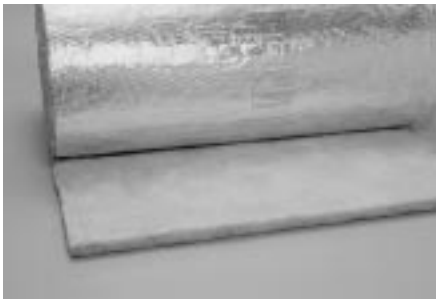
Submittal Sheet

Vinyl Faced Duct Wrap Insulation



☐ 1 1/2" (13mm) ☐ 2" (51mm)
☐ 3" (76mm)

Description

Owens Corning Vinyl Faced Duct Wrap Insulation consists of a blanket of glass fiber, factory-laminated to a vinyl vapor barrier facing (white or gray). A 2" (51mm) strapling flange is provided on one edge. This faced product qualifies for UL Listing.

Uses

Owens Corning Vinyl Faced Duct Wrap Insulation is used to insulate residential and commercial air conditioning or dual-temperature ducts operating at temperatures from 40°F (4°C) to 250°F (121°C).

This insulation, when applied in accordance with Owens Corning's installation instructions, will provide the "installed R-value" as published for the product, assuring specified in-place thermal performance.

Installed R-Values

When installed in accordance with recommended installation procedures Owens Corning Vinyl Faced Duct Wrap Insulation will provide R-values as follows:

Nominal Thickness	Installed R-Value	Out-of-Package R-Value
1 1/2" (38mm)	4.2	5.0
2" (51mm)	5.6	6.7
3" (76mm)	8.4	10.0
Standard Roll Width		48"

*Based on 25% compression

Physical Property Data

Property	Test Method	Value
Surface burning characteristics†	UL 723	Fire Hazard Classification 25/50
Operating temperature limit	—	250°F (121°C)
Thermal conductivity @ 75°F (23°C) mean temp.	ASTM C 518	0.30 Btu•in/hr•ft²•°F (0.043 W/m•°C
Corrosiveness	ASTM C 655	Will not accelerate corrosion of steel test panel when compared to sterile cotton.
Fungi resistance	ASTM C 1338	Meets requirements
Vapor permeance	Procedure A, ASTM E 96	1.8 perm maximum[1]
Water vapor sorption	ASTM C 1104	<3% by weight[2]

† The surface burning characteristics of this product has 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.

[1] Facing material as supplied .Higher ratings can be expected after product has been packaged, handled and installed. Since such conditions are not known, Owens Corning makes no claim for in-place vapor barrier performance.

[2] When exposed to conditions of 120°F temperature, 90% relative humidity, for 96 hours.

Specification Compliance

- ASTM C 1290, Flexible Fibrous Glass Blanket Insulatuon Used to Externally Insulate HVAC Ducts, Type II.
- ASTM C 553,* Mineral Fiber Thermal Insulation: Type I – Owens Corning Vinyl Faced Duct Wrap Insulation.

* Preferred specificaiton is ASTM C 1290.

Vapor Retarder Selection

The selection of the proper vapor retarder for faced duct wrap depends upon many factors. For normal air conditioning applications, however, the most important single factor is the local climatic conditions. In some areas, vinyl does not perform adequately as a vapor retarder.

In most localities, some water vapor will pass through the vapor retarder while the air cooling system is operating, and will condense on the outside of the sheet metal duct. This condensed water will accumulate during the air conditioning season but should dry out during the heating season or when the air conditioning is not operating. In most areas of the U.S., the drying will be complete each winter. However, in tropical and subtropical (Gulf Coast) areas, the drying will not be complete, and some of the water condensed will build up from year to year. For example, in New Orleans, vinyl faced duct wrap may accumulate more than 1 ounce of water per square foot in one year.

Workmanship is often a deciding factor in vapor retarder performance. Improper sealing of joints and careless punctures can cause serious condensation regardless of the quality of the retarder selection.

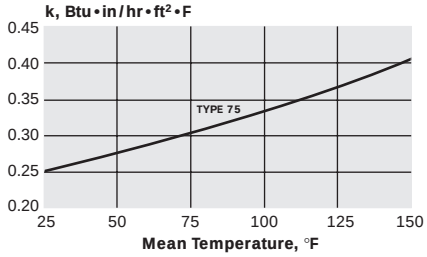
For more detailed information regarding vapor retarder selection, see and Owens Corning sales representative.

Vinyl Faced Duct Wrap Insulation

Limitations

Owens Corning Vinyl Faced Duct Wrap Insulation should not be used on duct systems subject to temperatures in excess of 250°F (121°C). It should not be exposed to weathering or mechanical abuse without proper protection. It should not be used on the inside of ducts. Owens Corning does not recommend nor will it be responsible for applications of this product whenever the vinyl facing, the surrounding material or the atmosphere is at a temperature of 20°F (-6°C) or below. To avoid damage, it is recommended that this product be stored and installed at a temperature above 20°F (-6°C) at all times. Vinyl facings are not to be considered an adequate vapor retarder due to the high permeance and should no be used in all areas.

Thermal Conductivity



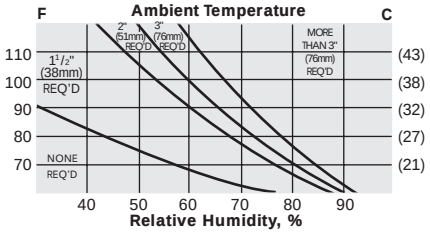
Apparent thermal conductivity curve determined in accordance with ASTM Practice C 1045 with data obtained by ASTM Test Method C 177. Values are nominal, subject to normal testing and manufacturing tolerances.

Condensation Control

To determine thickness to prevent surface condensation at various ambient temperature and humidity levels, based on installed thickness 75% of nominal (out-of package) thickness 55°F (13°C) air duct internal temperature:

1. Select maximum expected relative humidity (R.F.) on the lower scale.
2. Move up vertically until that line intersects the expected maximum ambient air temperature.
3. Select the thickness indicated by the intersection point.

Nominal Duct Wrap Thickness to Prevent Surface Condensation



The above chart is based on indoor conditions so far as wind and other factors are concerned.

Application Recommendations

Application instructions to achieve installed R-value claimed: Before applying Owens Corning Vinyl Faced Duct Wrap Insulation, sheet metal ducts shall be clean, dry, tightly sealed at all joints and seams.

Duct Wrap Insulation shall be cut to "stretch-out" dimensions as provided in the table below, and a 2" (51mm) piece of insulation removed from the facing at the end of the piece of insulation to form an overlapping staple and tape flap.

Installed duct wrap tightly butted with facing outside. Overlap 2" (51mm) formed tape flap and facing at other end of piece of duct wrap. If ducts are rectangular or square, install so insulation is not excessively compressed at duct corners. Seams shall be stapled 6" (150mm) (approx.) on center with outward clinching staples. Adjacent sections of duct wrap shall be tightly butted with the 2" (51mm) tape flap overlapping.

Seal all seams and joints with pressure-sensitive tape matching the facing. Cloth duct tape of any color and finish using reclaimed rubber adhesives is not recommended for use on Vinyl Faced Duct Wrap Insulation.

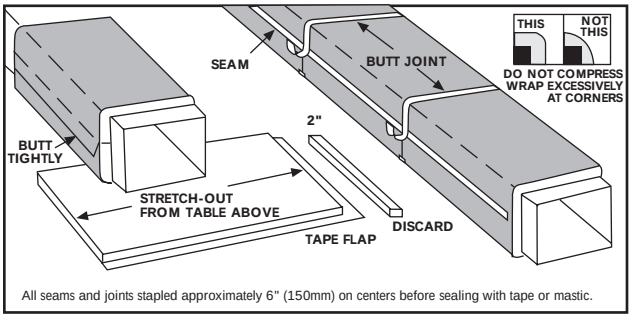
Where rectangular ducts are 24" (600mm) in width or greater, duct wrap shall be additionally secured to the bottom of the duct with mechanical fasteners such as pins and speed clip washers, spaced on 18" (425mm) centers (maximum) to prevent sagging of insulation. It is neither necessary nor desirable to adhere duct wrap to duct surfaces.

Where a vapor retarder is required, seal all tears, punctures and other penetrations of the duct wrap facing using one of the above methods to provide a vapor-tight system.

Material Requirements to Achieve Installed R-Value

Nominal Thickness, in. (mm)	Installed Thickness, in. (mm)	Stretch-Out Dimensions, in. (mm)		
		Round and Oval Ducts	Square Ducts	Rectangular Ducts
1½ (38)	1⅛ (29)	P+9½ (240)	P+8 (205)	p+7 (180)
2 (51)	1½ (38)	P+12 (305)	P+10 (255)	P+8 (205)
3 (76)	2¼ (57)	P+17 (430)	P+14½ (370)	P+11½ (290)

P = mesured duct perimeter



All seams and joints stapled approximately 6" (150mm) on centers before sealing with tape or mastic.

OWENS CORNING WORLD HEADQUARTERS
ONE OWENS CORNING PARKWAY
TOLEDO, OHIO, USA 43659

1-800-GET-PINK
www.owenscorning.com

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