELF-DRILLING SELF-TAPPING
SELF-LOCKING SCREW
AND STEEL WASHER /
ALUMINIUM TAPE

* Not supplied by TECHNOMICOL

Ceresit CT 190 plaster-and-adhesive mix

GOST R 54359-2017

Application

— For mineral-wool slab fastening

Completed projects



Moskva Shopping Mall,
Stavropol



Cosmos Megacentre,
Stavropol



Stress-strain properties

Bulk density of the dry mix, kg/dm ³	1.3 (±0.1)
Amount of batched water, l/25 kg of dry mix	6.5–6.8
Bulk density of the ready-to-use mix, kg/dm ³	1.5 ± 0.1
Mobility by cone immersion, Cl, cm	9.0 ± 1.0
Consumption time, hours (min)	1.5
Application temperature, °C	from +5 to +30
Open time, minutes (min)	30
Compressive strength at 28 days, MPa (min)	8.0
Adhesion to concrete at 28 days, MPa (min)	0.7
Adhesion to mineral-wool slab at 3 days	varies by slab type
Adhesion to metal at 28 days, MPa (min)	0.45
Frost resistance of the hardened mixture, cycles (F100) (min)	100
Operating temperature, °C	from –50 to +70
Combustibility group	NC
Consumption rate of the dry mix in fastening the slab to the surface, kg/m ²	0.7–2.0

Note:

material consumption rate depends on the evenness of the base and the application method used in securing the slab

Packaging

	Ceresit CT 190 plaster-and-adhesive mix
Weight per 1 bag, kg	25
Number of bags per palette, pcs	36
Net/gross weight, kg	900/930

WALL 4 metal disk anchor and TERMOCLIP fastener



Application

— Fastening of TECHNO Slab OZB to reinforced-concrete 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 the fastened material, mm	30	60	90	120	150	200
Hole diameter, mm	8	8	8	8	8	8
Diameter of the disk element, mm	35	35	35	35	35	35
Recommended working drill length, mm	100	150	200	200	250	300
Anchor tear-out force from concrete, kN						1.4
Anchor tear-out force from brick, kN						1.2

Disk fastener

Diameter of the disk fastener, mm	80
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Completed projects

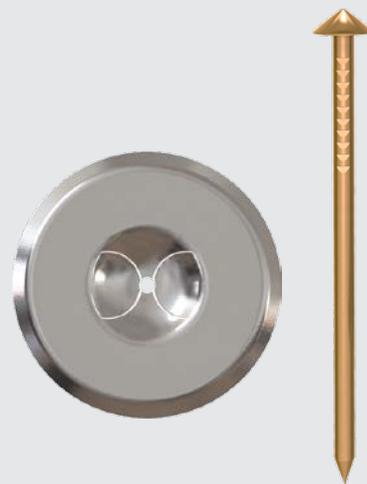


Leroy Merlin Shopping Centre,
Penza



Aquapolis Waterpark,
Pskov

Metal welded pin CT/WP2 and washer PW2 TERMOCLIP



Application

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

Geometric dimensions

Pin length: 19; 25; 32; 42; 51; 63; 76; 89; 105; 114;
125; 140 mm

Washer diameter: 30; 38 mm

Completed projects



Aura Shopping Mall,
Yaroslavl

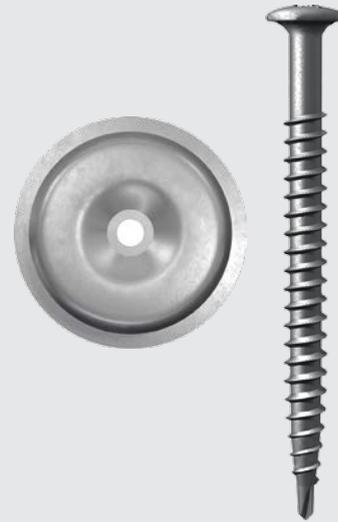


Riviera Shopping Mall,
Moscow

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



Geometric dimensions

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

Stress-strain properties of the screw

Drill boring strength, mm	2.5
Drill rotation speed, RPM	1,500

Completed projects



Kalina Mall,
Vladivostok



Yemelyanovo Airport,
Krasnoyarsk

Aluminium tape, types AST (aluminium self- adhesive tape), ASIT (aluminium self- adhesive installation tape)



Application

- Sealing the joints of foiled heat-insulation materials for the purposes of vapour insulation

Geometric dimensions

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

Stress-strain properties

Indicator	Value by type			
	ASIT	ASIT-L (low temps)	AST	AST-R (reinforced)
Adhesion to stainless steel, g/cm (min)	500	500	500	500
Longitudinal tensile load, L/50 mm (min)	100	100	70	100
Adhesion temperature, °C	+5...+50	-15...+50	min -5	min -5

Completed projects



AERO PARK Shopping Mall,
Bryansk



Chizhova Galleria,
Voronezh



**Training and
design
assistance**

Training and design assistance

TECHNONICOL devotes a considerable amount of attention to training builders in innovative technologies and the particularities associated with the use of new materials.

Training Centres

The TECHNONICOL Construction Academy consolidates and studies the experience of thousands of the company's employees and clients, creates and transfers knowledge and expertise in the design and installation of insulation systems.

Training quality is ensured by 21 learning centres in Moscow, St. Petersburg, Yekaterinburg, Kazan, Ryazan, Novosibirsk, Ufa, Kumertau, Krasnodar, Khabarovsk, Cheboksary, Astana and Minsk.

Specialists in the construction field, employees at design firms and contractors, and the representatives of our commercial partners are all eligible to take part in the training.

A personal certificate is issued upon the completion of training.

Studying at TECHNONICOL Training Centres means:

- acquiring the skills needed to work with cutting-edge materials and equipment;
- increasing labour productivity and work quality;
- minimising customer and regulator complaints at the work delivery stage.

Webinars

One of the most effective training tools embraced by TECHNONICOL is the use of online seminars – webinars conducted by the company's national technical specialists in conjunction with TECHNONICOL Training Centres. This training format is convenient in that the student's physical location is of no consequence: you can get the information you need wherever there's an Internet connection. This results in significant time savings and virtually eliminates travel costs during the training process.

Our highly-qualified specialists will help you find the answers to your questions and elevate your level of professional expertise.

Installation Training Guides

A wealth of training tools lets you get the information you need from the most convenient source. Quality materials and professional expertise – the foundation of long-lasting knowledge.

TECHNONICOL'S range of training tools encompasses a series of videos and printed materials in the form of guides on the installation of various types of TECHNONICOL stonewool heat-insulation systems.

The videos and publications make it possible to study the main points associated with the installation of system materials, the required components and equipment, and the technical characteristics of the materials.

Each training tool is a professional visual guide whose study makes it possible to correctly choose the appropriate heat-insulation and/or fireproofing material for a particular building structure and avoid future problems associated with the incorrect installation of insulation.

academy.tn.ru

academy.tn.ru/obuchenie/online/webinar

tn.ru/catalogue/sistemy_ognezacshity

Calculators

The technical-insulation calculator makes it possible to select the appropriate technical-insulation thickness per CR 61.13330 and CR 60.13330 by 5 types:

- calculation by heat-flow density rates – heat insulation of equipment and pipes;
- calculation by preset temperature on the insulation surface;
- calculation aimed at preventing moisture condensation on the insulation surface;
- calculation for the insulation of two-stack heating-system pipes;
- calculation for insulation intended to prevent water from freezing in pipes for a predetermined period of time.

The resulting detailed, step-by-step calculation can be printed out or saved in PDF format.

The fireproofing calculator makes it possible to calculate the required thickness of the fireproofing layer made from TECHNO Slab OZM. Calculations are made according to the instructions developed by FSI Scientific-Research Institute for Fire Safety at the RF Ministry of Emergency Situations, based on two main factors:

- 1) required maximum fire resistance of the structure;
- 2) effective metal thickness.

As a result, you get the minimum thickness of fireproofing slab needed to ensure the required maximum fire resistance.

ProjectNavigator Interactive Building-System Directory

TECHNONICOL'S ProjectNavigator Interactive Building-System Directory is a unique free service for architects and engineers in the form of an interactive programme featuring the detailed elaboration of turnkey solutions.

The programme has been designed to simplify the work entailed in choosing the right insulation system for equipment, pipes, air ducts and fireproofing systems for a range of different structures, as well as to speed up the time needed to work out the chosen technical solution.

Working with ProjectNavigator, you'll be able to:

- quickly and easily choose the right insulation or fireproofing system for foundations, facades, floors, roofs, technical equipment, pipes and air ducts, depending on the functional and engineering specifics of the building being designed;
- find the required information about the materials used in TECHNONICOL building systems – their weight, thickness, consumption rate and other specifications;
- get information on the installation specifications of the structures being designed, examine blueprints of interest;
- make the required thermotechnical design, select the appropriate layer thickness of the insulation system.

International standards



At all TECHNONICOL stonewool production plants, the quality management system satisfies the requirements of international standard ISO 9001:2015, as is evidenced by the consistently-high level of quality of our manufactured products.

Russian regulations and standards



All TECHNONICOL stonewool products are certified. Their properties, safety and characteristics meet the latest requirements of Russian standards and regulations.

Conformance with technical regulations. "Rosizol" Quality Seal

Established in 2002, the Association of Russian Producers of Modern Mineral Insulation "Rosizol", whose membership includes TECHNONICOL, has developed the "Rosizol" Quality Seal. The presence of the seal confirms and guarantees that the material conforms to the most stringent quality standards.

Application of technical-insulation and fireproofing materials by TECHNONICOL

		Wired Mat (MP)	TECHNO Mat Lamel 35	TECHNO Mat Lamel 50	TECHNO Wired Mat 50	TECHNO Wired Mat 80	TECHNO Wired Mat 100
Air ducts							
Heat insulation of hot-running air ducts	rectangular						
	circular						
Vapour-insulation of cold-running air ducts	rectangular						
	circular						
Pipes							
Pipes with a diameter of up to 219 mm	t < 250 °C						
	250 °C < t < 640 °C						
	640 °C < t °C						
Pipes with a diameter of from 219 to 324 mm	t < 250 °C						
	250 °C < t < 640 °C						
	640 °C < t °C						
Wide-diameter pipes > 324 mm	t < 250 °C						
	250 °C < t < 640 °C						
	640 °C < t °C						
Insulation from condensate							
Soundproofing							
Reservoirs, boilers, furnaces and equipment							
Boilers and reservoirs	t < 250 °C						
	t > 250 °C						
Boilers							
Flat surfaces							
Cast-iron chimneys							
Steel smokestacks							
Equipment and pipes containing strong oxidizing agents (liquid oxygen)							
Fireproofing							
Fireproofing of metal structures							
Fireproofing of concrete structures							
Fireproofing of air ducts							
Fireproofing of corrugated sheeting							
Fireproofing of fire doors							
Application temperature, °C			250	250	570	640	650
Use of the material prohibited							
Use of the material permissible yet not expedient							
Use of the material recommended							
Material specially developed for precisely this use							

Stress-strain properties of insulation materials

Indicator, unit of measurement	Fireproofing					
	Concrete		Metal	Doors and gates		
	TECHNO Slab OZB 80	TECHNO Slab OZB 110	TECHNO Slab OZB	TECHNO Slab OZB 110	TECHNO Slab OZB 190	
Density, kg/m ³	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 ₆₈₀	–	–	–	–	–	
Compressibility, % (max)	–	–	–	–	–	
Elasticity, % (min)	–	–	–	–	–	
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

Technical insulation																				
Wired Mat				TECHNO Mat Lamel		TECHNO Slab T						TECH-NO Mat	TECHNO Wired Mat				Mineral Wool	TECHNO Cylinder		
MP 50	MP 75	MP 100	MP 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)	
0.038	0.035	0.034	0.032	-	-	-	-	-	-	-	-	-	-	-	-	-	0.036	-	-	
0.040	0.037	0.038	0.039	0.040	0.038	0.038	0.036	0.035	0.036	0.037	0.039	0.038	0.036	0.034	0.034	0.036	0.038	0.038	0.043	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	0.045	0.043	0.043	0.040	0.040	-	0.040	0.043	0.044	-	0.038	0.038	0.039	-	0.039	0.037	
-	0.047	0.044	0.042	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.049	0.044	
-	0.052	0.050	0.046	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	-	-	
-	0.068	0.061	0.055	-	-	-	0.071	0.064	-	-	0.060	-	-	-	-	-	-	0.076	0.064	
-	0.101	0.082	0.072	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	0.118	0.094	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15	0.113	
-	0.138	0.114	0.100	0.201	0.180	0.168	0.151	0.124	-	0.103	0.095	0.168	-	0.130	0.110	0.104	-	-	-	
-	0.183	0.153	0.129	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	0.236	0.201	0.161	-	-	0.316	-	-	-	0.219	-	-	-	0.260	0.226	0.207	-	-	-	
-	-	-	-	-	-	-	0.323	0.282	-	-	0.182	-	-	-	-	-	-	-	-	
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	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*							
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; 1,200; 2,400	1,200; 1,200; 2,400	1,200; 1,200; 2,400	1,200; 1,200; 2,400	1,200; 1,200; 2,400	1,200; 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	Inner 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	

Recommendations

Design and installation

In the Russian Federation, the design and installation of technical insulation must comply with CR 61.13330.2012 – heat insulation of equipment and pipes.

Safe temperature at the surface of the insulation

In case of hot-running pipes, according to CR 61.13330.2012, the layer of insulation must ensure an insulation surface temperature of:

Indoors and for equipment and pipes containing substances with a temperature of:

- over 500 °C – 55 °C;
- from 150 to 500 °C – 45 °C;
- 150 °C and below – 40 °C.

Outdoors:

- in case of a metal covering layer – 55 °C;
- in case of other covering layers – 60 °C.

In case of cold-running pipes, it's essential to provide for an additional layer of vapour insulation or to use materials coated with reinforced aluminium foil.

Covering layer and insulation durability

According to the same CR 61.13330.2012, in case of outdoor pipes, an additional protective covering layer must always be used. A protective covering layer entails the use of support elements to ease the load: support brackets or rings.

When using TECHNO Cylinders to insulate pipes running at a temperature of up to +250 °C, it is permissible to forego the use of support brackets/rings, insofar as the insulation is self-supporting. Support brackets must be used at temperatures of over +250 °C.

In cases where the equipment/pipe being insulated is indoors, an additional protective covering layer need not be used – provided the insulation is reliably shielded from physical impacts.

Insulation installation

Installation must be performed in such a way so as to avoid moisture coming into contact with the insulation to the greatest extent possible.

Outdoor installation during rain, snow, hail and other inclement weather conditions is prohibited. This could result in damage to the insulation.

Insulation storage

Insulation must be stored in enclosed, dry storage areas. Keep away from moisture!

Durability

The durability of building structures depends on a number of factors, such as correct calculations at the design and structural-engineering stage, expert assembly-and-installation work, observance of the relevant transportation and storage conditions for the corresponding building materials, and so on.

Years of experience, modern equipment, the constant refinement of emerging technologies and the advancements developed at our own Research and Technology Centre let TECHNOMICOL manufacture consistently high-quality stonewool products that maintain their performance claims throughout the entire service life of the respective buildings and structures. The safety and quality of TECHNOMICOL stonewool products have been confirmed by all of the required documents, including a Technical Approval issued by the RF Ministry of Construction, Housing and Public Utilities.



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