TAWREED

TAWREED TRADING & CONTRACTING · DUCT FACTORY IN QATAR SINCE 2012

TECHNICAL DATA SHEET // INSULATION

CoolX Thermal & Acoustic Insulation – NBR, PE/XLPE/IXPE

عزل حراري وصوتي CoolX – NBR وPE/XLPE/IXPE

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01 NBR foam insulation

02 PE / XLPE / IXPE foam

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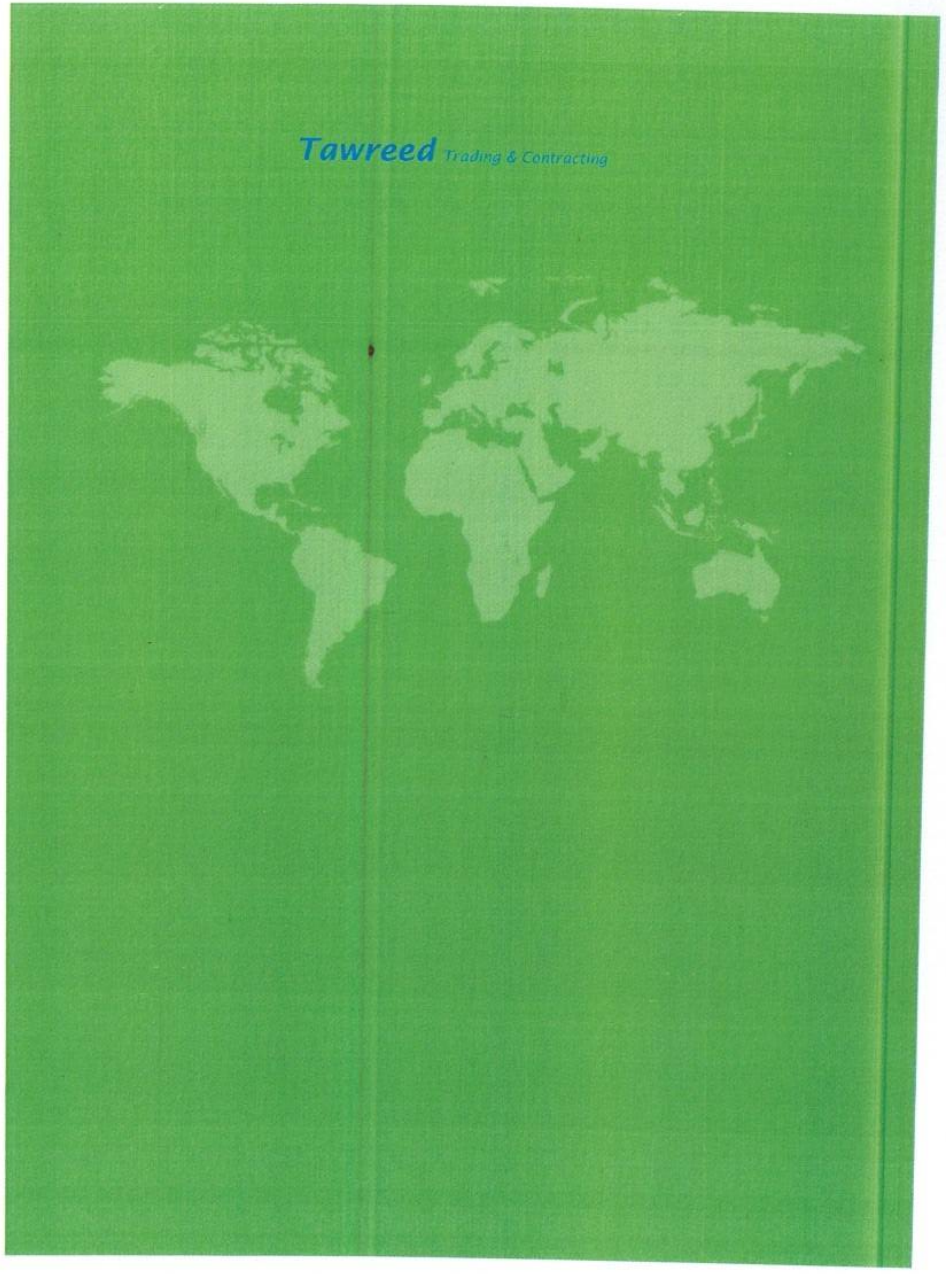
DOCUMENT

5 pages, extracted from:
Technical Submittal - WellWall Phenolic Pre-Insulated Duct, p. 16–19
Revision 01 · October 2026

CONTACT · REQUEST A QUOTE

Phone / WhatsApp: +974 7097 0111 Email: hvac@tawreed.ltd
Factory: Zone 91, Street 3138, Building 66, Birkat Al Awamer, Qatar
Web: tawreed.ltd Hours: Sat–Thu, 9am–5pm

Data supplied for submittal and specification purposes. Values are nominal;
confirm project-specific requirements with Tawreed before ordering.



COOLX Industrial

Thermal & Acoustic Insulation

CoolX

INSULATION

» THERMAL INSULATION

▶ NBR FOAM INSULATION

CF - Closed cell structure NBR Rubber Foam is a high quality flexible thermal insulation product, ideal for HVAC&R applications. It includes pipe and sheet insulations. The main application is for the refrigerant medium system in A/C machine, metal air duct system, chilled and condensed water systems and hot water piping system.





PARAMETER & SIZE

PARAMETER SHEET »

Physical Properties	Data	Test Method
Density	40-60 (2.500-3.750) Kg/m3 (lbs/ft3)	ASTM D1667
Thermal Conductivity	W/mk (BTUin/ft2°F)	
-20℃	0.0310 (0.225)	ASTM C518
0℃	0.0340 (0.240)	
40℃	0.0380 (0.260)	
Water Vapor Permeability	1.16 x 10-13 (0.08) s·m·Pa (perm-in)	ASTM E96
Moisture Resistance	12000	
Water Absorption(%)	<= 0.2 (by volume)	
Flammability and smoke developed	25/50	ASTM E84/ ULC S102
	Class 1 / Class 0	BS 476 Part 6 & 7
Dimensional Stability	0 to 7%	ASTM C534
Temperature Range	-50 ~ +105℃ (-58 ~ +221 °F)	

SHEET/ROLL SIZE »

Thickness		Width	Length	Packing
inch	mm	m	m	PE Bag
1/8	3	1.0, 1.2	10	1 roll/bag
1/4	6			
3/8	9			
1/2	13	1.0, 1.2, 1.5		
3/4	19			
1	25			
1 1/4	32			
1 1/2	38	1.0, 1.2	4	5 sheets/bag
2	50			

Size can be customized



PIPE SIZE »

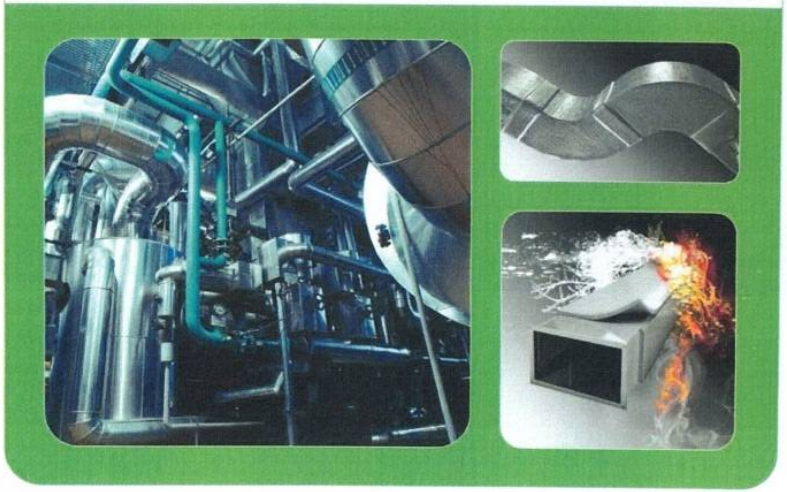
ID	THK	3/8" (9mm)	1/2" (13mm)	3/4" (19mm)	1" (25mm)	1 1/4" (32mm)
inch	mm	pcs/ctn.	pcs/ctn.	pcs/ctn.	pcs/ctn.	pcs/ctn.
1/4	6	150	90			
3/8	9	130	85	45		
1/2	13	110	70	40		
5/8	16	90	60	35	24	20
3/4	19	80	55	32	22	18
7/8	22	70	50	30	20	17
1	25	60	45	27	18	16
1 1/8	28	55	38	24	18	15
1 1/4	32	45	35	22	16	14
1 3/8	35	40	33	20	15	12
1 1/2	38	36	31	18	13	11
1 5/8	42	35	30	18	13	11
1 7/8	48	30	24	14	11	9
2 1/8	54	24	20	12	10	8
2 1/4	57	16	18	11	10	8
2 3/8	60		16	10	9	7
2 5/8	67		12	9	9	7
3	76			8	7	6
3 1/2	89			6	6	5
4 1/4	108			5	4	4

Standard length: 6 ft or 2m(can be customized)

▶ PE/XLPE/IXPE FOAM INSULATION

CF - Polyolefin Foam (PE / XLPE / IXPE Foam) is full closed cell structure, flame retardants, and free from PVC, gives out low smoke and non-toxic matter. The material is supplied with factory applied embossed aluminum foil facing and repositionable acrylic tissue adhesive system. It is used for heat insulation and sound absorption, suitable in the building and construction field, like duct, roof, and wall where thermal insulation, moisture resistance, sound and vibration is critical.





PARAMETER & SIZE

PARAMETER SHEET »

Physical Properties	Testing Method	Data
Surface Density		25 - 28 kg/m3
Color Available		Dark Grey,White,Red,etc.
Fire and Smoke Behaviour (Alu foil faced)	BS476 Part 6&7	Class 0, Class 1
	AS1530 Part 3	Ignitability Index:0
		Spread of Flame Index:0
		Heat Evolved Index:0
		Smoke Developed Index:1
	UL 94	Horizontal Burn: approved (HF-1)(E193277)
Thermal Conductivity Average Temperature 23℃	ASTM C518	0.0327 w/m·k
Water Vapour Permeability	ASTM E96	≤2.3×10 $^{-15}$ kg/Pa.s.m
Water Vapour Permeability 12mm		0.000195 μg/N.s
Water Absorption by volume	JIS K6767	<0.1% v/v g/cm3 (0.00038 g/cm2)
Permeability Resistance Factor		μ > 80,000
Resistance to fungi	ASTM G21	Zero Growth
Ozone Resistance		Excellent
UV Resistance		Excellent
Noise Reduction Coefficient:	AS 1045	0.20(12mm foam thickness)
		0.30(25mm foam thickness)
Temperature Range	-50 °C ~ +90 °C(-58 ~ +194°F)	

SHEET/ROLL SIZE »

Thickness		Width	Length	Packing
inch	mm	m	m	PE Bag
1/8	3	1.0, 1.2, 1.5	10	1 roll/bag
1/4	6			
3/8	9			
1/2	13			
3/4	19			
1	25			
1 1/4	32			
1 1/2	38	1.0, 1.2, 1.5	4	5 sheets/bag
2	50			

Size can be customized



PIPE SIZE »

DN		Insulation Pipe ID	Thickness			Length
inch	(mm)	(mm)		(mm)		(m)
1/2	15	20	16	18	23	1.0
	15	22	16	18	23	
3/4	20	25	16	18	24	
	20	28	16	18	24	
1	25	32	16	20	24	
	25	35	16	20	24	
1 1/4	32	38	16	20	26	
	32	42	16	20	26	
1 1/2	40	45	16	22	26	
	40	48	16	22	26	
1 3/4	45	51	16	22	26	
2	50	57	20	23	28	
	50	60	20	23	28	
2 1/2	65	76	20	23	28	
3	80	89	20	25	30	
4	100	108		25	30	
	100	114		25	30	
5	125	133		26	35	
	125	140		26	35	
6	150	159		28	35	
	150	168		28	35	
8	200	219		30	40	
10	250	273		30	40	
12	300	325		30	40	
14	350	371		30	40	
	350	377		30	40	
16	400	426		33	42	
18	450	480		33	42	
20	500	530		35	45	
24	600	630		35	45	
Thickness Tolerance(mm)		±0.75	±1.5		±1.5	

» ACOUSTIC INSULATION



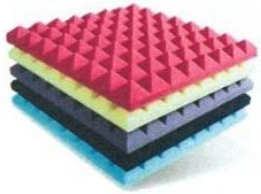
▶ PU ACOUSTIC FOAM

CF - PU Acoustic Foam is used high density mold-proof, fireproof, eco-friendly PU foam as basic material,processed by full automatic computer controlled equipment, be made to multihole structures product, not only have good sound absorbing effect, but also looks great on visual. These products are widely used for hotel, night club, ballroom, hospital, office building, recording room, studio, KTV sound insulation & absorption purpose.

PARAMETER SHEET »

Physical Properties	Unit/Standards	Data
Density	kg/m3	20 - 30
Tensile Strength	Kpa	63
Fire Retardant	BS 5852 Part2 1982	Pass
Tear Strength	N/CM	1.65
75% Compress Permanent Distortion Rate	%	3
Heat Conductivity Rate	W/m.K	0.039
Tensile Rate	%	96
Rebound Rate	%	55
25% Compression Rigidity	N	112
65% Compression Rigidity	N	210
65%/25% Cave-in Ratio		1.9
Temperature	°C	-55~180
NRC		0.85





Patterns: waved, pyramid, wedged, squared, bass trap, etc.
Colors: black, white, red, purple, gray, yellow, blue.
Packing: PE bag or carton box.
Size: 50 x 50 x 5cm/pc (can be customized)

▶ NBR ACOUSTIC FOAM

CF - NBR Acoustic Foam is engineered and designed specifically for air - conditioning units, automotive, generator shell, generator room sound insulation.

PARAMETER SHEET »

Physical Properties	Data
Density	45 - 60 kg/m³
Structure	open cell structure
Patterns	waved, plain
Thickness	6, 10, 15, 20, 25mm
Size	1m x 1m, 1m x 1.5m, 1m x 2.0m
Package	plastic bag or paper carton



» ACCESSORIES

▶ FOAM GASKET/TAPE

Application: Sealing and insulating between material joints.

Material: NBR, PE/XPE, EVA, SBR foam.

PACKING

Size	Rolls/Carton
3mm x 50mm x 10m	60
3mm x 25mm x 10m	120
5mm x 50mm x 10m	48
5mm x 25mm x 10m	96
Size can be customized	



▶ ALU FOIL TAPE

Applications: sealing joints and seams against moisture and vapor on foil jacketing, or used in refrigerators, water heaters and gas stoves, etc.

PACKING

Size	Rolls/Carton
0.03mm x 50mm x 28m	36
Size can be customized	

