TAWREED

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TECHNICAL DATA SHEET // PI DUCT

WellWall Phenolic Pre-Insulated Duct

دكت فينوليك معزول مسبقا – WellWall

CONTENTS

01 Manufacturer catalogue (WellWall)

02 Phenolic foam board specification

03 Physical & thermal properties

DOCUMENT

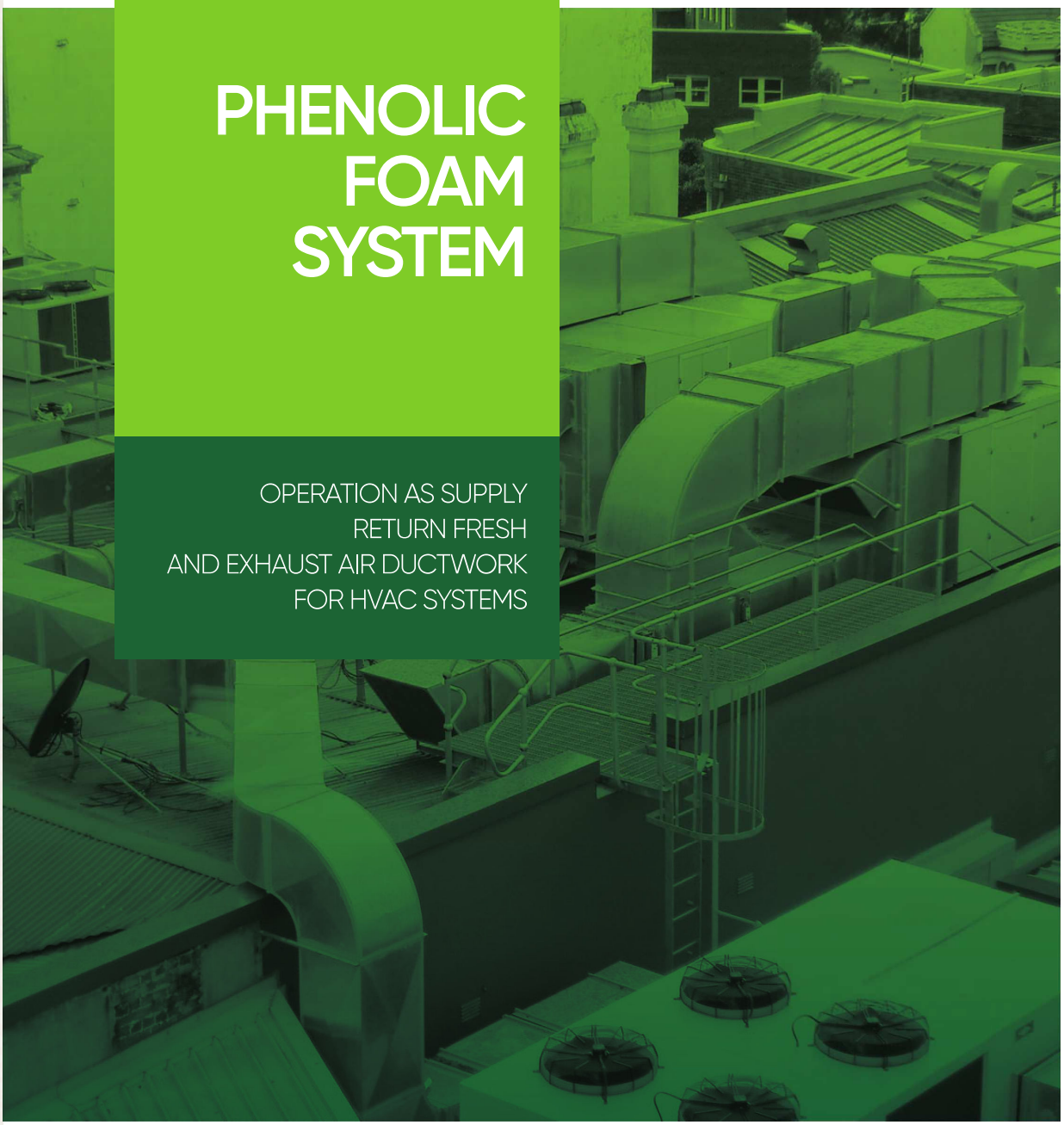
16 pages, extracted from:
Technical Submittal - WellWall Phenolic Pre-Insulated Duct, p. 26–33, 59–65
Revision 01 · October 2026

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.

PHENOLIC FOAM SYSTEM



OPERATION AS SUPPLY
RETURN FRESH
AND EXHAUST AIR DUCTWORK
FOR HVAC SYSTEMS

维 沃
WELLWALL



COMPANY CORE VALUES

CUSTOMER FIRST

EMBRACE CHANGE

TEAMWORK

INTEGRITY

PASSION

DEDICATION

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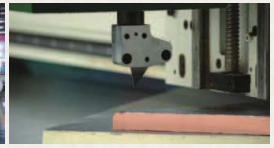
CERTIFICATION 15











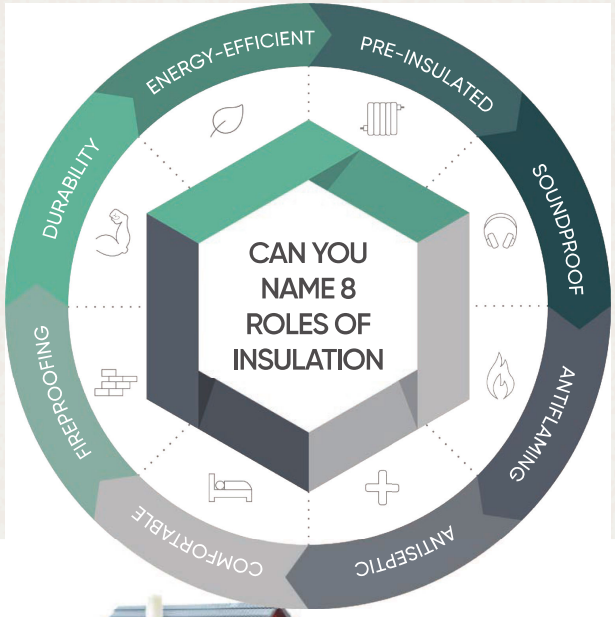

ABOUT WELLWALL

Jiangyin Wellwall Insulation Materials Co., Ltd. is an independent innovative enterprise integrating R&D, manufacturing, sales and engineering services. The company has been focusing on the production of phenolic foam sheets and composite products, and has 12 years of production experience. The company is located in Jiangyin City, Jiangsu Province, 2 hours drive from Shanghai, with a very convenient transportation advantage.

The company occupies 40 acres and has 120 employees. Our company has an international advanced phenolic foam insulation board automatic production line, and equipped with relevant inspection and testing equipment, specializing in green, low carbon, energy saving, fireproof, environmental protection, heat preservation, light weight, high pressure, sound insulation, beautiful phenolic foam board and Production of composite materials. The company has a series of products: phenolic composite duct board series, phenolic external wall insulation board series, anti-corrosion silencer exhaust duct sheet. The company has an annual production capacity of 7 million square meters of phenolic composite air duct for central air conditioning, 500,000 cubic meters of phenolic external wall insulation board, and 3 million square meters of anti-corrosion silencer exhaust duct sheet. In 2015, 2016 and 2017, the country achieved the first national output for three consecutive years.

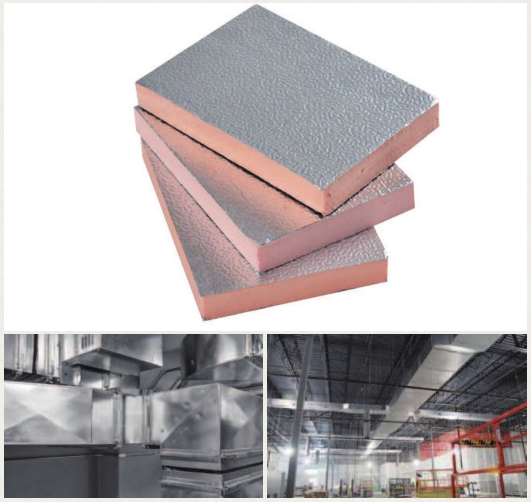
In 2016, the company was one of the national industry standard drafting companies, and participated in the preparation of the latest industry standard JC/T1051 "metal surface rigid phenolic phenolic foam composite board". Obtained the ISO9001 quality system certification and environmental assessment report. And passed the NFTC, Exova, ITS and other related institutions on the comprehensive testing of products.

Since its establishment, the company has adopted an advanced production management mode, so that all technical indicators of the products meet the requirements of international and domestic standards. The company advocates the enterprise spirit of "diligence and pragmatism, surpassing self", insists on the product with "highest cost performance" as the core, adheres to the service with the concept of "integrity and efficiency", and strives to be the leading brand in the composite air duct and fireproof and heat insulation board industry. Welcome domestic and foreign customers to cooperate with us.





PHENOLIC PANEL FOR AIR DUCT



• PRODUCT INFORMATION

Phenolic foam material is a organic polymer rigid foam product, which is a closed-cell type rigid foam made of phenolic resin and flame retardant, foaming agent, curing agent and other additives. Phenolic foam is known as the king of insulation because of its low thermal conductivity, heat preservation and fire resistance.

Phenolic foam is the most promising new type of thermal insulation material in the internationally recognized construction industry. Because this material not only has low thermal conductivity, good thermal insulation performance, but also has flame retardancy, good thermal stability, light weight and low smoke. Heat resistance, high mechanical strength, strong sound insulation, strong chemical resistance, good weather resistance, etc., first applied to aerospace, defense engineering, and later widely used in civil aircraft, ships, station oil wells and other fire-resistant requirements Sites, as well as thermal insulation, energy conservation, sanitation and other high-rise building central air conditioning systems, such as hospitals, stadiums, schools, factories, airports and so on. It can also be applied to cold storage in refrigeration storage, insulation for industrial pipes and equipment such as petrochemicals, building partitions, exterior wall composite panels, ceilings, sound absorbing panels, etc.

• TECHNICAL DETAILS

Length	3900mm/2900mm(other length are available)
Width	1200mm
Thickness range	20/25/30/40/50mm
Aluminum facing	Aluminum foil, black Aluminum foil, Aluminum sheet, Color steel sheet, Galvanized sheet.
Density	40–80 kg/m^3(other density are available)
Thermal conductivity	0.021~0.030 W/(M·K)
Water Absorption Rate	1.9%
Dimension Change Rate	0.3%
Working Temperature	-100°C to 150°C
Combustion performance	Class 0 (BS476 Part 6 and 7), Class A (ASTM E84)

• FEATURES

- Light, safe, decrease the load of the building.
- Easy to install, shorten the construction period.
- Protect environment, sandwich structure with antioxidant surfaces.
- High performance in heat insulating, can be served in both high and low temperature environment.
- Fireproof, meet the National standard, makes building safe.
- Soundproof, makes a quieter environment.
- No need to leave space for insulation material installing, so that the story height can be reduced.
- Long service life up to 20 years, very low cost in wastage and maintenance.
- Nice appearance.

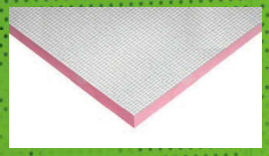
WELLWALL PANELS



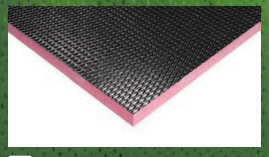
1 Embossed Aluminum foil 80 or 60 micron
2 Phenolic foam
3 Embossed Aluminum foil 80 or 60 micron



1 Black Embossed Aluminum foil 80 or 60 micron
2 Phenolic foam
3 Embossed Aluminum foil 80 or 60 micron



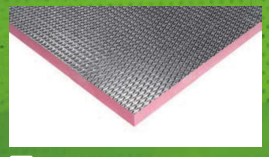
1 Aluminum foil reinforced with a glass scrim
2 Phenolic foam
3 Aluminum foil reinforced with a glass scrim



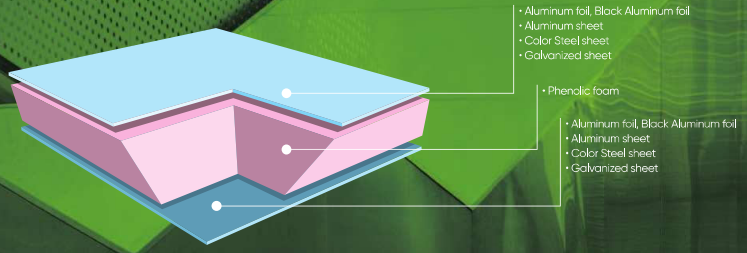
1 Embossed Aluminum foil 80 or 60 micron
2 Phenolic foam
3 Aluminum sheet 200 micron



1 Embossed Aluminum foil 80 or 60 micron
2 Phenolic foam
3 Color steel sheet 200 micron



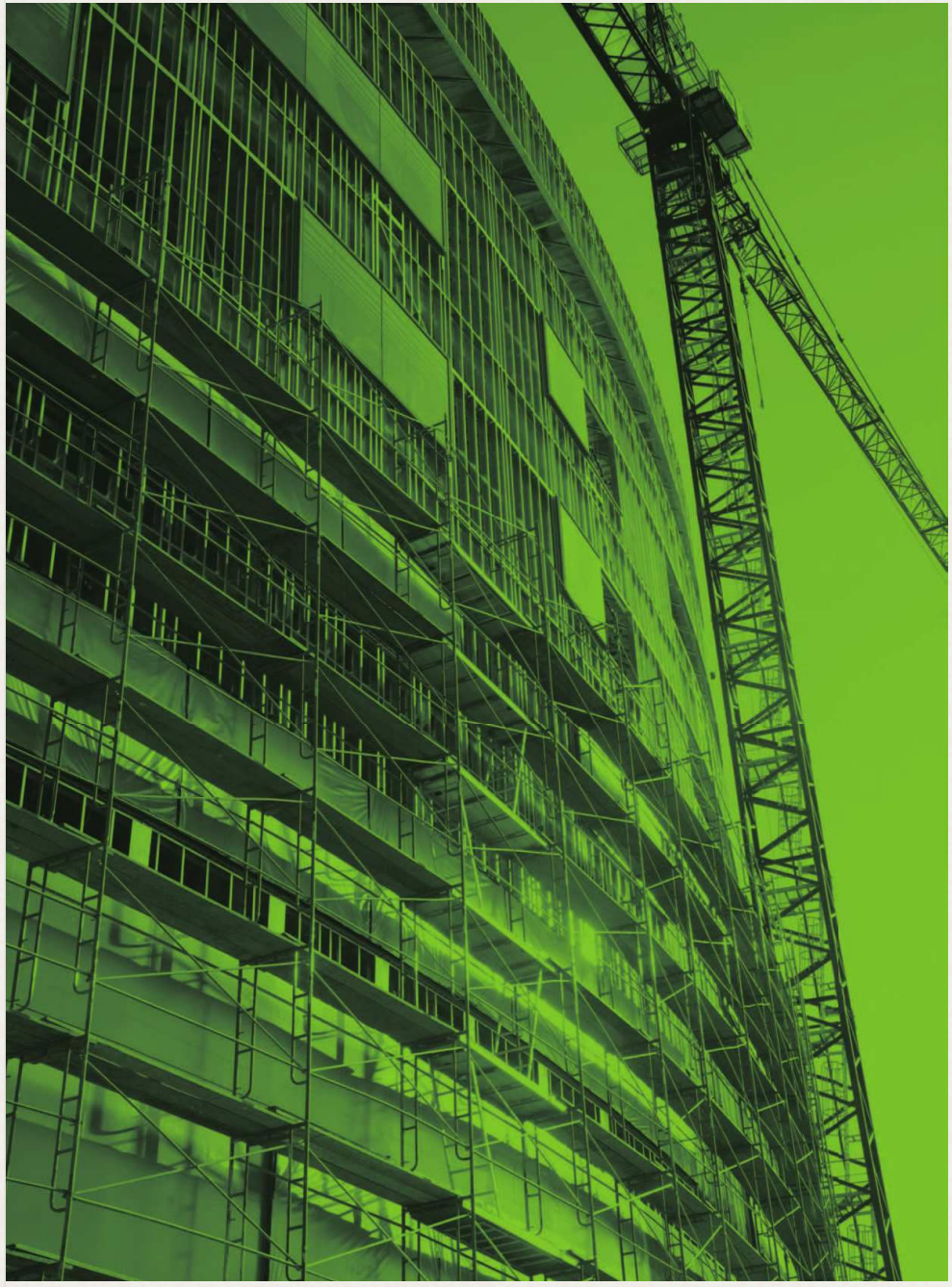
1 Embossed Aluminum foil 80 or 60 micron
2 Phenolic foam
3 Galvanized sheet 200 micron



PHENOLIC FOAM FOR AIR DUCT APPLICATIONS







PHENOLIC FOAM FOR WALL INSULATION







• PRODUCT INFORMATION

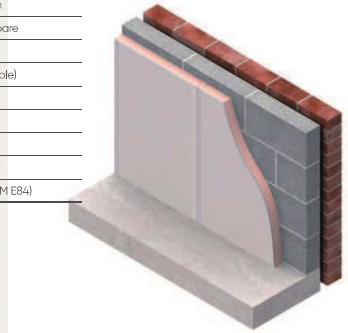
Phenolic foam for Framing Board is a rigid insulation board used for timber and steel framing systems, consisting of a rigid thermoset modified resin insulation core, covered with low emissivity composite foil on both sides, improving thermal resistance in adjacent unventilated cavities. The product is manufactured with a 0 ODP and low GWP blowing agent, which makes it very eco-friendly. It could be used to control potential condensation problems, especially if combined with a vapor-resistant layer placed on the warm side of the insulation. It is easily cut by using a sharp knife or a toothed saw, always taking care of accurate trimming. It is best kept in indoor conditions and when stored outdoors it must be properly covered and protected by using polythene sheet, for instance, in order of keeping it dry. The product is completely safe to use and will not endanger your health.

• FEATURES

- Safe and easy to handle and install.
- Water vapor resistant.
- The core is Class 0 fire rated.
- Non-deleterious.
- Very durable, depending on the structure and conditions of use.
- Mold and microbial growth resistant.
- Unaffected by air filtration.
- High performance thermoset rigid insulation.
- Applicable in both new build and refurbishment projects.
- Environmentally friendly, with 0 ODP and low GWP.

• TECHNICAL DETAILS

Length	1000mm(other length are available)
Width	1200mm/600mm
Thickness range	60/70/80/90/100/110/120/130mm
Panel surface	Both side embossed aluminum foil or bare
Aluminum foil thickness	80/80 micron, 60/60 micron
Density	40~80 kg/m^3(other density are available)
Thermal conductivity	0.021~0.030 W/(M·K)
Water Absorption Rate	1.9%
Dimension Change Rate	0.3%
Working Temperature	-100°C to 150°C
Combustion performance	Class 0 (BS476 Part 6 and 7), Class A (ASTM E84)





CONSTRUCTION OF AIR DUCT



1 PLOTTING

In this phase, the perimeter of the single piece, that will compose the finished duct (linear or fitting) after cutting and assembly, is plotted on the panel.



2 CUTTING

Using the appropriate tools (manual or automatic) in this phase, the single pieces to be used in the fabrication of the duct are cut from the panel.



3 GLUING

During gluing, all the pieces produced above are assembled with the use of special glues and the finished duct takes shape.



4 FOLDING

In this phase (required only for the production of duct fittings), indentations are applied to the piece of panel allowing the panel to be adapted to the shapes of the finished duct.



5 CLOSING

In this phase, the duct is trimmed and finished through pressing and taping.



6 ACCESSORIES

Using specific tools and glues, the section bars required are applied to the finished duct. When the duct is installed, these section bars permit easy connection of the single pieces to complete the air distribution system.

AIR DUCT FITTINGS AND ACCESSORIES



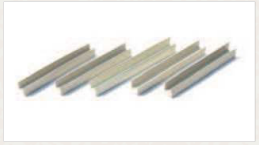
FLANGE/INVISIBLE FLANGE:ALUMINUM JOINT OR PVC
Thickness: (20mm and 30mm)
Length: 4m



CHAIR H-FLANGE: ALUMINUM JOINT OR PVC
Thickness: (20mm and 30mm)
Length: 4m



F-FLANGE: ALUMINUM JOINT OR PVC
Thickness: (20mm and 30mm)
Length: 4m



U-FLANGE: ALUMINUM JOINT OR PVC
Thickness: (20mm and 30mm)
Length: 4m



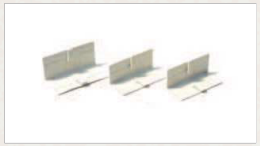
SLIDING CHANNEL: ALUMINUM JOINT
Thickness: (20mm and 30mm)
Length: 4m



H-INSERT: ALUMINUM JOINT OR PVC
Thickness: (20mm and 30mm)
Length: 4m



GI CORNER COVER
Thickness: (20mm and 30mm)



PVC CORNER
Thickness: (20mm and 30mm)



ALUMINUM TAPE
width: 2 inch, 3 inch



GI SHAPE DISK



CUTTING TOOLS SET
Left, right, straight and V cutter



TIGER JOINT

TESTING EQUIPMENT



VISCOSITY TEST MACHINE



OXYGEN INDEX MACHINE



THERMAL CONDUCTIVITY MACHINE



PRESSURE MACHINE

CERTIFICATION

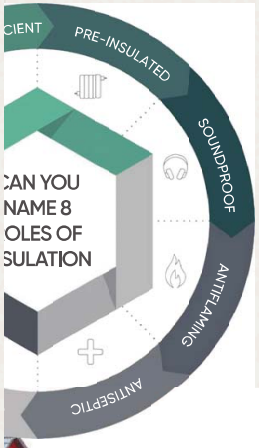


TECHNICAL DATA SHEET

PHENOLIC FOAM BOARD – SPECIFICATION

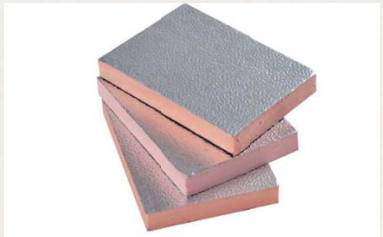
Property	Description	Unit Value	Standard
Dimension	Thickness	20mm ±0.5mm	
	Length	4000 mm	
	Width	1200 mm	
Panel Facing	Inner Face	Aluminum foil with glass-fiber mesh – 80micron Aluminum foil	
	Outer Face	Aluminum foil with glass-fiber mesh – 80micron Aluminum foil	
Density		65 kg/M3 ±5	ASTM D 1622:03
Thermal Conductivity		0.021W/(m.K)	ASTM C518:2010
Compressive Resistance		401.5 (kPa)	ASTM D1621:00
Water Vapor Transmission of Materials	Transmission	0.0 g/h.m2	ASTM E96:2000
	Permeance	0.0 g/Pa.s.m2	BS:4370
Water Absorption	Transmission	0.25%	ASTM C209:1998
	Permeance		
Dimensional Stability	Length	0.15%	ASTM D2126:1999
	Width	0.06%	
	Thickness	0.05%	
Ph Value		6.47	ISO 8975
CFC		CFC Free	SGS/J00202F-DB07
Halogen		Halogen Free	SGS/J00202F-DB07

Property	Description	Unit Value	Standard
Apparent Closed Cell		95%	ASTM D 2856
Reaction to Fire		Class '0'	BS 476 -Part 6 & 7
Fire Performance		C- S3- d0	BS EN 13823:2002
			BS EN ISO 11925:2002
Flame Spread Index (FSI)		14.64 / Class 1	ANSI/UL 723 - ASTM E 84-04 - BS 476-Part 7
Smoke Development Index (SDI)		13.10	ANSI/UL 723 - ASTM E 84-04





PHENOLIC PANEL FOR AIR DUCT







• PRODUCT INFORMATION

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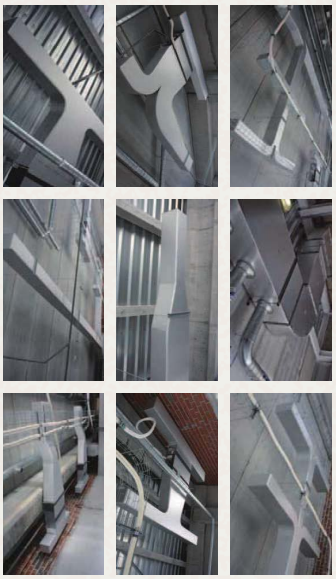
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PHENOLIC FOAM FOR AIR DUCT APPLICATIONS













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single pieces to be used in the
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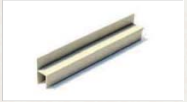
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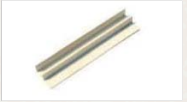
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ALUMINUM TAPE
width: 2 inch, 3 inch



GI SHAPE DISK



CUTTING TOOLS SET
Left, right, straight and V cutter



TIGER JOINT

TEST REPORTS

intertek
Total Quality. Assured.

JIANGYIN WELLWALL INSULATION MATERIAL CO., LTD

TEST REPORT

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