

A stylized logo consisting of a semi-circle filled with several overlapping, pointed leaf shapes in various shades of green. The leaves are arranged symmetrically around a central vertical axis.

«LOTOS» Ltd

We give heat
and silence

PRODUCTION OF HEAT-INSULATING AND SOUND-PROOF MATERIALS FROM BASALT SUPERTHIN FIBRE

- ▶ **ABOUT COMPANY**
- ▶ **PRODUCTS**
- ▶ **WHRE TO USE**

In 1991 in the city of Syktyvkar “Lotos” Ltd. factory construction began. At construction and purchases of the equipment all advanced technologies which was earlier only in nuclear power, aircraft industry and shipbuilding were used.

At the end of 1992 the first production was made.

Now “Lotos” Ltd. - the successful enterprise which increases every year quantity and the product range.



Production of “Lotos” Ltd. is made of basalt superthin fiber (BSTV) which turns out as a result of fusion of crushed trap rock.

These are very thin (no more than 3 microns) and long threads.


Thanks to structure of BSTV allows to make products without binding substance. These thinnest fibers have a huge number of the minute pores which are filled with air that interferes with the radiation of heat and sound penetration on a surface.

Basalt superthin fiber and product from it:

- environmentally friendly (doesn't contain phenols)
- durable, resistant to vibrations;
- nonflammable, fire-resistant, fireproof;
- chemically neutral, nontoxic;
- resistant in relation to microorganisms and rodents, doesn't decay;
- doesn't increase the diffusion resistance of buildings (excellent vapor permeability);
- possesses low hygroscopicity (doesn't absorb moisture from air);



TYPES OF PRODUCTS

<u>BASALT FELTS</u>	<u>HEAT-INSULATING BASALT MATS (piercing)</u>	<u>HEAT-INSULATING BASALT MATS (with lining)</u>	<u>HEAT AND SOUND INSULATING BASALT MATS</u>	<u>NOISE-ABSORBING BASALT MATS</u>
<p>the fibrous material consisting of chaotically located fibers with a diameter no more than 3 microns which are fastened among themselves by forces of natural coupling.</p> <p>Type: BSTVst, BSTVsp TOR 5761-002-12881589-03</p>	<p>are made on the basis of BTSVst and are stitched by vitreous fiber.</p> <p>Type: MTB TOR 5769163-004-12881589-03</p>	<p>are made on the basis of BTSVst and are revetted with fabric (glass, basalt, silica) or the metal gauze.</p> <p>Type: MTBS, MTBK, MTBB, MTBM TOR 5769163-004-12881589-03</p>	<p>are made from BSTVsp, are revetted from all directions with glass, basalt or silica fabric. The corresponding threads stitch them.</p> <p>Type: ATM-10, ATM-10k, ATM-10b TOR 5769163-004-12881589-03</p>	<p>are made from BSTVsp, are revetted from all directions with fiber glass fabric. The corresponding threads stitch them.</p> <p>Type: BZM-L TOR 576990-003-12881589-01</p>
				
<p>Size: Length – 2000 mm Width – 1000 mm Thickness - 125 mm</p>	<p>Size: Length – 1000 - 6000 mm Width – 500 - 1000 mm Thickness - 50 - 100 mm</p>	<p>Size: Length – 1000 - 6000 mm Width – 500 - 1000 mm Thickness - 50 - 100 mm</p>	<p>Size: Length – 1100 mm Width – 600 mm Thickness - 10 - 50 mm</p>	<p>Size: linear parameters of mats are defined together with the customer.</p>

Production is certified on fire safety, on compliance to requirements Sea and River to Registers of the Russian Federation and as has the certificate "NIKIMT-Atomstroy" for application on objects of the nuclear industry



QUALITATIVE CHARACTERISTICS OF PRODUCTION

Characteristics	Unit of measurement	Definitions			
		BSTVst, BSTVsp	MTB	MTBS/ MTBK/ MTBB/ MTBM	ATM-10/ ATM-10k / ATM-10b
Operating temperature	° C	- 269 ÷ +700	- 269 ÷ +700	-60 ÷ +450 / -170 ÷ +1000 / -260 ÷ +600 / - 269 ÷ +700	-60 ÷ +450 / -170 ÷ +1000 / -260 ÷ +600 /
Density	Kr/m3	18	23-60	23-60	41-91
Thermal conductivity with 25 ° C	Bт/(M*K)	0,042	0,040 ÷ 0,034	0,040 ÷ 0,034	0,034
Humidity, no more than	%	2	2	2	2
Consolidation temperature	° C	1040	1040	1040	1040
Water resistance	%	96,4	96,4	96,4	96,4

CHARACTERISTICS OF SOUND-ABSORBING MATS – BZM-L

Frequency range	Normal coefficient of a sound absorption at a thickness of BZM-L, mm		
	50	100	200
Low-frequency 100-250 Hz	0,08-0,46	0,21-0,98	0,70-0,66
Mid-frequency 250-1000 Hz	0,46-0,73	0,98-0,80	0,66-0,77
High-frequency 1000-2000 Hz	0,73-0,86	0,80-0,85	0,77-0,83

Products from BSTV are used as in construction for warming and noise suppression in designs of protections and overlappings, and for a noise isolation and thermal insulation of units, equipment, pipelines in the machine-building, gas industry, oil industry, nuclear branch, energy production and shipbuilding.





LOTOS

Russia, 167000, Komi Republic, Syktyvkar, K. Marks street 201 A, p/o box 855
Phone numbers.: General Manager (8212) 21 45 86, Chief accountant (8212) 24 32 68,
Fax: (8212) 21 45 86
TIN 1101046589, KPP code 110101001, PSRN 1051100561071



167000, Russian Federation, Komi Republic, Syktyvkar, 201a Karl Marx street
tel.: +7(8212) 21-43-65, 24-32-68, fax: (8212) 21-43-65 WWW: www.lotos-komi.ru

“Lotos” since 1991 makes basalt superthin fiber, heat-insulating and sound-proof materials on its basis. Our production with success is used by structures of JSC Gazprom, JSC Lukoil, JSC TVEL, JSC Rosenergoatom Concern, JSC NPO Saturn, energy production companies and many other consumers.

Thermal insulating materials are issued in the form of BSTV canvases (basalt superthin fiber), mats of heat and sound insulating basalt ATM-10 and mats of heat-insulating basalt MTB (in a facing glass, basalt, silica fabric or the metal gauze).

Sound-insulating materials are issued in the form of basalt sound-absorbing mats of BZM-L.

Scope of materials - isolation of the industrial equipment, pipelines, steam lines, regenerators and gas flues, warm sound insulation in designs of buildings of industrial and civil function, thermal insulation of tanks of water and oil, in shipbuilding.

Key parameters of our materials:

- operating temperature from -269 °C to +700 °C (consolidation temperature is 1040 °C);
- heat conductivity no more than 0,036 W / (MK);
- incombustibility;
- lack of issue of harmful substances;

Production passed all necessary tests, has the corresponding conclusions and certificates in Russian Federation. It is certified by NIKIMT-ATOMSTROY for use on objects of the nuclear industry.

Cod TNVED – 6806100009

We are ready to participate in exhibitions and conduct business missions to discuss aspects of possible cooperation in foreign countries.

General manager
Ltd «Lotos»
Stanislav Petrov