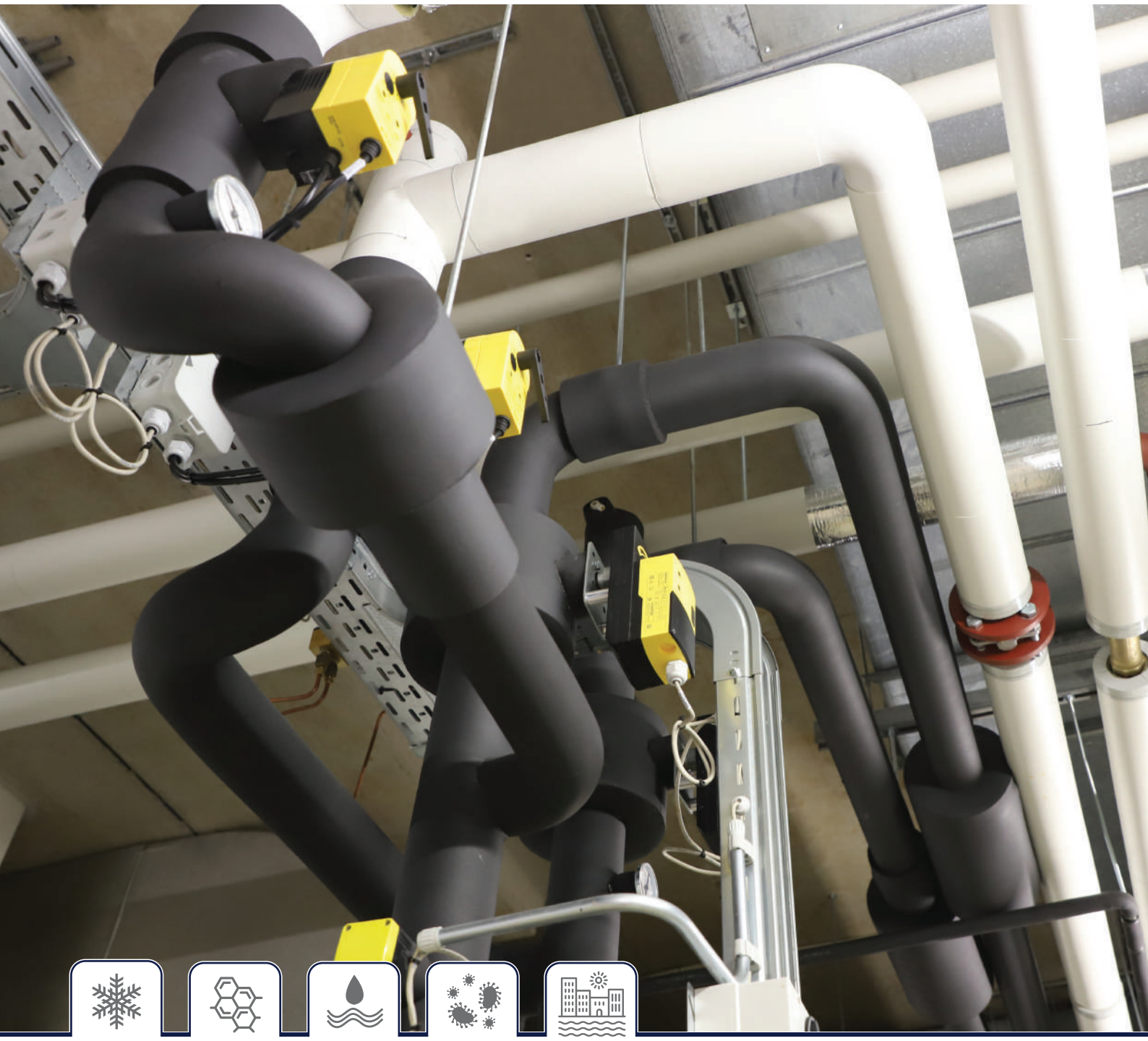
AEROFOAM® - NBR



Flexible Closed Cell
Elastomeric Thermal Insulation Foam

E484543

CLASS 0
ASTM E84

SINGAPORE GREEN BUILDING PRODUCT
SGBC EXCELLENT
SGBP 2021-4436

FM APPROVED

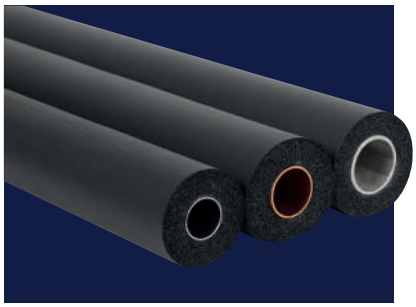
CE

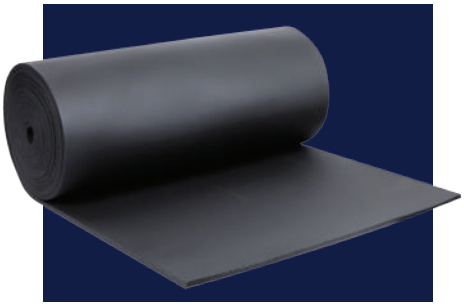
www.aerofoamusa.com

AEROFOAM® NBR TUBES & ROLLS

Aerofoam® NBR is a flexible closed cell elastomeric thermal insulation foam, with high water vapor diffusion resistance factor and low thermal conductivity. It is suitable for such application like duct and pipe insulation for air conditioning, cold water, chilled water, hot water and refrigeration.

Designed for indoor and outdoor applications, however outdoor application needs additional protection against weather conditions and UV radiation.

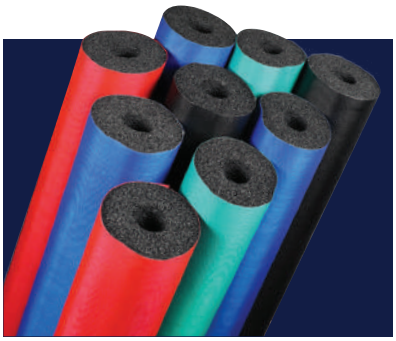




AEROFOAM® NBR WITH DIFFERENT FACINGS

Aerofoam® NBR with foil facing

Factory applied aluminum foil facing, also available with optional UV resistant coating. Designed for indoor installations in order to increase the mechanical resistance of elastomeric foam. Available in the form of tubes and sheets.



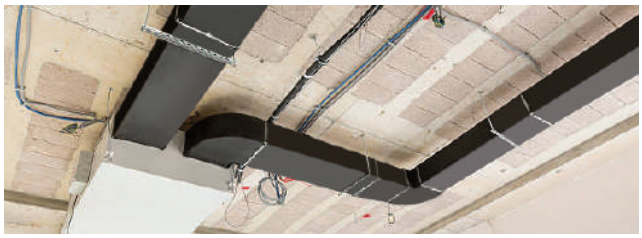
Aerofoam® NBR with Glass Cloth

Glass cloth is a factory applied facing designed for indoor installations in order to increase the mechanical resistance and to improve the esthetic look of thermal insulation. It is available in the form of tubes, sheets and in different colors - black, blue, green and red.

FEATURES

- Closed cell structure
- Prevent condensation
- Excellent thermal efficiency
- Suitable for low temperature applications
- Suitable for cooling & heating systems
- Resistant to bacteria
- Resistant to mold & mildew growth
- High mechanical strength
- Flexible foam easy to install
- Suitable for coastal area applications
- Environmental friendly foam
- Ozone resistant

APPLICATIONS



AEROFOAM® NBR TUBES - R-VALUES

Tube Inner Dia.	Thermal Insulation Thickness					
Inch	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"
1/4	1.65	2.78	4.47	7.32	10.44	14.36
3/8	1.49	2.48	3.97	6.49	9.26	12.76
1/2	1.37	2.25	3.58	5.82	8.30	11.44
5/8	1.31	2.14	3.38	5.48	7.81	10.75
3/4	1.27	2.06	3.24	5.23	7.43	10.22
7/8	1.24	2.00	3.13	5.03	7.13	9.79
1	1.21	1.95	3.04	4.86	6.88	9.44
1-1/8	1.19	1.91	2.96	4.73	6.67	9.14
1-1/4	1.17	1.86	2.88	4.58	6.44	8.81
1-3/8	1.16	1.84	2.83	4.48	6.30	8.60
1-1/2	1.15	1.81	2.79	4.40	6.17	8.41
1-5/8	1.13	1.79	2.74	4.30	6.02	8.19
1-7/8	1.12	1.76	2.67	4.19	5.84	7.92
2	1.11	1.74	2.65	4.14	5.76	7.81
2-1/8	1.11	1.73	2.63	4.09	5.69	7.70
2-3/8	1.10	1.71	2.59	4.01	5.57	7.52
2-1/2	1.09	1.70	2.57	3.98	5.51	7.43
2-5/8	1.09	1.69	2.55	3.94	5.45	7.33
2-7/8	1.08	1.67	2.52	3.88	5.36	7.20
3	1.08	1.67	2.51	3.86	5.32	7.14
3-1/8	1.07	1.66	2.49	3.84	5.28	7.09
3-1/2	1.07	1.65	2.46	3.77	5.17	6.92
3-5/8	1.06	1.64	2.45	3.75	5.15	6.88
4	1.06	1.63	2.43	3.70	5.06	6.75
4-1/8	1.06	1.63	2.42	3.69	5.04	6.72
4-1/4	1.05	1.62	2.41	3.67	5.01	6.66
4-1/2	1.05	1.62	2.40	3.65	4.98	6.62

SPECIFICATION COMPLIANCE

- ASTM C534
- NFPA 90A & 90B
- ASTM E84
- NFPA 255
- FMVSS 302
- CAN/ULC S102
- ASTM D1056-00-2B1
- NFPA No. 101 Class A Rating
- UL 94-5V Flammability Classification (E484543)
- Meets energy code requirements of ASHRAE 90.1 & 189.1

AEROFOAM® NBR SHEETS & ROLLS - R-VALUES

Thickness	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"
R-Value	1.0	1.6	2.1	2.6	3.1	4.2	5.2	6.3	8.3

THICKNESS RECOMMENDATION: TUBES & SHEETS

Medium Temperature	50 °F			35 °F			0 °F			-20 °F		
Air Duct Size	Mild	Normal	Severe	Mild	Normal	Severe	Mild	Normal	Severe	Mild	Normal	Severe
40" x 40"	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"
Pipe DN	**Mild**	**Normal**	**Severe**	**Mild**	**Normal**	**Severe**	**Mild**	**Normal**	**Severe**	**Mild**	**Normal**	**Severe**
1/4" to 1-1/8"	3/8"	3/8"	3/4"	3/8"	1/2"	3/4"	1/2"	3/4"	1-1/2"	1/2"	1"	1-1/2"
1-1/4" to 3"	3/8"	3/8"	3/4"	3/8"	3/4"	1"	1/2"	1"	1-1/2"	3/4"	1-1/2"	1-1/2"

Calculation based on ISO 12241 standards **Thermal Insulation for Building Equipment and Industrial Installations.**
Calculation Rules Mild Conditions: Amb Temp 80 °F and 50%; Normal Conditions: Amb Temp 85 °F and 70% RH; Severe: Amb Temp 90 °F and 80% RH.
Contact Aerofoam® Technical Support for further clarifications or calculation based on different conditions and heat loss control.

SIZE AVAILABILITY

Tubes	
ID	Thickness
1/4" to 1-5/8"	1/4" to 1-1/4"
1-7/8" to 3-1/8"	3/8" to 1-1/4"
3-1/2" to 4-1/2"	1/2" to 1-1/4"

Sheets & Rolls	
Thickness	1/4" to 2"

Please contact Aerofoam® Technical Support for detailed information about sizes with different facings.

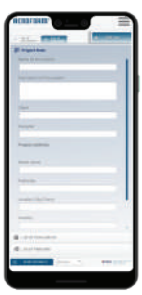
ACCESSORIES

Adhesive	Units
Aerofoam® NBR Glue	0.6 Galons 8 oz

AEROCALC

AEROCALC software is an excellent tool for calculating the most optimal thicknesses of insulation. Available as **Desktop, iOS** and **Android** applications.

Visit our website: **aerofoamusa.com**



Scan the QR code to download the Desktop app.

TECHNICAL DATA

Description: Aerofoam® NBR is a black flexible elastomeric thermal insulation product available in the form of tubes and sheets, unfaced with an aluminum foil facer or with a glass cloth facer.

Property	Value/ Assessment	Test Method
Thermal conductivity At 90 °F At 75 °F At 32 °F	 0.25 BTU-in/hr-ft² 0.23 BTU-in/hr-ft² 0.22 BTU-in/hr-ft²	 ASTM C518
Temperature range Max. line temperature Min. line temperature Aerofoam® Technical Support should be consulted for applications with temperatures below -40 °F.	 +230 °F (+180 °F with PSA*) -112 °F (-22 °F with PSA*)	 ASTM C411 ASTM C534
Density of the foam core	2.5 to 5 lb/ft³	ASTM C302
Water vapor diffusion resistance factor	μ>17,000	BS EN 12086
Water vapor permeance	0.005 perms-inch	ASTM E96
Water absorption	0.06% by volume	ASTM C209
Reaction to fire	FSI<25 & SDI<50	ASTM E84
	Class 0	BS 476 part 6 & part 7
	HF-1, V-0, 5VA	UL 94
	FSR<150 & SDC<300	CAN/ULC-S102
FM approval	Approved	FM 4924
Smoke and toxicity	Passed	IMO MSC 61(67)
Corrosion risk	No corrosion risk for steel, stainless steel and copper pipes	DIN 1988
Chemical analysis	<0.05% (water soluble chloride ions)	DIN 1988
	pH - 7.3	ASTM C871
Compression set	31.23% (for 1")	ASTM D3574
Linear shrinkage	0% at -40 °F, 4% at +219 °F	ASTM C534
Resistance to fungi	Zero growth	ASTM G21
Resistance to bacteria	Zero growth	ISO 22196
Ozone resistance	Excellent	ASTM D1149
TVOC (emission rate - 24 hours)	$<9.10x10^{-11}$ oz/inch²/h	ASTM D5116
RoHS	Comply	RoHS 3 2015/863
Environment friendly Ozone Depletion Potential Global Warming Potential CFC, HCFC, dust, fibers & asbestos	 0 <5 Free	

Storage life

Can be stored for 24 months (12 months with PSA) from manufacturing date in a dry, clean, dust free room at normal humidity and ambient temperature.*

Note: All outdoor applications of Aerofoam® NBR Elastomeric Foam need to be protected by Aerofoam® approved paint or weather resistant cladding.

*PSA - Pressure Sensitive Adhesive

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