



HANNA RUBBER COMPANY

Specification Sheet

Sponge Insulation

PHYSICAL PROPERTIES	INSULATION SHEET	TEST METHODS
Main Composition	Flame-retarded NBR/PVC-based elastomeric foam	
Thermal Conductivity (K) Btu-in/hr-Ft ² -°F (W/mK)	90°F (32°C) Mean Temp = 0.258 (0.0372) 75°F (24°C) Mean Temp = 0.245 (0.0353) 32°F (0°C) Mean Temp = 0.235 (0.0339)	ASTM C177
Density	3-6 lb/ft ³	ASTM D1667
Operating Temperature Range	-40°F (-40°C) to +200°F (93°C)	ASTM C534
Water Vapor Permeability (Dry Cup)	<0.01 perm-in	ASTM E96
Water Absorption (Volume Change)	0%	ASTM C209
Flame Spread / Smoke Development (up to 2" wall)	<25/50	ASTM E84
Flammability	Self-Extinguishing	ASTM D635
Dimensional Stability	<7% Linear Shrinkage	ASTM C534
Hot Surface Performance (250°F for 96 hours)	No Cracking or Delamination	ASTM C411
Ozone Resistance	Pass	ASTM D1171
Odor Emissions	No Objectionable Odor	ASTM C1304
Chemical/Solvent/Oil/Grease Resistance	Good	Compatibility Data Available on Request
Flexibility	Excellent Pass: Cold Crack Test at -40°F (-40°C)	ASTM C534 ASTM D1056
Mildew Growth Resistance/Air Erosion	Pass	UL 181, ASTM G21
Corrosion Risk	pH neutral: 6.6±0.04	DIN 1988
Leachable Chlorides	<0.05% water-soluble chloride ions	DIN 1988
UV / Weather Resistance ¹	Good	ASTM G90
Sound Transmission Class (1")	13	ASTM E90

*For applications below -40°F (-40°C), contact Hanna Rubber technical support.

¹ Outdoor applications should be protected with an approved Hanna Rubber coating or cladding for optimum performance.

THICKNESS RECOMMENDATIONS (TO PREVENT CONDESATION)

SERVICE TEMPERATURE	50°F (10°C)			35°F (2°C)			0°F (-18°C)			-20°F (-29°C)		
	Mild	Normal	Severe	Mild	Normal	Severe	Mild	Normal	Severe	Mild	Normal	Severe
Flat Surface or Pipe ≥48"	1/8"	1/2"	3/4"	1/4"	3/4"	1-1/2"	1/2"	1"	2"	3/4"	1-1/2"	2-1/2"

Thickness listed for the specified ranges will prevent condensation on indoor piping under the defined design conditions. Normal: 85°F and 70% R.H. Mild: Most air conditioned spaces and arid climates: 80°F and 50% R.H. Severe: Areas where excessive moisture is introduced or in poorly ventilated areas where the temperature may be depressed below the ambient: 90°F and 80% R.H.

Contact Hanna Rubber technical support for additional information.

SOUND ABSORPTION COEFFICIENTS AT FREQUENCY (Hz) (ASTM C423)

THICKNESS	125	250	500	1000	2000	4000	NRC
1/2" (12mm)	0.03	0.02	0.06	0.10	0.22	0.27	0.10
1" (25mm)	0.00	0.07	0.13	0.59	0.20	-0.05	0.25
1-1/2" (38mm)	0.00	0.15	0.81	0.29	0.31	0.27	0.40
2" (50mm)	0.22	0.65	0.48	0.54	0.47	0.45	0.55

"R" VALUES (ALL SIZES ARE NORMAL)

3/8"	1/2"	3/4"	1"	1-1/2"	2"
1.5	2	3	4	6	8