



Polynum Sound Technical Data Sheet

Properties	Units	Polynum™ Sound 1kg	Polynum™ Sound 2kg
Nominal thickness	mm	+/- 10.0	+/- 20.0
Bubbles diameter	mm	30.0	30.0
Foil purity	%	At least 99.0	At least 99.0
Foil thickness	Microns	At least 8.0	At least 8.0
Emissivity	%	3-5	3-5
Reflectivity	%	95-97	95-97
Roll size	M	1.20x15.00	1.20x10.00
Coverage area	M2	1800	12.00
Weight	Gr/m2	1000.00	2000.00
Roll weight	Kg	+/-18.00	+/-24.00
Roll diameter	mm	300	400
Noise Reflection –dB(A)	dB(A)	-16	-22
Sound Transmission Class (STC in a compound)	dB(A)	45	55
Product stability			
Anti corrosion treatment		Both Sides	Both Sides
Scratch Resistance		Both Sides	Both Sides
Shrinkage	%	<0.35	<0.35
Linear dimensional Changes @ 110°C	%	<0.50	<0.50
Water Vapor Transmission	g / ft ² • hr	0.0018 (method A)	0.0018 (method A)
Resistance to dry & wet delamination @ 60°C		Excellent	Excellent
Fungi and Bacteria growth		NIL	NIL
Thermal Resistance Performances (typical Rt values):			
Typical Residential roof (metal roof)	m ² •C/W	3.16	3.26
Typical Residential roof	Btu*in/(hr*ft ² *°F)	17.50	18.07

Properties	Units	Polynum™ Sound 1kg	Polynum™ Sound 2kg
Typical industrial/commercial roof (w/ceiling)	m ² ·°C/W	4.50	4.60
Typical industrial/commercial roof (w/ceiling)	Btu·in/(hr·ft ² ·°F)	25.60	26.17
Typical industrial/commercial roof (open)	m ² ·°C/W	2.30	2.40
Typical industrial/commercial roof (open)	Btu·in/(hr·ft ² ·°F)	13.00	13.57
Typical Concrete wall w/ plaster board	m ² ·°C/W	2.10	2.20
Typical Concrete wall w/ plaster board	Btu·in/(hr·ft ² ·°F)	12.00	12.57
Typical double brick wall	m ² ·°C/W	2.30	2.40
Typical double brick wall	Btu·in/(hr·ft ² ·°F)	13.00	13.57

Test\Report\Laboratory	Standard\Method	Results
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Basic test reports

Emittance	ASTM E 408	3% to 5%
Reflectance	ASTM E 408	95%-97%
Water Vapor Transmission	ASTM E-96 (Method A)	0.0018
Tensile properties	ASTM C 1136-92	>10kg/cm ²
Puncture properties	ASTM C 1136-92	>150 kg/cm
Noise Reduction (NRC) for 1kg / 2kg	ASTM 384-90	65%
Noise Reflection for 1kg/ 2kgproducts	ISO 717-1	16 dB (A) / 22 dB (A)
Sound Transmission Class (STC compound test)	ISO 717-1	STC 55

Product stability tests and reports

Thermal Stability Test: Linear dimensional Changes (such as shrinkage) @ 110°C	ASTM 1136-92 & ASTM 1204-94	Pass (<0.5%)
Thermal Stability Test for cracks @ 110°C	ASTM 1136-92 & ASTM 1204-94	Pass
Dry Delamination	AS/NSZ 4201.1	Pass
Wet Delamination	AS/NSZ 4201.2	Pass
Resistance to Corrosion	AS/NZS 4859.1 (App.1)	Pass
Evaluation of Fungi and Bacteria growth	ASTM C 1338-00	NIL
Thermal Stability Test: Linear dimensional Changes (such as shrinkage) @ 110°C	ASTM 1136-92 & ASTM 1204-94	Pass (<0.5%)
Evaluation of Fungi and Bacteria growth	ASTM C 1338-00	NIL

Test\Report\Laboratory	Standard\Method	Results
Safety (reaction to fire)		
Surface Flame Spread	BS 476 Part 7	PASS
Fire Hazard Properties Horizontal fire test	AS/NZS 1530.03	PASS
Mean Ignition Time	AS/NZS 1530.03	PASS
Mean flame propagation time	AS/NZS 1530.03	PASS
Mean heat release integral	AS/NZS 1530.03	PASS
Mean smoke release	AS/NZS 1530.03	PASS
Fire properties: European Union (EU)	EN 13501-1-2000	PASS*