

BRONYA

SUPERFINE HEAT INSULATION

INSTRUCTION

Ultra-thin thermal insulation BRONYA LIGHT NORD

BRONYA LIGHT NORD is designed for use in the construction, reconstruction and repair of residential, civil and public buildings, at low ambient temperatures from +30 ° C to -35 ° C. This modification has a low Newtonian fluidity, so when applied to vertical surfaces virtually no effect of "sliding", even when applying a layer thickness of 1 mm or more. Also, the material has a high vapor permeability and can be used for insulation of enclosing structures of buildings and structures. Operating temperature modification **BRONYA LIGHT NORD** is from -60 ° C to +90 ° C. When working with liquid thermal insulation coating **BRONYA LITE NORD** special attention should be paid to:

- Before opening the container, it is necessary to ensure the integrity of the seals
- In the preparation of the material is not be over-mixed it (see section 2 this instruction)
- In the preparation of the material is not excessively dilute it (see paragraph 2 this instruction)
- Prior to work on the application of the material **BRONYA LIGHT NORD** on the facades buildings to be repaired, it is necessary to make an expert assessment condition of the object and perform work on the overhaul of all external elements to be coated with the material.

TECHNOLOGY and organization of production work

Material **BRONYA LIGHT NORD** refers to water-active systems and contains closed-cell suspension of microgranules in solution acrylic, silicone-modified resin with the addition of plasticizers, biocides, fungicides and other additives. Has good vapor permeability and moisture resistance, high light resistance. The material **BRONYA LIGHT NORD** has good adhesion to most substrates, does not pass water, alkali-resistant, suitable for use on a variety of grounds.

1. Surface preparation

Surfaces prepared for the application of the material must be dry, smooth and clean. The moisture content of painted surfaces must not exceed: for plaster and brick - 5% in concrete - 4 %; When applying the material **BRONYA LIGHT NORD** humidity of the ambient the air must not exceed 80%; do Not apply material **BRONYA LIGHT NORD**:

- in the rain, and on the damp facade after the rain;
- in snow and on wet facade after the snow;
- if there is frost on the surface to be treated, ice.

It is not recommended to apply material **BRONYA LIGHT NORD** on substrates previously covered with silicate paints, silicate primers. It is not recommended to apply the material on wood and metal surfaces. The exception is made by the metal surfaces covered with specialized protective coatings such as primers, anti-corrosion coatings, **BRONYA ANTIRUST** or **BRONYA CLASSIC**, etc., since the porous structure modification **BRONYA LIGHT NORD** contributes development of corrosion of metal substrates. It must be remembered that, despite for the high alkali resistance of the cured material in liquid the material is **BRONYA LIGHT NORD** badly interact with the substrate, having a high pH. Therefore, it is not recommended to apply the material on concrete, cement, cement - sand surfaces, the drying time of which is less than 30 days. Before applying the material **LIGHT ARMOR NORD** painted surface must be prepared. In the preparation of the surfaces of the facade elements, concrete, brick, wood and similar surfaces: remove loose areas, point cracks, remove the oil inclusions, clean the concrete from the cement emulsion. To reduce material consumption it need to repair the surface using cement plaster mixtures, including between the brick seams and in cuts deeper than 5-7 mm. Sweep the surface to perform with the sandblaster, metal brush or abrasive wheels for removing the gloss on the surface and remove all the loose and crumbling structures. After mechanical treatment of the surface should be carried out thorough dedusting using brushes or blowers. After that, it is necessary to wash with water to remove dirt, remaining dust, etc. With partial removal of paint layers, the facade surfaces are cleaned of soot, dirt and dust. Clearing when the restoration is made by the formulations of the type "AFG" followed by degreasing with a solvent 649, 147, etc. As the same permitted use as a soil material **BRONYA LIGHT NORD** diluted orthoxylene 20 - 50%. Surface temperature and ambient air when applied by airless spray, paint brush, rubber spatula from +30°C to -35°C.

2. Preparation of coatings **BRONYA LIGHT NORD**

Preparation of coverage includes the following items:

Mixing of the material — manually or mechanically (mixer). When using a drill with a blade nozzle or mixer (recommendations on the choice of equipment, check with the representative of the **BRONYA** in Your region) Using vertical movements of the blade so as to immerse the thickened part in the liquid, turn the drill and slowly start rotating the blade, mixing clots with the liquid. With a long shelf life inside the container, Stir until the product becomes a homogeneous thick mass. Approximate mixing time — mixer 3-8 minutes, manual mixing 7-10 minutes.

Before use, to give the material the necessary consistency, **be sure** to add solvents to the **BRONYA LIGHT NORD**. **Orthoxylene should be used as a solvent. The use of other solvents is not recommended!** Addition of solvent is 5 - 10% of the volume of the material **BRONYA LIGHT NORD** (until the working consistency of the material). After the solvent is added, the material must be used. It is necessary to periodically mix the material in the container when applied with a brush — every 5 to 7 minutes. Also, when applying with a brush, it is not recommended to take the material from the bucket. It is necessary to fully prepare the material, then put a small amount (a few liters) in a smaller container, which can be easily mixed with a brush during operation. When applied with an airless spray, the material in the container must be stirred continuously, i.e. one person mixes while the other is applying.

3. Coating **BRONYA LIGHT NORD**

It is recommended to work with a spatula, a soft brush with a long natural bristle, an airless sprayer or plaster machines (recommended brands and models of airless sprayers, as well as recommendations for their configuration, check with a representative in your region). Apply the coating on small surfaces or areas with a complex configuration can be using a soft brush. Surfaces with an area of 100 m² can be treated with an airless sprayer with a

working pressure of more than 140 bar. **(IMPORTANT!!!) Not all airless sprayers are suitable for BRONYA plating!!!** Recommendations for the selection, configuration and operation of airless sprayers check with the manufacturer or the nearest representative of the **BRONYA**. Also see additional technical map for work with airless sprayers). For better adhesion of the material to the treated surface, it is recommended to apply a primer layer on the prepared surface, with a liquid (like milk) composition of the material, diluted with 20-50% orthoxylene. The term of complete drying of one coating layer with a thickness of 1 mm – from 24 to 48 hours, the next layer can be Applied only after the previous layer has completely dried - after 24 to 48 hours under specified conditions. The thickness of the layer of 1 mm can be determined by the comb thickness gauge and material consumption - 1,1 l per 1 m² (approximate consumption when applying the brush coating on a flat surface) or the thickness of the "optical density" of the material (so that the material does not shine through the substrate). The material consumption is affected by the type of surface and the method of application. The total thickness of the coating and the number of layers is determined by thermal calculation, recommendations of certified regional production offices. Must not to work in damp weather, because the material is diluted with water, and it can't dry up. Since the material contains volatile, flammable solvents, when working with the material must take into account all fire safety requirements.

The thickness of a single layer by applying **BRONYA LIGHT NORD** is 0.5 - 1 mm. The period of complete drying of one layer of material of thickness 0.5 - 1 mm from 24 to 48 hours. The next layer can be applied only after complete drying of the previous layer (inter-layer drying) - after 24 - 48 hours. Theoretical material consumption: 1 liter per 1 m² at a coating thickness of 1 mm. While applying the brush flow rate can be increased by 5 - 10% loss on the brush. When applied by airless spray to flow must be added to 20 - 35% of the overrun.

Mechanical application (airless spray) requires constant, continuous mixing of the material during application. The application of the material is carried out in a continuous uniform layer, without gaps and breaks. Application of each layer is made after complete drying of the previous one. When working with airless sprayers, the following rules must be observed: constant mixing of the material in the container from which the fence for spraying (one person continuously mixes, the other at this time applied); the material is applied in two mutually perpendicular directions:

- the first layer - moving the paint sprayer in the vertical plane, the second - in the horizontal;
- the speed of movement should be uniform and be 14 - 18 m/min;
- in order to obtain a uniform coating, the applied strip of material must cover the previously applied one by 0.3 widths;

when preparing the paint sprayers for operation, it is necessary to pay attention to the cleanliness and alignment of the nozzle holes for spraying the material of the air head, the tightness of the equipment. Self-tinting of the material is not recommended. After complete polymerization (drying) is allowed to paint the coating with acrylic water-dispersion paints.

A set of non-combustible properties occurs after 7 days after applying the last layer.

4. The conditions of storage and transport BRONYA LIGHT NORD

Storage conditions: in tightly closed containers at temperatures from -40°C to +40°C. Shelf life: 12 months. During transportation or long-term storage, internal stratification of the material is allowed, which is eliminated by careful mixing immediately before application. Transportation is carried out by any mode of transport at temperatures above -40°C to +40°C away from direct sunlight. Packaging of cargo for transportation must ensure the correct installation of containers and the safety of containers. Violation of the integrity of the container leads to damage to the material.

5. Safety and health, environmental and fire requirements securities.

When applying the material **BRONYA LIGHT NORD**, workers must be provided:

- special footwear and clothing;
- rubber gloves;
- cotton gloves;
- points open or closed to protect the eyes;
- respirators for respiratory protection.

If the material gets on the skin, remove it with a hand cleaner and rinse thoroughly with water. Material **BRONYA LIGHT NORD** and solvents should be stored in closed ventilated explosion-proof rooms. Work on the application of the material should be carried out in strict compliance with the safety and health, environmental and fire safety requirements established in your country.

The precise meaning of the parameters: the thickness of the layers, drying time, the intercoat drying time, solvent, etc. should be checked from an authorized dealer in your region or directly from the manufacturer.

In case of non-compliance with the instructions for the application and storage of the material, the manufacturer is not responsible for the quality of the coating.