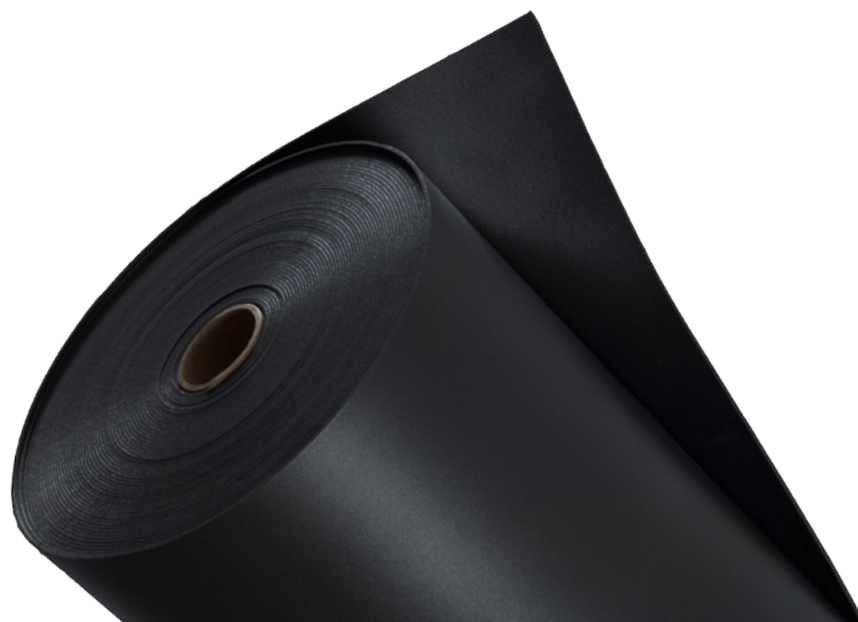




# Thermapipe

TUBERÍA PREAISLADA



## AEROFOAM<sup>®</sup>



# Flexible Closed Cell Elastomeric Foam



[www.thermapipe.com.mx](http://www.thermapipe.com.mx)

# Technical data sheet for AEROFOAM® NBR



## DESCRIPTION

AEROFOAM® NBR is an NBR/PVC based closed cell flexible elastomeric insulation foam. It has low VOC emission level. It is environmental friendly as it is free of CFCs, HCFs, Formaldehyde and Fibres. The product has low ODP (Ozone depletion potential) and GWP (Global warming potential) values, An antimicrobial agent was dispersed into the system for protection from fungal and bacterial growth.

## APPLICATIONS

AEROFOAM® NBR is recommended for applications with service temperature ranging from -112 °F (-80°C) to +200°F (+105°C). For the application above temperature limit is +194°F (+90°C) and below -40°F (-40°C), contact AEROFOAM® technical support.

AEROFOAM® NBR product has excellent UV Resistance properties with protective coating with clad on surface.

## AVAILABILITY

AEROFOAM® NBR is available in Black colour in the form of sheets, rolls and tubes. The sheet sizes are available in (3'x4') or roll from thickness of ¼ " to 2 " and tubes are available up to (1-1/4 " x 4-12/25").

## THERMAL TRANSMISSION PROPERTIES

AEROFOAM® NBR closed cell foam and has a stable thermal performance through lambda (k) value.

## RESISTANCE TO FIRE AND SMOKE

AEROFOAM® NBR rated 25 flame spread index (FSI) and 50 smoke development index (SDI) according to the ASTM E84, " surface burning characteristic of building materials. It is rated as class 'O' according to the BS 476 part 6 flame spread and BS 476 part 7 flame propagation.

AEROFOAM® NBR compliance with the Federal motor vehicle safety standard 302 (FMVSS 302).

## RESISTANCE TO MOISTURE VAPOR

The closed cell structure of AEROFOAM® NBR resist moisture vapour transmission. For most outdoor applications, AEROFOAM® NBR needs no extra protection.

## EASE OF INSTALLATION

AEROFOAM® NBR quick and easy to install due to the flexibility, dimensional stability and smooth surface. It can be applied pipes and ducts. Due to its high flexibility it is very easy to install in critical areas.

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## CERTIFICATION COMPLAINT

- NPPA 90A and 90B
- UL 94-V0, 5VA flammability Classification (#E484543)
- ASTM E84 25/50-rated
- FMVSS 302
- Certificate of conformity for Class 'O'

## PROPERTIES OF AEROFOAM<sup>®</sup> NBR

Property		Value/Assessment	Standard
<b>Density</b>		<b>2.5-5 lb/ft</b>	<b>ASTM D1667</b>
Thermal conductivity (K) Btu-in/hr-Ft <sup>2</sup> -F(W/m K)	75°F(23°C)	0.23(0.034)	ASTM C518
Water vapor permance		0.005 perm-inch	ASTM E96
Water absorption		0.12% by volume	ASTM C209
Flame spread and smoke development		25 FSI;30SDI	ASTM E84
Surface spread and propagation		Class 'O'	BS 476 part 6&7
Compression set (1/2")		>31%	ASTM C3574
Operating temperature +220°F (+105°C)		No cracking and delamination	ASTM C411
VOC level		<6 µg/m <sup>2</sup> hr	ASTM D5116
Ozone resistance, Ozone depletion potential, global warming potential		Excellent; Zero; and <5	
Resistance to fungi		Excellent	ASTM G21 : 2009
Resistance to bacteria		Excellent	ISO 22196 : 2007
Corrosion risk		pH Neutral: 7.03 +/- 0.06	DIN 1988
Leachable chlorides		<0.05% water soluble chloride ions	DIN 1988
Acoustic insulation		27 dB (A)	DIN52219, DIN 4109 DIN EN ISO 3822-1

## R VALUES SIZE WISE

Thickness	¼	⅜	½	⅝	¾	1	1-¼	1-½	2
R Value	1.0	1.5	2.2	2.7	3.2	4.3	5.5	6.8	8.6

### Disclaimer

This information on Hira Industries 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.

# Technical data sheet for AEROFOAM® NBR

## PACKING DETAILS AEROFOAM® ELASTOMERIC FOAM TUBES

1/4"					
Item Code	Pipe Insulation ID	Copper Pipe ID	PVC	Pcs/Carton	Linear ft. per crtn
NBRT0606	1/4"			180	1080
NBRT0609	3/8"			170	1020
NBRT0613	1/2"			150	900
NBRT0616	5/8"			120	720
NBRT0619	3/4"			100	600
NBRT0622	7/8"			90	540
NBRT0625	1"			80	480
NBRT0628	1-1/8"			70	420
NBRT0632	1-1/4"			65	390
NBRT0635	1-3/8"			60	360

1/2"					
Item Code	Pipe Insulation ID	Copper Pipe ID	PVC	Pcs/Carton	Linear ft. per crtn
NBRT1306	1/4"	-	-	80	480
NBRT1309	3/8"	1/4"	-	70	420
NBRT1313	1/2"	3/8"	1/4"	65	390
NBRT1316	5/8"	1/2"	3/8"	60	360
NBRT1319	3/4"	5/8"	-	45	270
NBRT1322	7/8"	3/4"	1/2"	40	240
NBRT1325	1"	-	-	40	240
NBRT1328	1-1/8"	1"	3/4"	30	180
NBRT1332	1-1/4"	-	-	30	180
NBRT1335	1-3/8"	1-1/4"	1"	30	180
NBRT1338	1-1/2"	-	1-1/2"	25	150
NBRT1342	1-5/8"	1-1/2"	1-1/4"	25	150
NBRT1348	1-7/8"	-	-	20	120
NBRT1351	2"	-	2"	20	120
NBRT1354	2-1/8"	2"	-	20	120
NBRT1360	2-3/8"	-	-	18	108
NBRT1367	2-5/8"	-	-	15	90
NBRT1373	2-7/8"	3"	-	15	90
NBRT1376	3"	-	3"	12	72
NBRT1379	3-1/8"	-	-	12	72
NBRT1389	3-1/2"	-	-	10	60
NBRT1392	3-5/8"	-	-	8	48
NBRT13102	4"	-	-	8	48
NBRT13110	4-1/4"	-	-	8	48
NBRT13114	4-1/2"	-	-	6	36

Tube length: (6ft") | Tolerance:  $\pm(1/16")$ thickness;  $\pm 0.1ft$

3/8"					
Item Code	Pipe Insulation ID	Copper Pipe ID	PVC	Pcs/Carton	Linear ft. per crtn
NBRT0906	1/4"	-	-	130	780
NBRT0909	3/8"	1/4"	-	120	720
NBRT0913	1/2"	3/8"	1/4"	100	600
NBRT0916	5/8"	1/2"	3/8"	80	480
NBRT0919	3/4"	5/8"	-	70	420
NBRT0922	7/8"	3/4"	1/2"	65	390
NBRT0925	1"	-	-	50	300
NBRT0928	1-1/8"	1"	3/4"	50	300
NBRT0932	1-1/4"	-	-	35	210
NBRT0935	1-3/8"	1-1/4"	1"	35	210
NBRT0938	1-1/2"	-	1-1/2"	30	180
NBRT0942	1-5/8"	1-1/2"	1-1/4"	30	180
NBRT0948	1-7/8"	-	-	25	150
NBRT0951	2"	-	2"	25	150
NBRT0954	2-1/8"	2"	-	20	120
NBRT0960	2-3/8"	-	-	20	120

3/4"					
Item Code	Pipe Insulation ID	Copper Pipe ID	PVC	Pcs/Carton	Linear ft. per crtn
NBRT1906	1/4"	-	-	45	270
NBRT1909	3/8"	1/4"	-	40	240
NBRT1913	1/2"	3/8"	1/4"	35	210
NBRT1916	5/8"	1/2"	3/8"	30	180
NBRT1919	3/4"	5/8"	-	30	180
NBRT1922	7/8"	3/4"	1/2"	30	180
NBRT1925	1"	-	-	25	150
NBRT1928	1-1/8"	1"	3/4"	20	120
NBRT1932	1-1/4"	-	-	20	120
NBRT1935	1-3/8"	1-1/4"	1"	20	120
NBRT1938	1-1/2"	-	1-1/2"	17	102
NBRT1942	1-5/8"	1-1/2"	1-1/4"	15	90
NBRT1948	1-7/8"	-	-	15	90
NBRT1951	2"	-	2"	12	72
NBRT1954	2-1/8"	2"	-	12	72
NBRT1960	2-3/8"	-	-	12	72
NBRT1967	2-5/8"	-	-	10	60
NBRT1973	2-7/8"	3"	-	10	60
NBRT1976	3"	-	3"	10	60
NBRT1979	3-1/8"	-	-	10	60
NBRT1989	3-1/2"	-	-	8	48
NBRT1992	3-5/8"	-	-	6	36
NBRT19102	4"	-	-	6	36
NBRT19110	4-1/4"	-	-	6	36
NBRT19114	4-1/2"	-	-	6	36

# Technical data sheet for AEROFOAM® NBR

## AEROFOAM® ELASTOMERIC FOAM TUBES

1"					
Item Code	Pipe Insulation ID	Copper Pipe ID	PVC	Pcs/Carton	Linear ft. per crtn
NBRT1306	1/4"	-	-	30	180
NBRT1309	3/8"	1/4"	-	25	150
NBRT1313	1/2"	3/8"	1/4"	20	120
NBRT1316	5/8"	1/2"	3/8"	20	120
NBRT1319	3/4"	5/8"	-	20	120
NBRT1322	7/8"	3/4"	1/2"	20	120
NBRT1325	1"	-	-	18	108
NBRT1328	1-1/8"	1"	3/4"	15	90
NBRT1332	1-1/4"	-	-	15	90
NBRT1335	1-3/8"	1-1/4"	1"	15	90
NBRT1338	1-1/2"	-	1-1/2"	12	72
NBRT1342	1-5/8"	1-1/2"	1-1/4"	12	72
NBRT1348	1-7/8"	-	-	10	60
NBRT1351	2"	-	2"	9	54
NBRT1354	2-1/8"	2"	-	9	54
NBRT1360	2-3/8"	-	-	8	48
NBRT1367	2-5/8"	2-1/2"	-	8	48
NBRT1373	2-7/8"	-	-	6	36
NBRT1376	3"	-	3"	6	36
NBRT1379	3-1/8"	3"	-	6	36
NBRT1389	3-1/2"	-	-	6	36
NBRT1392	3-5/8"	-	-	6	36
NBRT13102	4"	-	-	4	24
NBRT13110	4-1/4"	-	-	3	18
NBRT13114	4-1/2"	-	-	3	18

1-1/4"					
Item Code	Pipe Insulation ID	Copper Pipe ID	PVC	Pcs/Carton	Linear ft. per crtn
NBRT3206	1/4"			15	90
NBRT3209	3/8"			15	90
NBRT3213	1/2"			15	90
NBRT3216	5/8"			15	90
NBRT3219	3/4"			12	72
NBRT3222	7/8"			12	72
NBRT3225	1"			12	72
NBRT3228	1-1/8"			12	72
NBRT3232	1-1/4"			12	72
NBRT3235	1-3/8"			12	72
NBRT3238	1-1/2"			10	60
NBRT3242	1-5/8"			10	60
NBRT3248	1-7/8"			9	54
NBRT3251	2"			8	48
NBRT3254	2-1/8"			8	48
NBRT3260	2-3/8"			6	36
NBRT3267	2-5/8"			6	36
NBRT3273	2-7/8"			4	24
NBRT3276	3"			4	24
NBRT3279	3-1/8"			4	24
NBRT3289	3-5/8"			4	24

Tube length: (6ft") | Tolerance:  $\pm(1/16")$  thickness;  $\pm 0.1ft$

## AEROFOAM® ELASTOMERIC FOAM TUBES

Thickness (inch)	Width x Length	Accessories				
		Plain	Self Adhesive (SA)	With Aluminum foil (SA-AL)	Self Adhesive with Aluminum foil (SA-AL)	With CLAD
1/4"	48" x 100'	NBRR06-1-30	NBRR06-1-30SA	NBRR06-1-30AL	NBRR06-1-30SA-AL	NBRR06-1-30CL
3/8"	48" x 65'	NBRR09-1-20	NBRR09-1-20SA	NBRR09-1-20AL	NBRR09-1-20SA-AL	NBRR09-1-20CL
1/2"	48" x 45'	NBRR13-1-14	NBRR13-1-14SA	NBRR13-1-14AL	NBRR13-1-14SA-AL	NBRR13-1-14CL
5/8"	48" x 40'	NBRR16-1-12	NBRR16-1-12SA	NBRR16-1-12AL	NBRR16-1-12SA-AL	NBRR16-1-12CL
3/4"	48" x 32'	NBRR19-1-10	NBRR19-1-10SA	NBRR19-1-10AL	NBRR19-1-10SA-AL	NBRR19-1-10CL
1"	48" x 26'	NBRR25-1-08	NBRR25-1-08SA	NBRR25-1-08AL	NBRR25-1-08SA-AL	NBRR25-1-08CL
1-1/4"	48" x 20'	NBRR32-1-06	NBRR32-1-06SA	NBRR32-1-06AL	NBRR32-1-06SA-AL	NBRR32-1-06CL
1-1/2"	48" x 13'	NBRR40-1-04	NBRR40-1-04SA	NBRR40-1-04AL	NBRR40-1-04SA-AL	NBRR40-1-04CL
2"	48" x 13'	NBRR50-ST	NBRR50-1-04SA	NBRR50-1-04AL	-	-

Tolerance Rolls/Sheets:  $\pm(1/8")$  thickness;  $\pm 0.1ft$

Thickness (inch)	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"
R value at 75 °F ((h ft2 °F/btu)	1.0	1.5	2.2	2.7	3.2	4.3	5.5	6.8	8.6
U value at 75 °F ((btu / h ft2 °F)	1.00	0.67	0.45	0.37	0.31	0.23	0.18	0.15	0.12

ACCESSORIES	
NAME	SIZE
Aerofoam® glue	0.66 gallon
Aerofoam® elastomeric foam tape	2"width x 30ft length
PE duct tape (black/gray)	2"width x70/90ft length
Aerofinish UV paint	gallon



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## TEST CERTIFICATES

Sr. No.	Test Standard	Description
1	ASTM E84	Fire Reaction Test
2	ASTM C411	Hot Surface Measurement
3	ASTM C534	Dimensional Stability
4	ASTM E96	Water Vapour Permability
5	BS EN 12087	Water Absorption
6	BS EN 12086	μ Value
7	ASTM C518	Thermal Conductivity
8	ASTM C209	Water Absorption
9	EN 717-1	Formaldehyde
10	IMO MSC 61 (67)	Surface Flammability
11	ISO 5660-2	Smoke Density
12	ASTM D1149	Ozone Test
13	BS 476 Part 6	Class 0
14	BS 476 Part 7	Class 1
15	FMVSS 302	Flammability Test for Automobiles
16	ASTM D5116	VOC Level Antimicrobial Resistance
17	ISO 22196	Antimicrobial Resistance
18	ASTM G21	Antifugal Resistance
19	CFC Free	
20	ISO 354	Sound Absorption
21	OPD & GWP Values	
22	DIN EN 14706	Temperature Range
23	ASTM D3574	Compression Set
24	ASTM C871	Chemical Analysis
25	DIN EN 13468	Sodium, Silicate & Chloride
26	DIN 1988	Leachable chlorides, nitride and ammonia according to DIN 1988

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