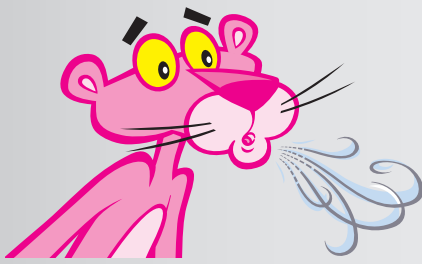


Air Handling INSULATION SOLUTIONS





MOVING AIR FORWARD™

As an industry leader for 75 years, Owens Corning continues to offer a full line of products for commercial and residential audiences that deliver energy conservation, noise control and indoor air quality while costing less than most non-fiberglass solutions. From the development of our very first product — an efficient and less expensive fiberglass furnace filter — coupled with the invention of flex duct and duct board, two products that paved the way for decades of innovation and quality, we continue to deliver the performance and sustainability needed to keep you ahead of the curve.

In addition, Owens Corning Air Handling Solutions Certifications and Sustainable features are:

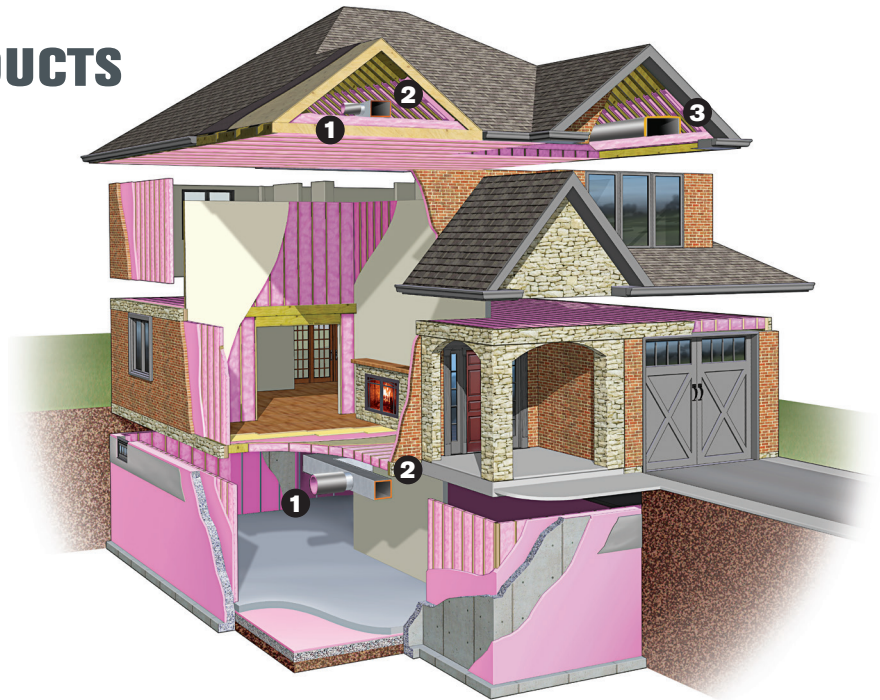
- Certified by Scientific Certification Systems to contain a minimum of 57% recycled glass content
- Certified to meet indoor air quality standards under the GREENGUARD Indoor Air Quality Certification ProgramSM, and many are also GREENGUARD Children & Schools CertifiedSM

*Duct board and duct liner products up to and including 1" along with duct wrap and flex duct insulation are GREENGUARD Children & Schools CertifiedSM



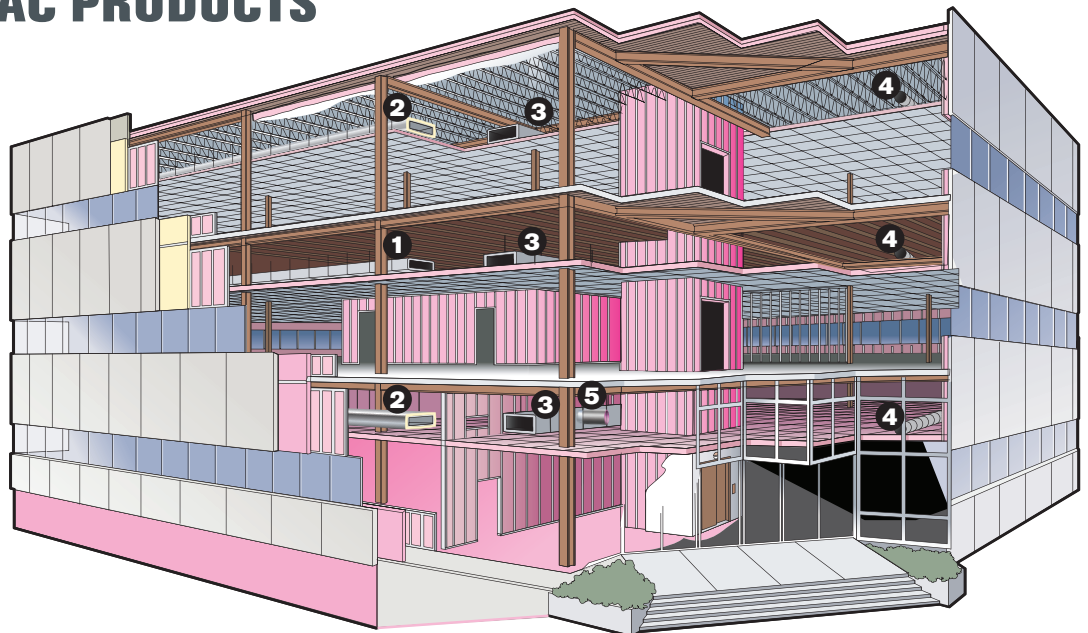
RESIDENTIAL HVAC PRODUCTS

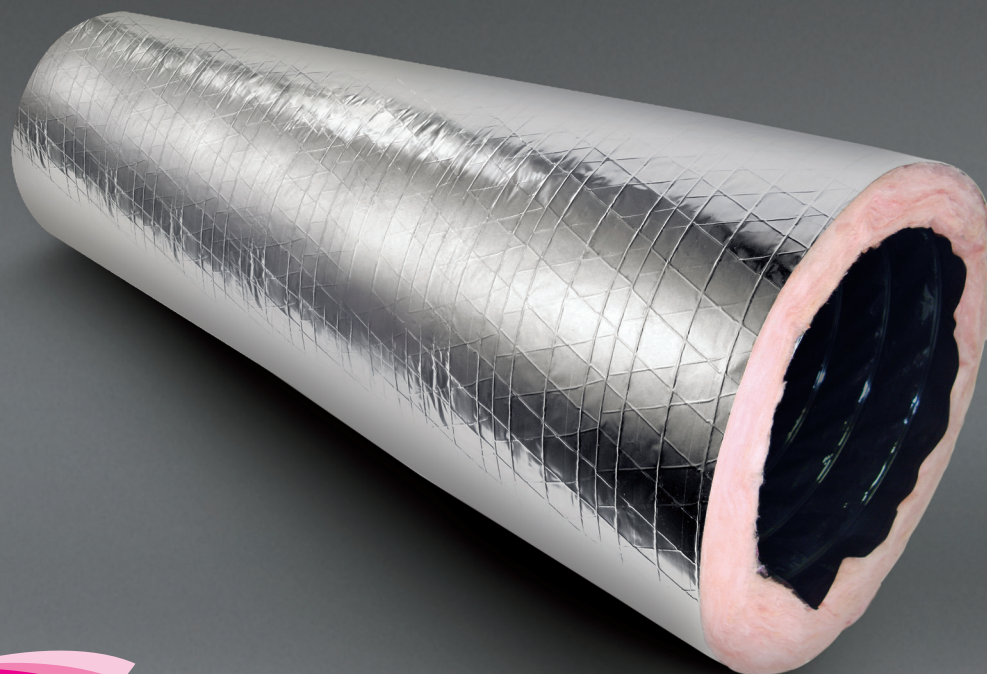
- 1 ECOTOUCH® INSULATION FOR FLEXIBLE DUCT
- 2 QUIETR® DUCT BOARD
- 3 SOFTR® DUCT WRAP



COMMERCIAL HVAC PRODUCTS

- 1 QUIETR® DUCT LINER BOARD
- 2 SOFTR® DUCT WRAP
- 3 QUIETR® ROTARY DUCT LINER
- 4 QUIETZONE® SPIRAL DUCT LINER
- 4 ECOTOUCH® INSULATION FOR FLEXIBLE DUCT





ECOTOUCH® INSULATION FOR FLEXIBLE DUCT

Owens Corning™ EcoTouch® Insulation for Flexible Duct is a lightweight, flexible, resilient thermal and acoustical insulation made of inorganic glass fibers bonded with a thermosetting resin.

Key Features

- EcoTouch® insulation is the only fiberglass insulation product listed in the USDA BioPreferredSM Catalog
- Made with 99% natural¹ materials
- Verified formaldehyde-free²
- Easy to handle
- Consistently meets UL-181 test requirements
- Made in the U.S.A.
- Excellent recovery provides outstanding thermal and acoustical performance
- GREENGUARD Children & Schools CertifiedSM
- High recycled content — minimum 57%

Standards, Codes Compliance

- Owens Corning™ EcoTouch® Insulation for Flexible Duct complies with the property requirements of ASTM C553, Type I

1. Unfaced insulation made with a minimum of 99% by weight natural materials consisting of minerals and plant-based compounds.

2. Applies to the insulation component only.

THERMAL PERFORMANCE/AVAILABILITY

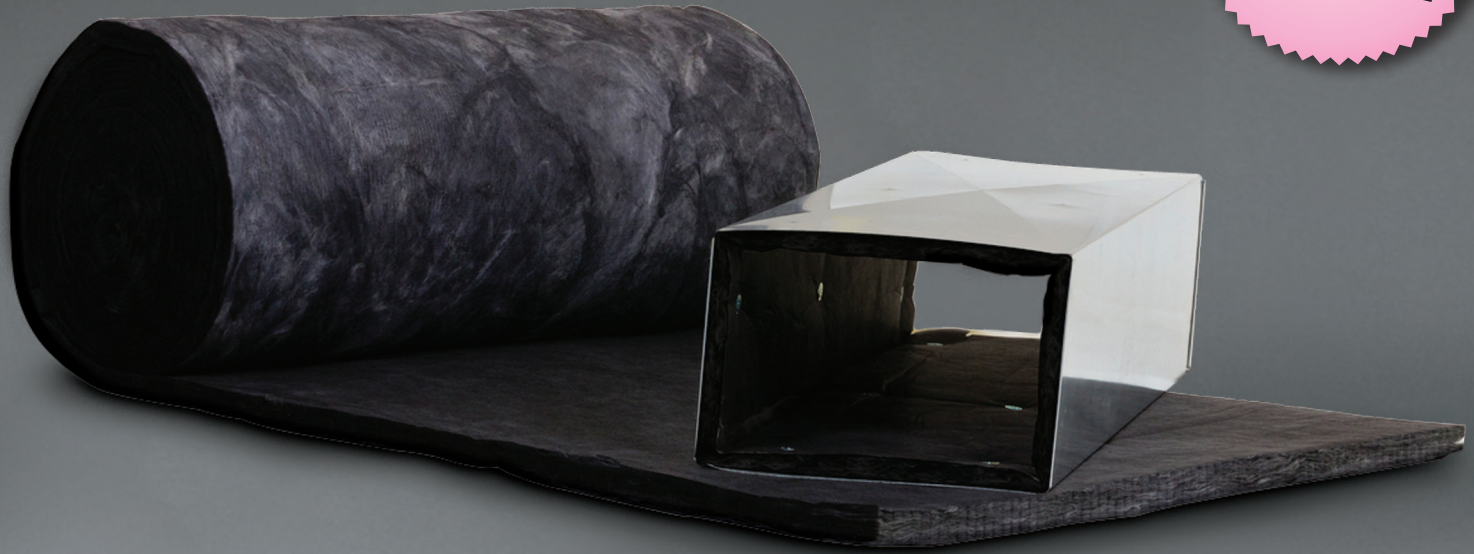
Dimensions	R-Value	Out of Package	Min. Installed Use
Thickness (in)	R 4.2	1.25" + .375 - 0	1.125"
	R 6	2" + .375 - 0	1.75"
	R 8	2.375" + .375 - 0	2.25"
Standard widths	Available for each duct size for R value		
Length (ft)	R 4.2	150' + 12" - 0	
	R 6	125' + 12" - 0	
	R 8	100' + 12" - 0	
Packaging	Compression packaged, open end rolls		

PHYSICAL PROPERTY DATA

Property	Test Method	Specification	Tolerance
Thermal Conductivity (k) (Btu·in/ft ² ·hr·°F) @ 75°F mean temperature	ASTM C177	0.29	+10%
Fire Hazard Classification ¹	UL 723 ASTM E84	FHC 25/50	
Mold Resistance	UL 181	Meets Requirements	
Noise Reduction Coefficient	ASTM C423 Mounting A	0.65	±0.05

1. The surface burning characteristics of this product have been determined in accordance with UL 723 (ASTM E84). This standard should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest five rating.

**NEW
STRONGER &
DARKER VEIL**



QUIETR® ROTARY DUCT LINER

QuietR® Rotary Duct Liner enhances indoor quality by absorbing noise within sheet metal ducts, and contributes to indoor comfort by lowering heat loss or gain through duct walls.

Key Features

- New, dark veil that is stronger with a durable air stream
- High erosion rating with 6,000 feet per minute (FPM) vs. 5,000 FPM
- Outstanding thermal and acoustical performance
- Absorbs fan and air turbulence noise and reduces popping noises within sheet metal ducts
- Bacterial and fungal growth resistant with an EPA registered biocide that protects the airstream surface from microbial growth

Standards, Codes Compliance

- ASTM C1071, Type I, Flexible
- NFPA 90A/90B
- ICC Compliant
- California Title 24
- SMACNA Application Standard for Duct Liners
- NAIMA Fibrous Glass Duct Liner Installation Standard
- Conforms to ASHRAE 62-2001
- Meets requirements of ASTM C1338, ASTM C1071, Type 11, ASTM G21, (fungi test) and ASTM G22 (bacteria test)

THERMAL PERFORMANCE/AVAILABILITY

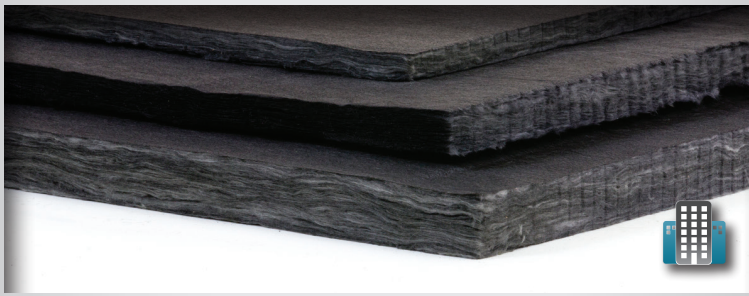
QuietR® Rotary Duct Liner is available in the following combinations of thicknesses and types.

Thickness		R-Value		Roll Length	
in	mm	(hr·ft ² ·°F)/Btu	(m ² ·°C)/W	ft	m
.5	13	2.2	0.38	100	31
1	25	4.2	0.74	100	31
1.5	38	6.3	1.11	50	15
2	51	8	1.41	50	15

PHYSICAL PROPERTY DATA

Property	Test Method	Value		
Operating Temperature	ASTM C411	250°F (121°C)		
Maximum Air Velocity	UL 181 Erosion Test ASTM C1071	6,000 fpm (30.5 m/sec)		
Water Vapor Sorption (by weight)	ASTM C1104	<3% at 120°F (49°C), 95% R.H.		
Fungi Resistance	ASTM C1338	Meets requirements		
Fungi Resistance	ASTM G21	Meets requirements		
Bacteria Resistance	ASTM G22	Meets requirements		
Corrosiveness ¹	ASTM C665 (Corrosiveness Test)	Will not cause corrosion greater than caused by sterile cotton on aluminum or steel		
Thermal Conductivity k at 75°F (λ at 24°C mean)	ASTM C518	Btu·in/hr·ft ² ·°F	W/m·°C	
		Type 200	0.23	0.034
		R-4.2	0.24	0.035
		R-6.3	0.24	0.035
R-8	0.24	0.035		
Surface Burning Characteristics ²	ASTM E84, UL 723, CAN/ULC S102	Flame Spread	25	
		Smoke Developed	50	

1. When wet, coated surfaces of QuietR® Rotary Duct Liner in contact with galvanized steel may cause discoloration of the sheet metal.
2. The surface burning characteristics of these products have been determined in accordance with UL 723 or CAN/ULC-S102. This standard should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest 5 rating. UL 723 and ASTM E84 are the same test methods.



QUIETR® DUCT LINER BOARD

QuietR® Duct Liner Board is a bonded board of glass fibers designed to be installed inside sheet metal ductwork or plenums with metal fasteners and adhesives. It is used in large duct and plenums and has an air velocity rating of 6,000 FPM (30.5 m/s).

Key Features

- Outstanding thermal and acoustical performance
- Absorbs noise within the duct that helps create quiet and comfortable environments
- Cleanable surface with a black mat facing that provides a smooth, durable surface making it easier to clean the duct liners using methods and equipment described in North American Insulation Manufacturers Association (NAIMA) Publication AH122, Cleaning Fibrous Glass Insulated Duct Systems: Recommended Practice
- Bacterial and fungal growth resistant with an EPA registered biocide that protects the airstream surface from microbial growth
- New, dark veil that is strong with a durable air stream

Standards, Codes Compliance

- ASTM C1071, Type II Rigid
- ICC Compliant
- California Title 24
- SMACNA Application Standard for Duct Liners
- NAIMA Fibrous Glass Duct Liner Installation Standard
- Conforms to ASHRAE 62-2001
- Owens Corning™ duct liners have flame spread ratings of 25 and smoke developed ratings of 50 when tested in accordance with UL 723 and ASTM E84. They meet requirements of NFPA 90A and 90B for fire resistance
- Meets requirements of ASTM C1338, ASTM G21 (fungi test), and ASTM G22 (bacteria test)

THERMAL PERFORMANCE

QuietR® Duct Liners are available in the following combinations of thicknesses and types: R-values, hr·ft²·°F/Btu (RSI, m²·°C/W) at 75°F (24°C) mean temperature

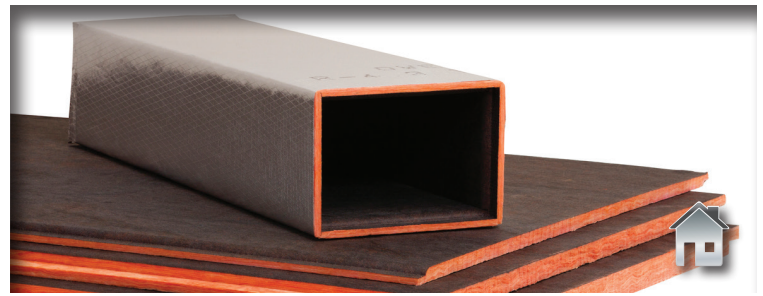
Product Type and Thickness	Normal Density pcf(kg/m ³)	1 in (25 mm)	1.5 in (38mm)	2 in (51mm)
QuietR® Duct Liner Board	3 (48)	4.3 (0.76)	6.5 (1.15)	8.7 (1.53)

QuietR® Duct Liner Board is available in the following standard sizes: 1.5" x 48" x 96" (38mm x 1219mm x 2438mm), 2" x 24" x 48" (51mm x 610mm x 1219mm), and 2" x 48" x 96" (51mm x 1219mm x 2438mm)
MTO available at Width: 48", Length: 24" - 120"

PHYSICAL PROPERTY DATA

Property	Test Method	Value
Operating Temperature	ASTM C411	250°F (121°C)
Maximum Air Velocity	UL 181 and ASTM C1071 Erosion Test	6,000 fpm (30.5 m/s)
Water Vapor Sorption (by weight)	ASTM C1104	3% at 120°F (49°C), 95% R.H.
Fungi Resistance	ASTM C1338	Meets requirements
Fungi Resistance	ASTM G21	Meets requirements
Bacteria Resistance	ASTM G22	Meets requirements
Corrosiveness ¹	ASTM C665 Corrosiveness Test	Will not cause corrosion greater than caused by sterile cotton on aluminum or steel
Thermal Conductivity k at 75°F (λ at 24°C mean)	ASTM C518	Btu·in/hr·ft ² ·°F 0.23 W/m·°C 0.033
Surface Burning Characteristics ² Flame Spread Smoke Developed	ASTM E84, NFPA 255, UL 723, and CAN/ULC-S102	25 50

1. When wet, coated surfaces of QuietR® Duct Liner Board in contact with galvanized steel may cause discoloration of the sheet metal.
2. The surface burning characteristics of these products have been determined in accordance with UL 723, ASTM E 84, NFPA 255, and CAN/ULC-S102. These standards should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest 5 rating.



QUIETR® DUCT BOARD

Owens Corning™ QuietR® Duct Board is a rigid, resin bonded fibrous glass board with a tough, damage-resistant, flame retardant, reinforced aluminum foil (FRK) facing. When fabricated into duct systems, it combines excellent thermal and acoustical insulating properties with substantially airtight transmission of air when all joints are sealed with UL 181A listed closures.

Key Features

- Virtually eliminates air leakage thus saving heating and cooling costs*
- Only manufacturer that has a 1" Type 800 duct board produced for light commercial applications
- Assured thermal R-value performance
- Absorbs noise and reduces popping noises caused by expansion, contraction and vibration
- Thermal/acoustical insulation board plus jacket forms a single component duct system, thus reducing inspection time
- Lightweight boards are easier to transport and handle than insulated sheet metal ducts
- Bacterial and fungal growth resistant with an EPA registered biocide that protects the air stream surface from microbial growth

Standards, Code Compliance

- Meets NFPA 90A/90B
- Meets ICC International Mechanical Code, Corps of Engineers Guide Spec., NYC MEA #186-69
- Supported by NAIMA and SMACNA industry standards
- Meets requirements of ASTM C1338, ASTM G21 (fungi test) and ASTM G22 (bacteria test)

*Savings vary.

THERMAL PERFORMANCE

	1" (25mm)	1.5" (38mm)	2" (51mm)
R-value, hr·ft ² ·°F/Btu (RSI, m ² ·°C/W)	4.3 (0.76)	6.5 (1.15)	8.7 (1.53)
k-value, Btu·in/hr·ft ² ·°F (W/m·°C)	0.23 (0.033)	0.23 (0.033)	0.23 (0.033)
C-value, Btu/hr·ft ² ·°F (W/m ² ·°C)	0.23 (1.32)	0.16 (0.87)	0.12 (0.65)

Mean temperature is the average of two temperatures: that of the air inside the duct and that of the ambient air outside it.
Note: Specified design thickness should be adequate to prevent exterior surface condensation.

PHYSICAL PROPERTY DATA

Property	Test Method	Value
Maximum Operating Temperature Limits	UL 181/ULC S10	Internal: 250°F (121°C) External: 150°F (66°C)
Maximum Air Velocity	UL 181/ULC S10 Erosion Test	6,000 fpm (30.5 m/s)
Static Pressure Limit	UL 181/ULC S10	±2 in. w.g. (500 Pa)
Water Vapor Sorption (by weight)	ASTM C1104	<3% at 120°F (49°C), 95% R.H.
Mold Growth	UL 181/ULC S10	Meets requirements
Fungi Resistance	ASTM G21	Meets requirements
Bacteria Resistance	ASTM G22	Meets requirements
Surface Burning Characteristics ¹ Flame Spread Smoke Developed	UL 723/ULC S102	< 25' < 50
Fire Retardancy	UL 181/ULC S10	Flame Penetration 30 min.

1. The surface burning characteristics of these products have been determined in accordance with UL 723/ULC S102. This standard should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest 5 rating.



SOFTR® DUCT WRAP FRK

SOFTR® Duct Wrap is a blanket of glass fiber insulation factory-laminated to FRK vapor retarder facing. A 2" (50mm) stapling and taping flange is provided on one edge. This product is designed to meet existing performance standards such as NFPA 90A and 90B and other mechanical and energy codes.

Key Features

- Condensation control
- Enhanced comfort control
- Easy to clean surface
- Flexible and easy to install

Standards, Codes Compliance

- ASTM C1290, Flexible Fibrous Glass Blanket Insulation Used to Externally Insulate HVAC Ducts, Type III
- ASTM C1136, Flexible Low Permeance Vapor Retarders for Thermal Insulation, Type II (facing only)
- ASTM C553 Mineral Fiber Thermal Insulation: Type I – Fiberglas™ Duct Wrap Type 75; Type II – SOFTR® Duct Wrap FRK Types 100 and 150. (Operating temperatures to 250°F (121°C) and thermal values to 150°F (66°C) mean

THERMAL PERFORMANCE

Standard roll width: 48" (1.2m)

Installed R (RSI) values: When installed in accordance with recommended installation procedures, SOFTR® Duct Wrap FRK will provide installed R (RSI) values as follows:

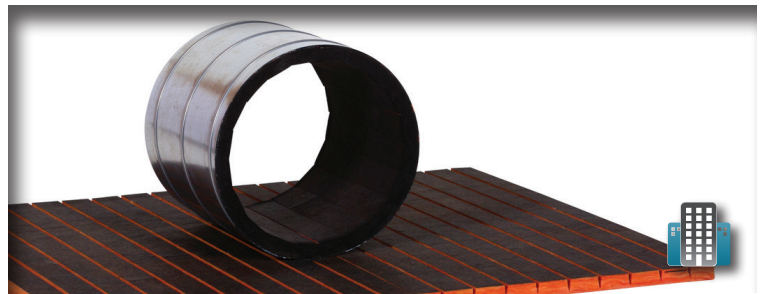
Nominal Thickness		Out-of-Package R (RSI) Value ¹		Installed Thickness ²		Installed R (RSI) Value ^{1,2}	
in	mm			in	mm		
Type 75 - 0.75 pcf (12 kg/m³)							
1.5	(38)	5.1	(0.9)	1.125	(29)	4.2	(0.74)
2.0	(50)	6.8	(1.17)	1.5	(38)	5.6	(0.98)
2.2	(56)	7.4	(1.3)	1.625	(42)	6	(1.06)
3	(76)	10	(1.76)	2.25	(57)	8.3	(1.46)
Type 100 - 1.00 pcf (16 kg/m³)							
1.5	(38)	5.6	(0.99)	1.125	(29)	4.5	(0.79)
2	(51)	7.4	(1.3)	1.5	(38)	6	(1.06)
Type 150 - 1.50 pcf (24 kg/m³)							
1.5	(38)	6	(1.06)	1.125	(29)	4.8	(0.85)
2	(51)	8	(1.41)	1.5	(38)	6.4	(1.13)

1. hr•ft²•°F/Btu (m²•°C/W) at 75°F (24°C) mean temperature.
2. Assumes 25% compression of insulation.

PHYSICAL PROPERTY DATA

Property	Test Method	Value		
Operating Temperature	ASTM C411	up to 250°F (121°C)		
Insulation Jacket Temperature Limit	ASTM C1136	up to 150°F (66°C)		
Jacket Puncture Resistance	ASTM C1136	25 units (0.7 joules)		
Water Vapor Permeance	ASTM E96	0.02 perms		
Water Vapor Sorption (by weight)	ASTM C1104	<3% at 120°F (49°C), 95% R.H.		
Fungi Resistance	ASTM C1338	Meets requirements		
Thermal Conductivity K at 75°F Mean, Btu•in/hr•ft ² •°F (λ at 24°C Mean, W/m•°C)	ASTM C518	Type 75 0.30 (0.043)	Type 100 0.27 (0.039)	Type 150 0.25 (0.036)
Surface Burning Characteristics ¹ Flame Spread Smoke Developed	ASTM E84	25 50		

1. The surface burning characteristics of these products have been determined in accordance with ASTM E 84. This standard should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest 5 rating.



QUIETZONE® SPIRAL DUCT LINER

QuietR® Duct Board can be fabricated for lining single wall spiral ducts. Please refer to the Owens Corning manual for grooving and fabrication instructions.

Key Features

- Outstanding thermal and acoustical performance
- Cleanable surface with a black mat facing that provides a smooth, durable surface making it easier to clean the duct liners using methods and equipment described in North American Insulation Manufacturers Association (NAIMA) Publication AH122, Cleaning Fibrous Glass Insulated Duct Systems: Recommended Practice
- Bacterial and fungal growth resistant with an EPA registered biocide that protects the airstream surface from microbial growth

Standards, Codes Compliance

- National Fire Protection Association Standards NFPA 90A/90B
- ICC International Mechanical Code
- NYC MEA# 186-69
- Meets requirements of ASTM C1338, ASTM G21, (fungi test) and ASTM G22 (bacteria test)
- ASTM C1071, Type II Rigid

THERMAL PERFORMANCE

at 75°F (24°C) Mean Temperature

	1" (25mm)	1.5" (38mm)
R-value: ft ² •°F/Btu (RSI: m ² •°C/W)	4.3 (0.76)	6.5 (1.15)
k-value: Btu•in/hr•ft ² •°F (W/m ² •°C)	0.23 (0.033)	0.23 (0.033)

PHYSICAL PROPERTY DATA

Property	Test Method	Value
Maximum Temperature Limits Internal External	UL 181 ASTM C411	250°F (121°C)
Maximum Air Velocity	UL 181 Erosion Test	6,000 fpm (30.5 m/s)
Water Vapor Sorption (by weight)	ASTM C1104	<3% at 120°F (49°C), 95% R.H.
Mold Growth	UL 181/ASTM C1338	Meets requirements
Fungi Resistance	ASTM G21	Meets requirements
Bacteria Resistance	ASTM G22	Meets requirements
Surface Burning Characteristics Flame Spread Smoke Developed	UL 723 ¹ ASTM E84	<25 <50

1. The surface burning characteristics of these products have been determined in accordance with UL 723. This standard should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest 5 rating. ASTM E84 and UL 723 are the same test method.



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Pub. No. 10012750-D. Printed in U.S.A. March 2013.
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