

# BRONYA

## SUPERFINE HEAT INSULATION



### Selection & Specification Data

<b>Product Name</b>	Bronya Facade
<b>Description</b>	Bronya Facade is an ultra-thin liquid ceramic thermal insulation material that can be applied in layers of thickness from 0.5 mm to 1 mm at a time (depending on the application modes), and has a vapor permeability of high-quality facade paint (0.03). Armor Facade is an weather-resistant high-viscosity composition, specially designed for thermal insulation of vertical surfaces. The coating applied to the wall from inside or outside, forms a single seamless surface, retains heat throughout the room, which has a positive effect on the climate. Bronya Facade reflects up to 80% of the visible solar and infrared radiation spectrum. This leads to a significant reduction in heating of the interior in summer, the cost of air conditioning, and in cold weather – can reduce heat losses up to 30%. Heat-insulating coating Bronya Facade is a durable material with high adhesion to any building materials, along with good vapor permeability has hydrophobic (water-repellent) properties. Liquid ceramic heat insulator Bronya Facade is used for thermal insulation of plastered, concrete, brick, wooden other surfaces of building envelope structures and structures for external and internal works. Ceramic heat insulator Bronya Facade can be covered with acrylic paint on the top of the water dispersion base, wallpapering is allowed. Tinting Bronya Facade is allowed only under the condition of strict compliance with our technical map, following our recommendations for the selection of tinting pastes, technical nuances.
<b>Features</b>	<ul style="list-style-type: none"> <li>• perform insulation of walls both outside and inside;</li> <li>• keep the volume of usable area (with thermal insulation of walls from the inside);</li> <li>• do not increase the load on the building structure;</li> <li>• isolate facades with complex architectural solutions (including during reconstruction works);</li> <li>• to increase the temperature comfort of the room;</li> <li>• reduce costs and time for construction work.</li> </ul>
<b>Base</b>	Water-based Acrylic Insulation Coating
<b>Gloss</b>	Flat
<b>Priming</b>	Self priming over non-ferrous materials (stainless steel & aluminum). Primer required for carbon steel substrates.
<b>Topcoats</b>	Please consult NPO Bronya Ltd.
<b>Wet Weight</b>	5.2–5.3 lbs/gallon (0.63 kg/liter)
<b>Weight dry film to area</b>	0.035 lbs/ft <sup>2</sup> at 20 mils dft (0.170 kg/m <sup>2</sup> at 0.50 mm dft)
<b>Practical Volume Solids Content</b>	78–80%
<b>Average Coat Thickness</b>	20–22 mils WFT at 70°–130°F (0.5 mm WFT at 21°–54°C)
<b>Practical Dry Coat Coverage</b>	50–55 ft <sup>2</sup> /gal @ 20 mils (1.3 m <sup>2</sup> /liter @ 0.5 mm)
<b>VOC Content</b>	0.06 lbs/gal (7.6 grams/liter)
<b>Limitations</b>	Applications should not exceed 375°F (190°C).
<b>Storage</b>	Do not subject wet coating in pail form to freezing conditions. Coating should be kept in a warehouse between 60°F and 90°F

### Substrates & Surface Protection

<b>Surface Prep</b>	RECOMMENDED SUBSTRATE CONDITIONS Surface should be dry and free of foreign matter.
<b>Ferrous Surfaces</b>	Should be primed prior to application of Bronya Facade. Since the coating is waterbased, it is important to have a boundary layer of protection to prevent flash rusting.
<b>Non-ferrous Surfaces</b>	The coating can be applied directly to nonferrous surfaces. Surface should be clean and free of any oil, dirt or other foreign matter.

### Application Equipment

Listed below are the general equipment guidelines for the application of this product.

<b>Airless Sprayer</b>	<b>Pump Ratio:</b> 33:1 or larger
	<b>Volume:</b> 1.5 gpm (5.7 lpm) or greater
	<b>Hose:</b> 3/8" or larger with no more than 3' of 1/4" whip. 1/2" hose recommended for length above 50'.
	<b>Tip Size:</b> 0.017" (for tight spots) 0.019–0.023" (Normal use)
	<b>Pressure:</b> Minimum of 3000 PSI
<b>Small Spray Application</b>	Please consult NPO Bronya Ltd. for the Small Application Gun. This gun is excellent for small applications and touch-ups.
<b>Brush</b>	Can use
<b>Rolling</b>	Not recommended for this coating

### Application Conditions

<b>Surface Temperatures</b>	Surface temperatures for applications should be greater than 60°F (15°C) or above. Lower surface temperatures will increase dry times.
<b>Applications</b>	Ambient & Cold (60°–139°F, 15°–59°C): For temperatures (surface or ambient – whichever is lower), an initial tack coat is recommended of 10 mils (0.25 mm or 250 microns). This tack coat will help eliminate sag on vertical wall applications. Tack coat should be dry to touch prior to next pass. Typical coat thickness should not exceed 20–22 mils (0.5–0.55mm) wet. Coating can be reapplied after each coat is thoroughly dry. Hot (>140°F, >60°C): Please consult NPO Bronya Ltd.
<b>Application Thickness</b>	Product can be applied in successive coats to increase insulation ability. There are no upper limitations.
<b>Dryfall</b>	Dryfall within a 3 ft radius

## Coating Specifications

Appearance composition	Suspension white	#.4.2. TC
Surface appearance	semi-plain matte film white	#.4.3. TC
Mass fraction of nonvolatile substances in the composition, not less than	at least 50 %	#. 4.4. TC
Ratio heat transfer, W/m2· °C	1,4±0,7	#. 4.5. TC
Ratio thermal conductivity, W/m·°C	0,001±0,0002	#. 4.6. TC
Resistance to static action water at 20°C for	24 h	
The adhesion of the coating	at least 1	GOST 9.403-80 method A
Linear elongation, %	at least 1	GOST 28574-2014
Resistance variable temperature	More than 80	GOST 18299-72
Ratio vapor permeability, Mg/m h PA:	0,03	GOST 9.401-91 method 12
Combustibility group	Г1	GOST 25898-2012
Group smoke-forming ability	B1	GOST 30244
Group Flammability	Д2	GOST 30402
Group toxicity combustion products	T2	GOST 12.01.044
Drying time for degree 3	5 hours	GOST 19007-73
Coverage dried film	186	GOST 8784-75
Film strength at impact	30	GOST 4765-73
UV resistance change in percent after 48 hours of irradiation	0,5 %	GOST 21903-76 method 2
Solar reflection	83%	ASTM E 903:01
The normal ratio radiation corrected	0,91	EN 673:1997
The ratio of OSL (SRI) for conditions with weak wind	103,56	ASTM E 1980:01
The ratio of OSL (SRI) for conditions with moderate wind	103,30	ASTM E 1980:01
The ratio of OSL (SRI) for conditions when the wind is strong	103,01	ASTM E 1980:01
The coefficient of permeability of the material, mg/m h PA	0,03	GOST 25898-2012
Surface temperature when applying the material, °C from	+7 to + 120	
Operating temperature, °C	-60 to + 120	
Material density at 20°C, kg / m3	600±10%	
Mass fraction of volatile substances, not more, %	43	
Hydrogen index of the material, pH	7.5-11.0	
Drying time and film formation at a temperature of (20±2)°C, not less than	24 hours	
Adhesion of the coating on the separation force, not less than, Mpa to concrete and brick surface to steel	1,3 2,2	
Resistance of coat to static action at a temperature of (20±2)°C, not less: Waters 5% NaOH solution	unchanged unchanged	



## Cleanup & Safety

<b>Cleanup</b>	Equipment may be cleaned with soap & water
<b>Safety</b>	Half-face respirator recommended with ammonia cartridge or better. Eye protection recommended.
<b>Ventilation</b>	Recommended for constricted areas.
<b>Caution</b>	This material is not for human consumption
<b>Clothing</b>	Safety clothing & gloves are recommended

## Mixing & Thinning

<b>Mixing</b>	Only a mud mixing paddle should be used. Use 1/2" drill motor to stir contents with paddle. Make sure drill is set to reverse to ensure that the paddle will not mar the bucket's inner wall. Please consult NPO Bronya Ltd. for paddle, if needed.
<b>Thinning</b>	Thinning is normally not needed. Please consult NPO Bronya Ltd. for specific instructions if thinning is desired.
<b>Pot life</b>	Coating is one part, so no catalyzation is needed. Pail can be reused if properly sealed.
<b>Container</b>	20 liters

## Package, Handling & Storage

<b>Container Wet (with pail/lid)</b>	12.47—12.7 kg per 20 liters
<b>Net Contents</b>	11.7 kg per 20 liters
<b>Flash Point (Setaflash)</b>	None
<b>Storage</b>	Do not subject wet coating in pail form to freezing conditions. Coating should be kept in a warehouse between 60°F and 90°F.
<b>Shelf Life</b>	12 months shelf life from manufacture date.
<b>Caution</b>	Do not let product freeze.

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