CE ASTM E1980-11

BRONYA®

TEST REPORT No.: ETR-21-0575

1. Unique identification code of the product type: **«Bronya Classic NF» thermal insulating dispersion thin plaster / non-flammable**
2. Intended use: **Factory-made, pre-mixed thermal insulating plaster with organic binder for outdoor and indoor use, suitable for plastering walls, partitions and ceilings**
3. Manufacturer: **NPO «BRONYA» LLC**
   13A. Batalionnaya St., 400005 Volgograd
   Russian Federation
4. Authorised representative: **GOUP FOUR for Maintenance and Services**
   Road 3616, Block 436, Bldg 742, Office 75,
   P.O. Box 26999
   Seef Aarea, Kingdom of Bahrain
   VAT; 22000636670002
5. Harmonised standard: **ASTM E1980-11**
   Notified Body: **EELab-Dipatimento di ingegnaria «Enzo Ferrari»**
   Via Vivarelli 10, 41125 Modena, Italia
   Identification number: **VAT code/Partita IVA: 00427620364**
6. Performance(s) stated in the declaration:

Test Date		Solar Reflectance Index (SRI)[%]		
		Low wind	Medium wind	High Wind
21/12/2021	Value	89.5	91.0	91.8
		Surface temperature (ST) [°C]		
		55.0	48.0	42.4
Test method		ASTM E1980-11		

Notes This calculation was performed according to ASTM E1980-11: Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces. This utilizes the following values for the convection coefficient: h_c = 5 W/m²·K for low-wind (0 to 2 m/s), h_c = 12 W/m²K for medium-wind (2 to 6 m/s), and h_c = 30 W/m²K for high-wind (6 to 10 m/s).

Person signing for and behalf of the manufacturer:

Date

NPO «BRONYA» LLC CEO Boyarincev A.

Name, surname and seal of the authorized person

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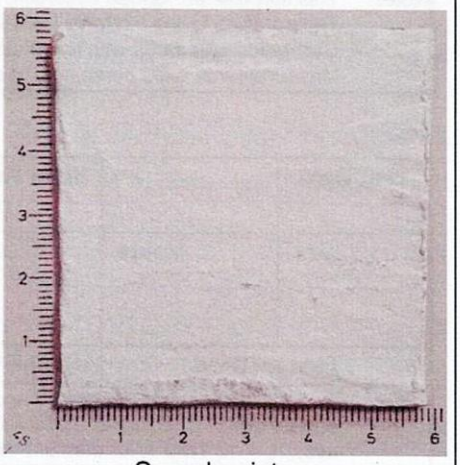
GENERAL INFORMATION

Subject:	Test report on testing activities to determine solar reflectance, infrared emittance and solar reflectance index (SRI)		
Client	GOUP FOUR for Maintenance and Services Road 3616, Block 436, Bldg 742, Office 75, P.O. BOX 26999 Seef Area, Kingdom of Bahrain VAT: 22000636670002	**Client reference person**	Mr. Ram Mohan Kutty phone: +973 17225373 email: rmk@groupfourservices.com PEC: -
Commitment document	MO_GC_05 dated 15/12/2021 sent by Ram Mohan Kutty	**Report release date**	23/12/2021
Notes	-		

SAMPLE DATA

Data provided by the customer for which the customer assumes full responsibility*			
Product name	BRONYA NF		
Manufacturer	Bronya St. Lavraneva 21 Volgograd - Russia		
Short physical description	Product type: Water-based acrylic insulation coating. Hollow vacuum microspheres Surface aspect and/or coating: - Substrate: metal		
Sample thickness	3.5 mm	**Total sample size**	6 x 6 cm
Surface coated	YES	**Coating thickness**	2.000 mm
Information on history and ageing*	N.A.		
Other information			
Receipt date	21/12/2021		
Sample id. sub.	-		
ECRC id	-		
Sampling	Carried out by the Client		
Ageing	-		
Treatments	-		



Sample picture

Surface state	Variegated	NO	Aged	NO	Cleaned	NO
Optical properties	Diffusive reflecting	NO	Intermediate reflecting	YES	Clear transmitting	NO
	Specular reflecting	NO	Translucent transmitting	NO	Opaque	YES

Notes
* The laboratory declines all responsibility for the data supplied by the customer

The test results are based on the material supplied by the client. This report shall not be reproduced except in full without the written approval of this laboratory. This laboratory assumes no responsibility nor makes a performance or warranty statement for this material or products and processes containing this material in connection with this report.
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k = 2, which for a normal distribution provides a level of confidence of approximately 95%.

EELab – Dipartimento di Ingegneria "Enzo Ferrari" – Via Vivarelli 10, 41125 Modena, Italia
VAT code / Partita IVA: 00427620364 – Website: www.dief.unimore.it / www.eelab.unimore.it

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TEST RESULTS

Test Date		Solar Reflectance (SR)	Standard Deviation	Measured Values				
21/12/2021	Value	0.749	0.006	0.754	0.741	0.752	0.753	0.745
	U(k=2, P=95%)	(± 0.010)						
Test method		ASTM C1549-09						
Reference Solar Spectrum		ASTM E 891– 87 Direct normal						
Notes	This test was performed according to ASTM C1549-09: Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Reflectometer with air mass 1.5. A solar spectrum reflectometer Devices and Services SSR-ER was used. Calibration standards with low (0.000) and high (0.864) solar reflectance were provided by the instrument manufacturer. Measurements were conducted at ambient temperature of 21 ± 1°C and relative humidity of 45% ± 10%.							

Test Date		Infrared Emittance (IE)	Standard Deviation	Measured Values		
21/12/2021	Value	0.811	0.005	0.816	0.807	0.811
	U(k=2, P=95%)	(± 0.055)				
Test method		ASTM C1371-15				
Notes	This test was performed according to ASTM C1371-15: Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers. An emissometer with scaling digital voltmeter Devices and Services AE1 RD1 was used. Calibration standards with low (0.060) and high (0.870) emittance were provided by the instrument manufacturer. Measurements were conducted at ambient temperature of 21 ± 1°C and relative humidity of 45± 10% in a time period of about 1 h.					

Test Date		Solar Reflectance (SR)	Infrared Emittance (IE)	Solar Reflectance Index (SRI)[%]		
				Low wind	Medium wind	High Wind
21/12/2021	Value	0.749	0.811	89.5	91.0	91.8
				Surface temperature (ST) [°C]		
				55.0	48.0	42.4
Test method		ASTM E1980-11				
Notes	This calculation was performed according to ASTM E1980-11: Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces. This utilizes the following values for the convection coefficient: h_c = 5 W/m^2·K for low-wind (0 to 2 m/s), h_c = 12 W/m^{2}K for medium-wind (2 to 6 m/s), and h_c = 30 W/m^{2}K for high-wind (6 to 10 m/s).					

The Responsible of EELab Laboratory (Prof. Alberto Muscio)

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