

Sound and vibration
isolation properties of
the entire line of
Bronya "Light"

BRONYA[®]
SUPERFINE HEAT INSULATION



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Table of contents Line Bronya "Light"



For application at a positive temperature:	For application at low temperatures (up to -35), taking into account the normal "dew point":
<ol style="list-style-type: none">1. Bronya "Light"2. Bronya "Light NG"3. Bronya "Light AIRLESS"4. Bronya "Light AIRLESS NG"	<ol style="list-style-type: none">1. Bronya "Light NORD"2. Bronya "Light NORD NG"3. Bronya "Light NORD AIRLESS"4. Bronya "Light NORD AIRLESS NG"

Soundproof properties of the Bronya "Light" line



If you need to reduce noise and vibration caused by resonating metal, rely on Armor Light. With minimal application effort, the coating spreads quickly and lasts for many years with little or no maintenance. Unlike conventional insulation, Light significantly reduces corrosion under the insulation.

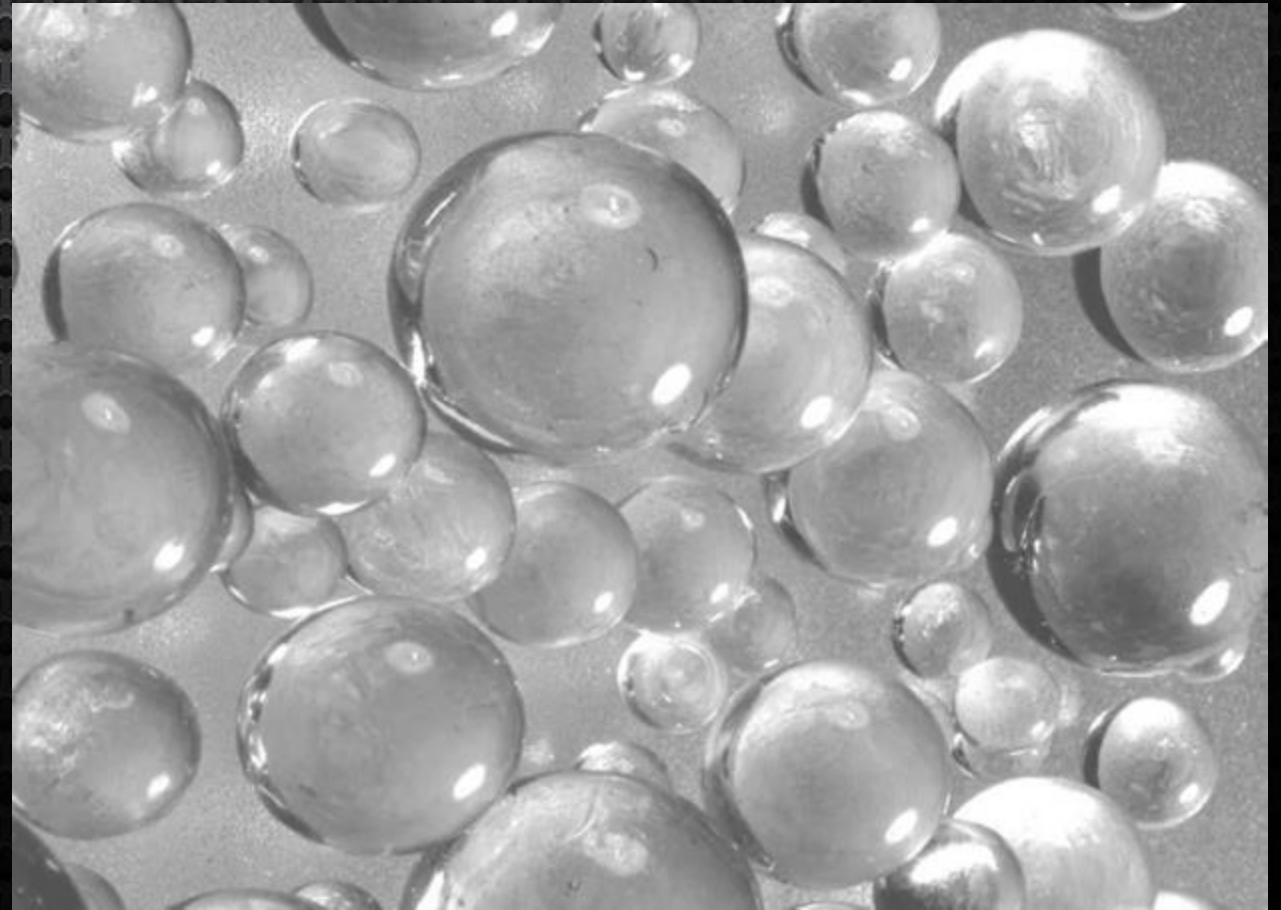
Heat-insulating coating Bronya Light is an innovative material for construction and finishing works, designed for heat and sound insulation of internal and external surfaces made of concrete, brick, cement-lime plasters, gypsum blocks and slabs, gas and foam concrete, gypsum plasterboard, gypsum plasterboard, etc. ...

Armor Light is non-toxic, does not contain harmful volatile compounds, and is also completely safe for people with allergies, which is confirmed by the Conclusion of the sanitary and epidemiological examination issued by the FBU Healthcare Center for Hygiene and Epidemiology in Moscow.

Soundproof properties of the Bronya "Light" line



- The uniqueness of the heat and sound insulation coating Bronya Light is that the material has inherited all the positive properties of "airgel", while expanding and supplementing the scope and functionality.
- "Light" has similar thermal insulation properties of the main line, but in addition to a high-quality heavy microsphere, which, in addition to excellent thermal insulation properties, provides additional vibration-damping properties, it contains a highly porous aerogel with heat-insulating and vibration-damping (soundproof) properties.

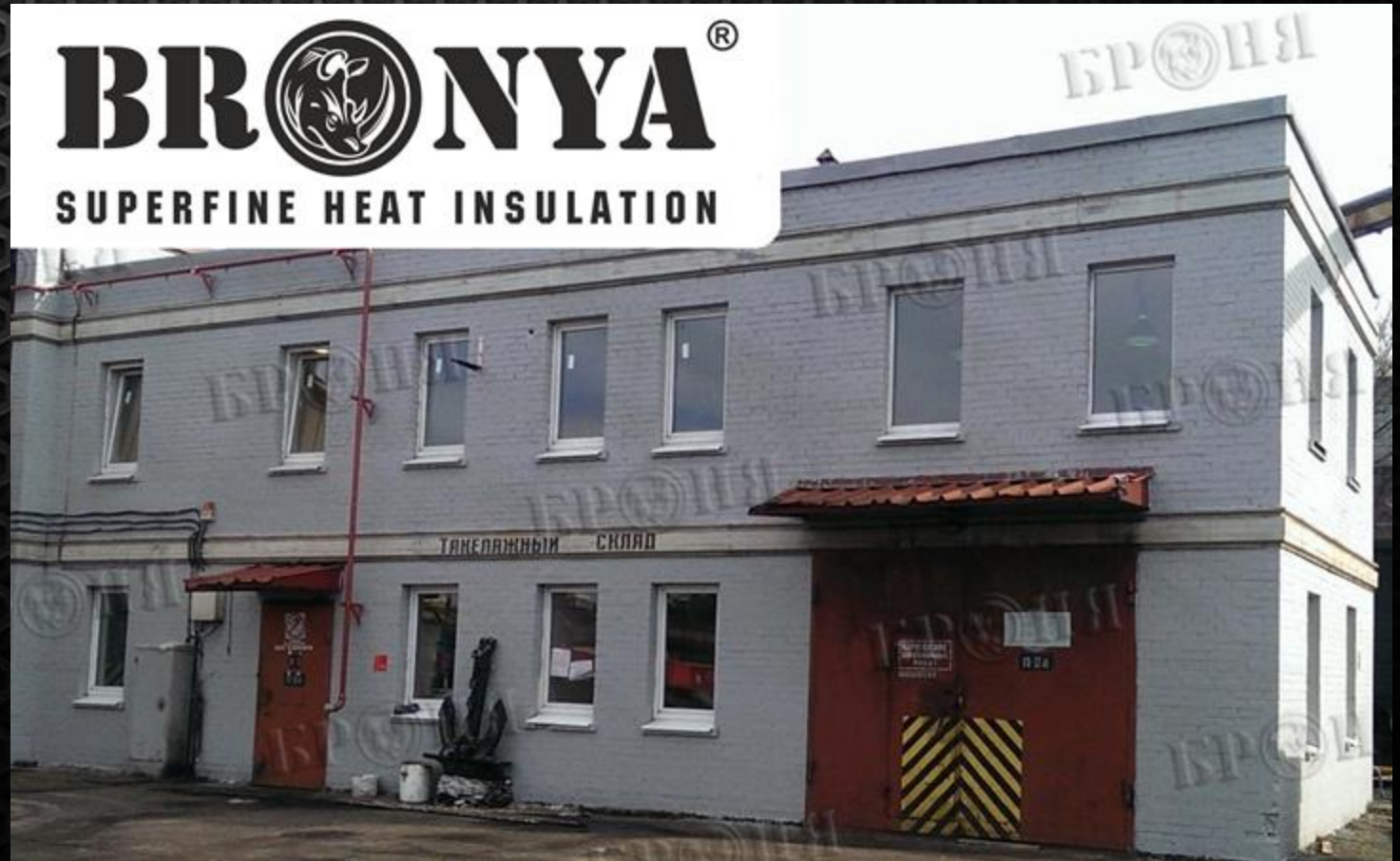


Soundproof properties of the Bronya "Light" line

- The special composition of heat and sound insulation Bronya Light allows you to perform plastering and heat insulation works on the facades of buildings and structures at the same time, reducing labor costs and shortening the time of work. The Bronya Light coating has high adhesion, vapor permeability, weather resistance, and durability.

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Advantages of applying sound and vibration insulation Bronya "Light"

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- Unlike gluing with vibration-damping mats, there are no non-closed parts (boxes, seams, etc.), "cold bridges",
- Adhesion is several times higher, which allows materials to be applied to the roof panel without the risk of delamination,
- The specific gravity of the materials is much lower, with higher sound absorption coefficients,
- High anti-corrosion properties allow the material to be applied to the floor of the body,
- The material does not contain volatile solvents, is absolutely harmless to health, and has no smell.

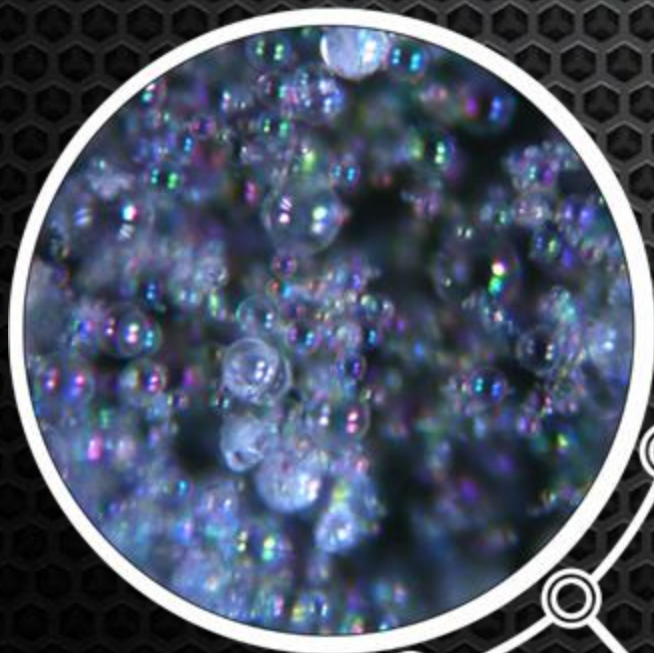


Noise reduction studies



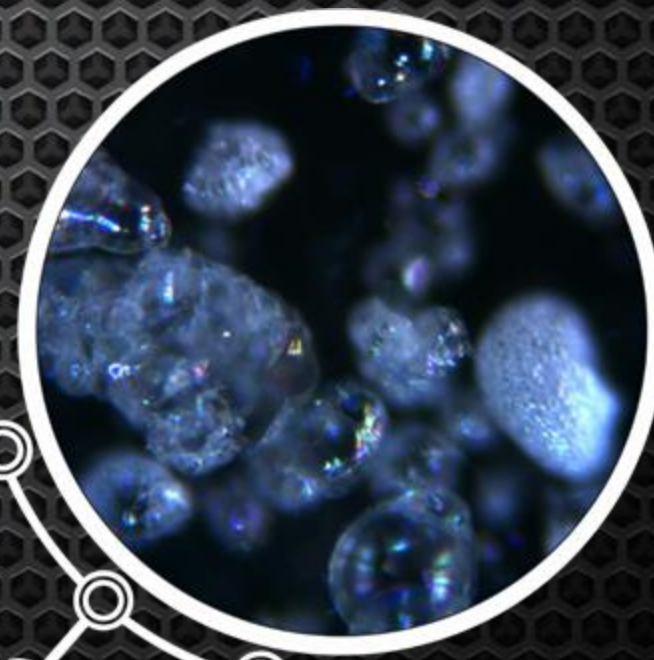
- A decrease in noise by 3 dBA is subjectively perceived by a person as being in earplugs or a decrease in sound by about 2 times. The noise measurement dependence is expressed in dBA (logarithmic value). So, for example, the general noise level: whispering - 40 dBA, in the forest (in calm weather) - 50 dBA, elevator - 70 dBA, jet engine of an aircraft - 140 dBA.
- Table 1. Comparative measurements of the noise level of a car before and after application of Bronya "Light"

The treatment was carried out with a brush, layer 1-3 mm (uneven)	Noise level above the hood (outside) engine speed 800	Noise level inside the cabin at idle (engine speed 800)	40 km / h	60 km / h	80 km / h	90 km / h
Noise level before processing	74-75 dBA	78 dBA	90-93 dBA	92-93 dBA	97-98 dBA	97-100 dBA
Noise level after processing	68-69 dBA	70 dBA	86-87 dBA	87-88 dBA	92-93 dBA	93 dBA



Microsphere 3M
under the microscope

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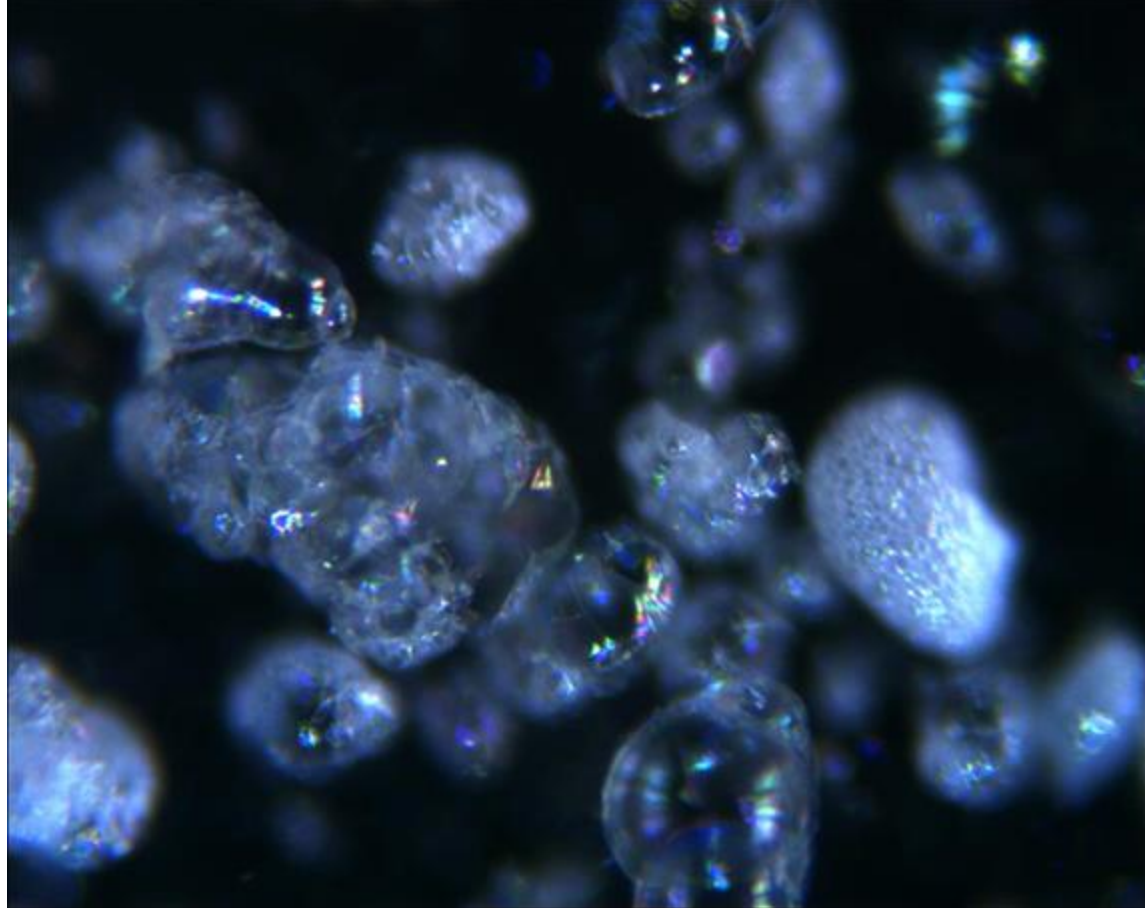


Airgel powder under the
microscope



Description of the airgel

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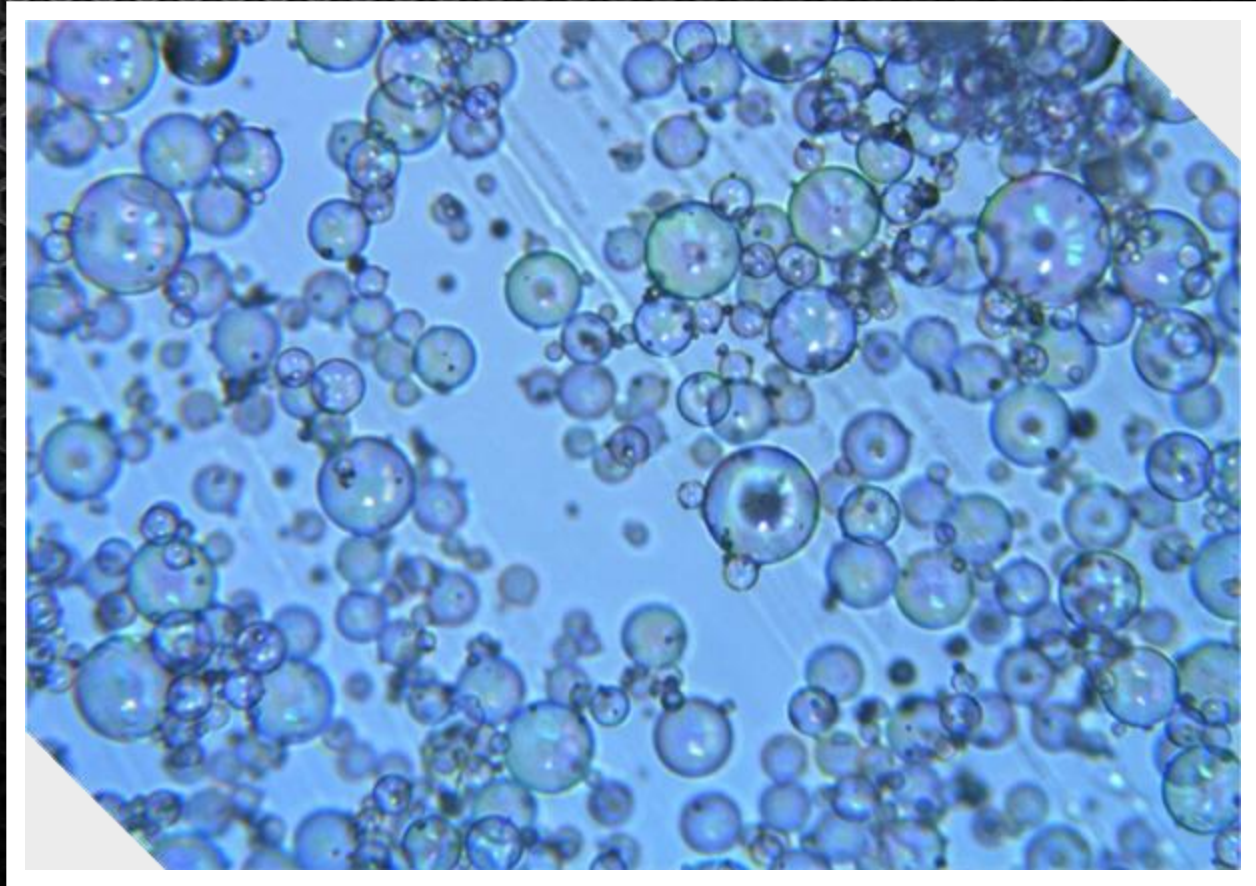


The Bronya "Light" modifications include airgel. ... Due to its low density, the airgel has good sound-insulating and vibration-absorbing properties. As you know, the higher the density of a substance, the higher the sound and vibration transmission. Consider a simple example: the transmission of sound in an aquatic environment, the density of water is 997 kg / m³, while, as above, the density of the airgel is 1.9 kg / m³. When compared, the difference in density speaks for itself.

Description of the microsphere



The Bronya "Light" modification includes a heavy microsphere 3M, as well as airgel has a low density, but at the same time better thermophysical properties, which makes Bronya "Light" a good heat-insulating material. Reinforces the airgel powder from mechanical damage in the composition.



Application methods



Surface	Combination Bronya	Application
Metal	Bronya "Antikor" * + Bronya "Light"	Non-enclosed metal indoors
	Bronya "Light"	Indoor primed metal
	Bronya "Antikor" * + Bronya "Light" + Bronya "Aquablock" **	Non-enclosed metal outdoors
	Bronya "Light" + Bronya "Aquablock" **	Primed metal outdoors
Concrete surfaces	Bronya "Light"	Indoor concrete, brick and other building materials
	Bronya "Light" + Bronya "Aquablock" **	Concrete, brick and other outdoor building materials

* - Bronya "Anticorrosive" contains a microsphere, hence additional vibration damping, and also includes corrosion inhibitors. Has modifications with the NG index.

** - Bronya "Aquablock" does not contain no airgel powder, no microspheres, but is an excellent waterproofer and protector of a porous coating, and also, due to its high elasticity and degree of elongation, has obvious additional sound-reflecting properties.

Application in transport



Estonia. Thermal insulation of a minibus



Moscow. Car body insulation



Belarus. Heat and sound insulation of the car



Permian. Insulation of a tanker

Certificates and approvals

- Technical certificate of the Ministry of Construction of the Russian Federation
- Technical certificate of the Ministry of Architecture and Construction of the Republic of Belarus
- CE declaration
- Sanitary conclusion of the European Union
- Maritime Register
- Fire certificate G1
- Fire certificate NG
- MosStroyCertification for each modification
- River register
- Conclusion VNIIZHG
- Conclusion of VNIIZhT (Russian Railways)
- Sanitary and epidemiological conclusion





Interior of the barge's steel deckhouse

Icebreaker "Velikiy" in Estonia



Thermal insulation of technological equipment
supplied to various ships at a construction plant



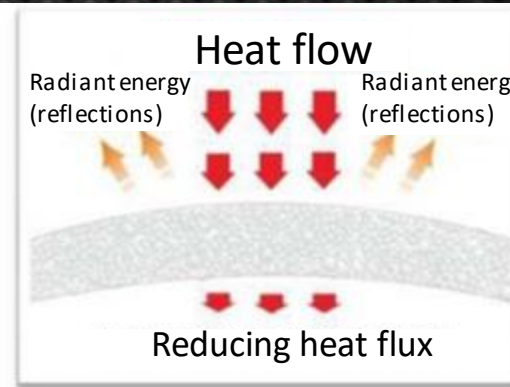
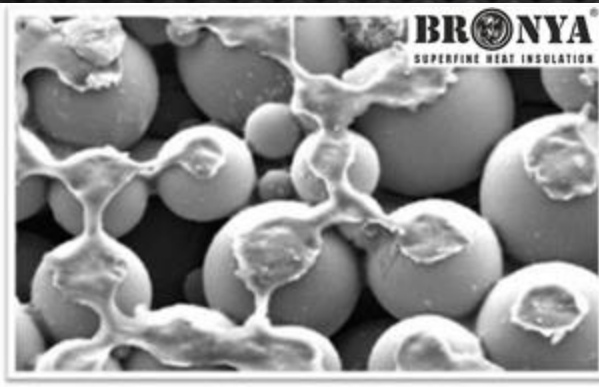
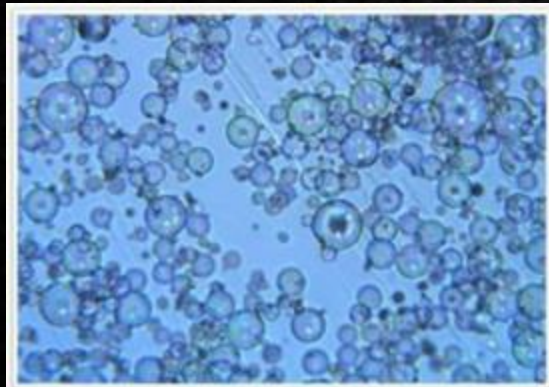
Insulation of interior surfaces on
a patrol boat



Thermal insulation properties of Bronya



Ultrathin heat-insulating coatings of the Bronya series consist of a high-quality acrylic binder, an original developed composition of catalysts and fixers, and ultra-thin ceramic microspheres with rarefied air. The consistency of the material resembles ordinary paint, which can be applied to almost any surface. After drying, an elastic polymer coating is formed, which has excellent thermophysical properties. Due to its structure, the material has a low heat transfer from the surface, which plays a decisive role in thermal physics.



Microsphere under a microscope

Thermal insulation Bronya under the microscope

Heat flow diagram

Shooting an electric stove with a thermal imager, with a half-insulated Bronya