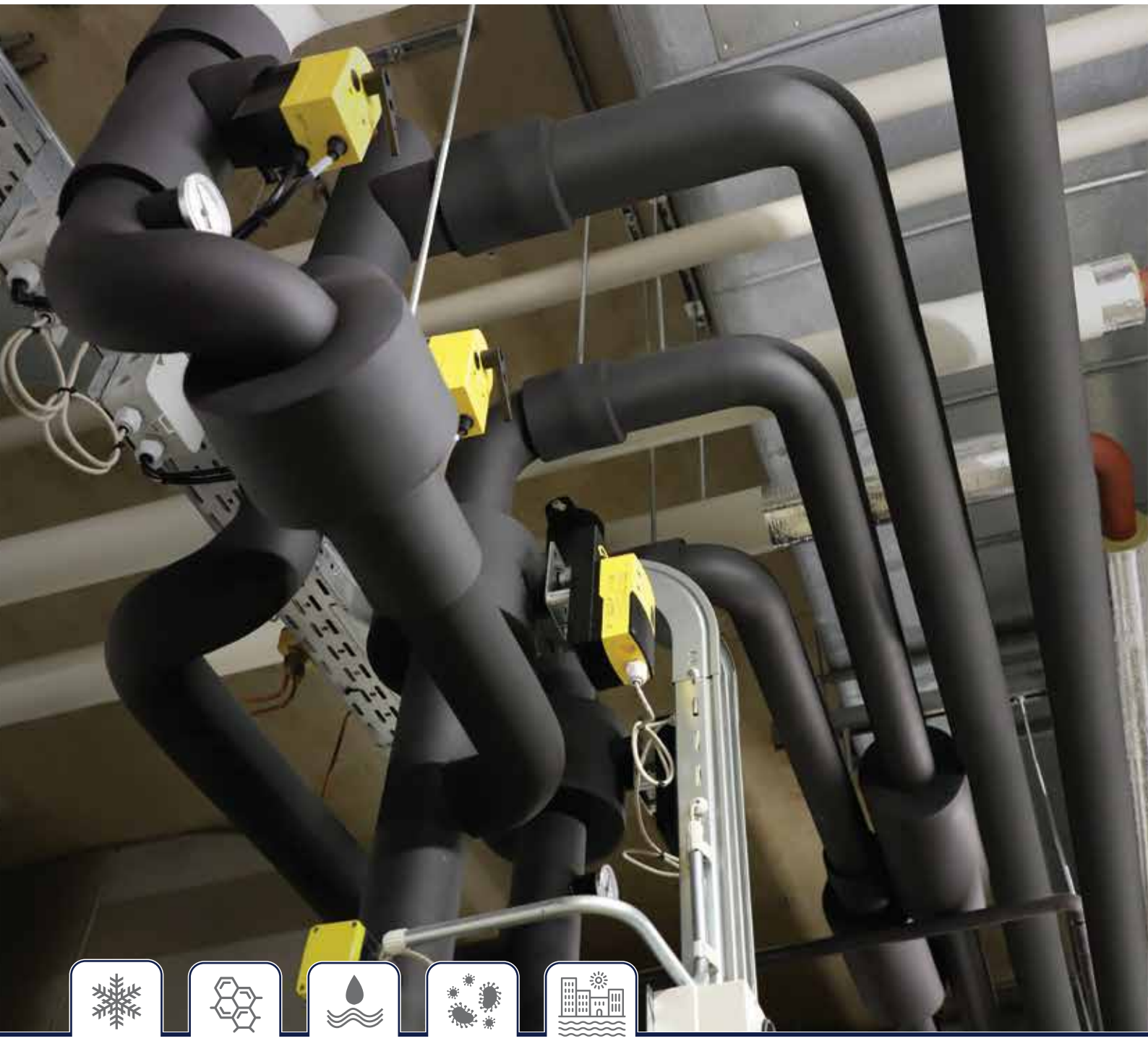
AEROFOAM® - NBR



Flexible Closed Cell
Elastomeric Thermal Insulation Foam

CLASS 0
ASTM E84

FM
APPROVED

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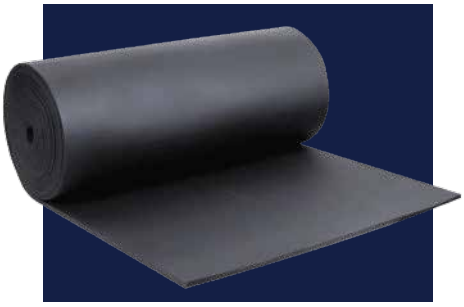
AEROFOAM® NBR TUBES & ROLLS

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.

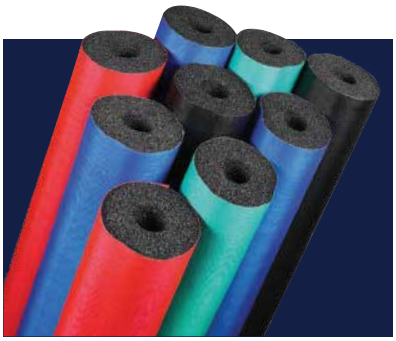
Designed for indoor and outdoor applications, however outdoor application needs additional protection against weather conditions and UV radiation.



AEROFOAM® NBR WITH DIFFERENT FACINGS

Aerofoam® NBR with foil facing

Factory applied aluminum foil facing is 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 - SIZE RANGE

Copper Pipes for AC & Refrigeration		Steel Pipe		Aerofoam® NBR Tubes		Aerofoam® NBR Tubes Size Range											
						NBR Code	Pcs/ Box	NBR Code	Pcs/ Box	NBR Code	Pcs/ Box	NBR Code	Pcs/ Box	NBR Code	Pcs/ Box	NBR Code	Pcs/ Box
OD [inch]	OD [mm]	Nom size [inch]	OD [mm]	ID [inch]	ID [mm]	6 mm (1/4")		9 mm (3/8")		13 mm (1/2")		19 mm (3/4")		25 mm (1")		32 mm (1-1/4")	
1/4"	6.35			1/4"	6.00	NBRT0606	180	NBRT0906	168	NBRT1306	90	NBRT1906	50	NBRT2506	35		
3/8"	9.52			3/8"	9.00	NBRT0609	170	NBRT0909	130	NBRT1309	80	NBRT1909	40	NBRT2509	25		
1/2"	12.70			1/2"	13.00	NBRT0613	150	NBRT0913	115	NBRT1313	65	NBRT1913	40	NBRT2513	25		
5/8"	15.90	1/4"	13.50	5/8"	16.00	NBRT0616	120	NBRT0916	90	NBRT1316	60	NBRT1916	35	NBRT2516	25		
3/4"	19.10			3/4"	19.00	NBRT0619	100	NBRT0919	76	NBRT1319	45	NBRT1919	30	NBRT2519	20	NBRT3219	15
7/8"	22.20	1/2"	21.30	7/8"	22.00	NBRT0622	90	NBRT0922	70	NBRT1322	40	NBRT1922	30	NBRT2522	20	NBRT3222	12
1"	25.40			1"	25.00	NBRT0625	70	NBRT0925	55	NBRT1325	40	NBRT1925	25	NBRT2525	20	NBRT3225	12
1-1/8"	28.60	3/4"	26.90	1-1/8"	28.00	NBRT0628	70	NBRT0928	55	NBRT1328	36	NBRT1928	25	NBRT2528	18	NBRT3228	12
				1-1/4"	32.00	NBRT0632	65	NBRT0932	40	NBRT1332	30	NBRT1932	20	NBRT2532	15	NBRT3232	12
1-3/8"	34.90	1"	33.70	1-3/8"	35.00	NBRT0635	60	NBRT0935	36	NBRT1335	30	NBRT1935	20	NBRT2535	15	NBRT3235	12
				1-1/2"	38.00	NBRT0638	50	NBRT0938	36	NBRT1338	25	NBRT1938	17	NBRT2538	12	NBRT3238	10
1-5/8"	41.30	1-1/4"	42.40	1-5/8"	42.00	NBRT0642	40	NBRT0942	30	NBRT1342	25	NBRT1942	17	NBRT2542	12	NBRT3242	10
1-7/8"	48.00	1-1/2"	48.30	1-7/8"	48.00			NBRT0948	25	NBRT1348	20	NBRT1948	15	NBRT2548	10	NBRT3248	8
				2"	51.00			NBRT0951	25	NBRT1351	20	NBRT1951	15	NBRT2551	9	NBRT3251	8
2-1/8"	54.00			2-1/8"	54.00			NBRT0954	25	NBRT1354	20	NBRT1954	15	NBRT2554	9	NBRT3254	8
2-3/8"	60.30	2"	60.30	2-3/8"	60.00			NBRT0960	20	NBRT1360	18	NBRT1960	12	NBRT2560	9	NBRT3260	6
2-1/2"	63.00			2-1/2"	63.00					NBRT1363	18	NBRT1963	12	NBRT2563	8	NBRT3263	6
2-5/8"	67.00			2-5/8"	67.00					NBRT1367	15	NBRT1967	10	NBRT2567	8	NBRT3267	5
2-7/8"	73.00			2-7/8"	73.00					NBRT1373	15	NBRT1973	10	NBRT2573	6	NBRT3273	4
3"	76.00	2-1/2"	76.10	3"	76.00					NBRT1376	12	NBRT1976	10	NBRT2576	6	NBRT3276	4
3-1/8"	79.00			3 1/8	79.00					NBRT1379	12	NBRT1979	10	NBRT2579	6	NBRT3279	4
3-1/2"	89.00	3"	88.90	3-1/2"	89.00					NBRT1389	10	NBRT1989	8	NBRT2589	6	NBRT3289	4
				3-5/8"	92.00					NBRT1392	8	NBRT1992	6	NBRT2592	6	NBRT3292	4
4"	102.00			4"	102.00					NBRT13102	8	NBRT19102	6	NBRT25102	4	NBRT32102	3
				4-1/8"	105.00					NBRT13105	8	NBRT19105	6	NBRT25105	4	NBRT32105	3
				4-3/8"	110.00					NBRT13110	8	NBRT19110	6	NBRT25110	4	NBRT32110	3
4-1/2"	114.00	4"	114.30	4-1/2"	114.00					NBRT13114	6	NBRT19114	6	NBRT25114	3	NBRT32114	3

Note: Available length of tubes 1.8 m or 2 m. Please contact Technical Support for detailed sizes with different facings (aluminum foil and glass cloth).

AEROFOAM® NBR SHEETS & ROLLS - SIZE RANGE

Aerofoam® NBR Rolls						Aerofoam® NBR Sheets			
Thickness Inch	Thickness mm	Width x Length m x m	Pcs/ Box	Plain	Plain with self-adhesive (SA)	Width x Length m x m	Pcs/ Box	Plain	Plain with self-adhesive (SA)
1/4"	6	1x30	1	NBRR6-1-30	NBRR6-1-30/SA	1x1	30	NBRS6-1000-1000	NBRS6-1000-1000/SA
3/8"	9	1x20	1	NBRR9-1-20	NBRR9-1-20/SA	1x1	20	NBRS9-1000-1000	NBRS9-1000-1000/SA
1/2"	13	1x14	1	NBRR13-1-14	NBRR13-1-14/SA	1x1	15	NBRS13-1000-1000	NBRS13-1000-1000/SA
5/8"	16	1x12	1	NBRR16-1-12	NBRR16-1-12/SA	1x1	12	NBRS16-1000-1000	NBRS16-1000-1000/SA
3/4"	19	1x10	1	NBRR19-1-10	NBRR19-1-10/SA	1x1	10	NBRS19-1000-1000	NBRS19-1000-1000/SA
1"	25	1x8	1	NBRR25-1-8	NBRR25-1-8/SA	1x1	8	NBRS25-1000-1000	NBRS25-1000-1000/SA
1- 1/4"	32	1x6	1	NBRR32-1-6	NBRR32-1-6/SA	1x1	6	NBRS32-1000-1000	NBRS32-1000-1000/SA
1- 1/2"	40	1x4	1	NBRR40-1-4	NBRR40-1-4/SA	1x1	4	NBRS40-1000-1000	NBRS40-1000-1000/SA
2"	50	1x4	1	NBRR50-1-4	NBRR50-1-4/SA	1x1	4	NBRS50-1000-1000	NBRS50-1000-1000/SA

Note: Other size of sheets 0.915 m x 1.22 m (3 ft x 4 ft) is available upon request. Please contact Technical Support for detailed sizes with different facings (aluminum foil and glass cloth).

Tolerances - Rolls & Sheets			
Thickness	Thickness tolerance	Length tolerance	Width tolerance
6-25 mm	±2 mm	±1.5%	-20 mm +40 mm
32-50 mm	±3 mm		

Tolerances - Tubes (foam core only)		
	Target	Target Tolerance
Internal Diameter (ID)	ID + 1 mm	-1 mm, +4 mm (for ID ≤100 mm)
		-1 mm, +6 mm (for ID >100 mm)
Thickness	≤6 -16 mm: ±1.5 mm	
	19-25 mm : ±2.5 mm	
	≥32 mm ±3 mm	
Length	±1.5%	

ACCESSORIES

Adhesive	Units
Aerofoam® NBR Glue	5 Litres

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: **aerofoamvietnam.com**

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 10 °C At 23 °C At 35 °C	 0.032 W/m·K 0.033 W/m·K 0.035 W/m·K	 ASTM C518
Temperature range Max. line temperature Min. line temperature *Aerofoam® Technical Support should be consulted for applications with temperatures below -40 °C.*	 +110 °C (+80 °C with PSA*) -80 °C (-30 °C with PSA*)	 ASTM C411 ASTM C534
Density of the foam core	40-70 kg/m³	ASTM C302
Water vapor diffusion resistance factor	μ>17,000	BS EN 12086
Water vapor permeance	1.56 E-09 g/m².s.Pa	ASTM E96
Water absorption	0.06% by volume	ASTM C209
Reaction to fire	FSI<25 and SDI<50	ASTM E84
	Class 0	BS 476 part 6 & part 7
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 25 mm)	ASTM D3574
Linear shrinkage	0% at -80 °C, 4% at +104 °C	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)	<0.5 mg/m²/hr	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

Disclaimer: This information on Hira Manufacturing products is presented to the best of our knowledge. All product data is based on average values and is for guidance only. As these products are subject to constant research and development, we reserve the right to update the contents without notice.

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