BRONYA

SUPERFINE HEAT INSULATION

Selection & Specifcation Data

Product Name	Bronya Winter NF
Description	Bronya Winter NF -the latest development in the line of ultra-thin liquid ceramic thermal insulation materials. Work on the application of Bronya Winter NF can be carried out both at low temperatures and positive from -35 °C to +30 °C, while the minimum temperature of application of conventional GITM can not be lower than +5 +7 °C. the heat Insulator Bronya Winter NF consists of a composition of special acrylic polymers and hollow vacuumized ceramic microspheres, as well as pigmenting, flame retardant, rheological and inhibiting additives.
Features	• allows to perform thermal insulation of building structures made of metal, wood, concrete, brick, plastic and other materials, as well as metal products, pipelines, industrial equipment for various purposes; • allows to perform works on thermal insulation in the winter period of time at negative temperatures to -35°C; • allows you to isolate the equipment without stopping technological processes.
Base	Water-based Acrylic Insulation Coating
Gloss	Flat
Priming	Self priming over non-ferrous materials (stainless steel & aluminum). Primer required for carbon steel substrates.
Topcoats	Please consult NPO Bronya Ltd.
Wet Weight	5.2–5.3 lbs/gallon (0.63 kg/liter)
Weight dry flm to area	0.035 lbs/ft^2 at 20 mils dft (0.170 kg/m^2 at 0.50 mm dft)
Practical Volume Solids Content	78–80%
Average Coat Thickness	20–22 mils WFT at 70˚–130˚F (0.5 mm WFT at 21˚–54˚C
Practical Dry Coat Coverage	50–55 ft^2/gal @ 20 mils (1.3 m^2/liter @ 0.5 mm)
VOC Content	0.06 lbs/gal (7.6 grams/liter)
Limitations	Applications should not exceed 375˚F (190˚C).
Storage	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

Surface Prep	RECOMMENDED SUBSTRATE CONDITIONS Surface should be dry and free of foreign matter. Steel; blast cleaned to ISO-Sa2S (NASE 3), blasting profile 30 - 75 mkm (1.2 – 3.0 mils) or according to ISO-St3
Ferrous Surfaces	Should be primed prior to application of Bronya Winter NF. Since the coating is waterbased, it is important to have a boundary layer of protection to prevent flash rusting.
Non-ferrous Surfaces	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.

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

Application Conditions

Surface Temperatures	Surface temperatures for applications should be greater than 60˚F (15˚C) or above. Lower surface temperatures will increase dry times.
Applications	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.
Application Thickness	Product can be applied in successive coats to increase insulation ability. There are no upper limitations.
Dryfall	Dryfall within a 3 ft radius

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Coating Specifcations

Appearance composition	Suspension white	#.4.2. TC
Surface appearance	semi-plain matte film grey (beige)	#.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
Combustibility group	НГ (NF)	GOST 25898-2012
Group smoke-forming ability	В1	GOST 30244
Group Flammability	Д2	GOST 30402
Group toxicity combustion products	Т2	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	-20 to + 40	
Operating temperature, °C	-60 to + 90	
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

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

Mixing & Thinning

Mixing 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.

Thinning Thinning Dilution Bronya Winter solvent is a must, and depends on the surface of the object and the method of applying thermal insulation, as well as the temperature of the surrounding air and the surface to be painted.For the application of superfine heat insulation Bronya Winter, according to the instructions for use on the surface of the object, if necessary, should be brought to the working viscosity with solvent ortoxylol.In order to choose another solvent correctly, you can test it on a small amount of insulation. If the solvent does not fit the insulation can be folded or lose adhesion (the material will become oily and stop sticking to the surface).Categorically, as a solvent, you can not use white Spirit!

Pot life Coating is one part, so no catalyzation is needed. Pail can be reused if properly sealed.

Container 20 liters

Package, Handling & Storage

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