

InsulPure® Duct Wrap & WideWrap

TECHNICAL BUILDING INSULATION

InsulPure Duct Wrap and WideWrap Insulation is used to insulate rectangular and round heating, ventilating and air-conditioning ductwork.

Features & Benefits

InsulPure Duct Wrap and WideWrap provide thermal efficiency that reduces unwanted heat loss or gain from equipment and ductwork. When properly installed in the correct thickness, this product virtually eliminates condensation problems on cold duct surfaces. The 5' width accommodates larger ducts and means less labor, less wasted material and a cleaner installed appearance.

Composition & Materials

InsulPure Duct Wrap and WideWrap are a blanket-type insulation composed of white, uniformly textured, inorganic fibrous glass formed with a formaldehyde-free binding agent. It is available unfaced or with FSK or white PSK vapor retarder facing. On faced products, a stapling/taping tab is provided on one edge.

Application

The product should be kept clean and dry from the time of manufacture through job site installation and system operation.

InsulPure Duct Wrap and WideWrap are suitable for use with most heating, ventilating and air-conditioning ductwork operating at temperatures from 35°F to 250°F (1.7°C to 121°C) for faced InsulPure Duct Wrap and WideWrap and from 35°F to 450°F (1.7°C to 232°C) for unfaced.

Installation

Sheet metal ducts must be clean, dry and sealed tightly prior to insulating with CertainTeed InsulPure Duct Wrap and WideWrap.

To ensure installed thermal performance, Duct Wrap must be cut to "stretch-out" dimensions. This requires measurement of the duct perimeter, then cutting the duct wrap to the dimensions (perimeter + add-on) indicated in the stretch-out table on the next page. A 2" piece of insulation is removed from the facing at the end of the piece of insulation to form an overlapping stapling and taping flap.

InsulPure Duct Wrap and WideWrap are installed by wrapping the insulation around the perimeter of the duct with the facing out. Adjacent sections of duct wrap are tightly butted with the 2" taping flap overlapping. Seams must be stapled with outward-clinching staples on approximately 6" centers. When a vapor retarder is required, all seams, joints, tears, punctures and/or other penetrations of the duct wrap must be sealed with a pressure-sensitive vapor retarder tape that matches the facing, or a suitable mastic system.

Where rectangular ducts are 24" in width or greater, Duct Wrap must be additionally secured to the bottom of the duct with mechanical fasteners spaced 18" on center to prevent sagging.

For additional installation details, consult the National Commercial and Industrial Insulation Standards (current edition) published by the Midwest Insulation Contractors Association (MICA).

Quality Assurance

CertainTeed's commitment to quality and environmental management has ensured the registration of the Athens, Chowchilla and Kansas City plants to ISO 9001 and ISO 14001 standards.



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APPLICABLE STANDARDS, CODE COMPLIANCE

Model Building Codes:

- ICC

Material Standards:

- ASTM C1290
Type I, Unfaced
Type III, FSK & PSK - White
- ASTM C553
Type I, Type 75 Duct Wrap
Type II, Type 100 & 150 Duct Wrap
Type III, Type 150 Duct Wrap
- ASTM C1136: FSK & White PSK
Type II, Type IV

Fire Safety Standards:

- NFPA 90A, NFPA 90B

FIRE RESISTANCE

Fire Hazard Classification:

- UL 723, ASTM E84, CAN/ULC-S102
Max. Flame Spread Index: 25
Max. Smoke Developed Index: 50

Thermal Performance: See table on other side

PHYSICAL/CHEMICAL PROPERTIES

| PROPERTY (UNIT) | TEST | VALUE |
|---------------------------------------|----------------------------|---|
| Operating Limits: Faced Unfaced | ASTM C411 | 250°F / 121°C 450°F / 232°C |
| Water Vapor Sorption: | ASTM C1104 | ≤ 5% |
| Water Vapor Transmission (Facing): | ASTM E96, Desiccant Method | 0.02 perms (1.15 x 10 ⁻⁹ g/Pa·s·m ²) |
| Noncombustibility: | ASTM E136 | Pass |
| Odor Emission: | ASTM C1304 | Pass |
| Corrosion Resistance: | ASTM C665 | Pass |
| Fungi Resistance: | ASTM C1338 | Pass |
| Stainless Steel: | ASTM C795 | Pass |

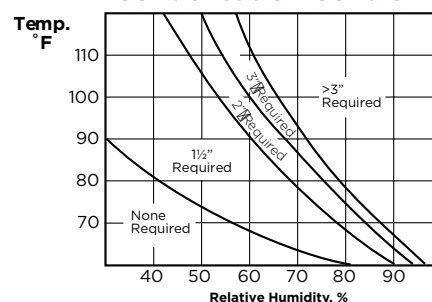
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Available Sizes

Available standard sizes are listed in the table. Contact CertainTeed for non-standard sizes.

| TYPE | THICKNESS | | LENGTH | | WIDTH | |
|------|-----------|-----|--------|------|-------------------|---------------------|
| | IN | MM | FT | M | IN | MM |
| 75 | 1 | 25 | 100 | 30.5 | 48 (Duct Wrap) | 1219 (Duct Wrap) |
| | 1½ | 38 | 100 | 30.5 | | |
| | 2 | 51 | 75 | 22.9 | | |
| | 2½ | 54 | 75 | 22.9 | | |
| | 3 | 76 | 50 | 15.2 | | |
| | 4 | 102 | 50 | 15.2 | | |
| 100 | 4 ½ | 114 | 40 | 12.2 | 60 (WideWrap) | 1524 (WideWrap) |
| | 1 | 25 | 100 | 30.5 | | |
| | 1½ | 38 | 100 | 30.5 | | |
| 150 | 2 | 51 | 75 | 22.9 | | |
| | 1 | 25 | 100 | 30.5 | | |
| | 1½ | 38 | 75 | 22.9 | | |
| | 2 | 51 | 50 | 15.2 | | |

Condensation Control



This chart is based on indoor conditions so far as wind and other factors are concerned. To determine thickness to prevent condensation, based on installed thickness at 75% of nominal (out of package) thickness and a duct internal air temperature of 55°F, refer to the condensation control chart.

To use:

- 1) Select maximum relative humidity (%) on lower axis;
- 2) Read up vertically until that line intersects the maximum ambient air temperature;
- 3) Select the thickness indicated at the point of intersection.

THERMAL PERFORMANCE

| TYPE | PRODUCT | | UNCOMPRESSED R-VALUE | | INSTALLED DUCT R-VALUE | | UNCOMPRESSED K-VALUE | | INSTALLED DUCT K-VALUE | |
|------|-----------|-----|------------------------------|-------------------------|------------------------------|-------------------------|---------------------------------|-----------|---------------------------------|-----------|
| | THICKNESS | | H•FT ² •°F BTU | M ² •°C W | H•FT ² •°F BTU | M ² •°C W | BTU•IN H•FT ² •°F | W M•°C | BTU•IN H•FT ² •°F | W M•°C |
| | IN | MM | | | | | | | | |
| 75 | 1 | 25 | 3.4 | 0.61 | 2.8 | 0.49 | 0.29 | 0.042 | 0.27 | 0.039 |
| | 1-1/2 | 38 | 5.2 | 0.91 | 4.2 | 0.74 | 0.29 | 0.042 | 0.27 | 0.039 |
| | 2 | 51 | 6.9 | 1.21 | 5.6 | 1.00 | 0.29 | 0.042 | 0.27 | 0.039 |
| | 2-1/8 | 54 | 7.3 | 1.29 | 6.0 | 1.06 | 0.29 | 0.042 | 0.27 | 0.039 |
| | 3 | 76 | 10.3 | 1.82 | 8.3 | 1.46 | 0.29 | 0.042 | 0.27 | 0.039 |
| | 4 | 102 | 13.8 | 2.43 | 11.0 | 1.94 | 0.29 | 0.042 | 0.27 | 0.039 |
| 100 | 4-1/2 | 114 | 15.2 | 2.68 | 12 | 2.11 | 0.30 | 0.043 | 0.28 | 0.041 |
| | 1 | 25 | 3.8 | 0.68 | 3.0 | 0.53 | 0.26 | 0.038 | 0.25 | 0.036 |
| | 1-1/2 | 38 | 5.8 | 1.02 | 4.5 | 0.79 | 0.26 | 0.038 | 0.25 | 0.036 |
| 150 | 2 | 51 | 7.7 | 1.35 | 6.0 | 1.06 | 0.26 | 0.038 | 0.25 | 0.036 |
| | 1 | 25 | 4.2 | 0.73 | 3.2 | 0.56 | 0.24 | 0.035 | 0.23 | 0.033 |
| | 1-1/2 | 38 | 6.3 | 1.10 | 4.8 | 0.85 | 0.24 | 0.035 | 0.23 | 0.033 |
| | 2 | 51 | 8.3 | 1.47 | 6.4 | 1.13 | 0.24 | 0.035 | 0.23 | 0.033 |

Tested in accordance with ASTM C518 and/or ASTM C177 at 75°F (24°C) mean temperature. R means resistance to heat flow. The higher the R-value, the greater the insulating power. The installed R-value and K-value are based upon 25% compression of the product thickness during installation. To get the installed R-value, it is essential that this insulation be installed properly. If you do it yourself, follow the installation instructions carefully.

INSTALLATION STRETCH-OUT DIMENSIONS

| PRODUCT LABEL THICKNESS | | AVERAGE INSTALLED THICKNESS | | | STRETCH-OUT DIMENSIONS ¹ | | | | | |
|-------------------------|-----|-----------------------------|----|----|-------------------------------------|-----|-------------|-----|------------------|-----|
| | | | | | ROUND DUCT | | SQUARE DUCT | | RECTANGULAR DUCT | |
| IN | MM | IN | MM | | IN | MM | IN | MM | IN | MM |
| 1 | 25 | 0.75 | 19 | P+ | 7 | 178 | 6 | 152 | 5 | 127 |
| 1-1/2 | 38 | 1.13 | 29 | P+ | 9.5 | 241 | 8 | 203 | 7 | 178 |
| 2 | 51 | 1.50 | 38 | P+ | 12 | 305 | 10 | 254 | 8 | 203 |
| 2-1/8 | 54 | 1.59 | 40 | P+ | 12.6 | 321 | 10.4 | 270 | 8.4 | 213 |
| 3 | 76 | 2.25 | 57 | P+ | 17 | 432 | 14.5 | 368 | 11.5 | 292 |
| 4 | 102 | 3.00 | 76 | P+ | 22 | 559 | 18.5 | 470 | 14.5 | 368 |
| 4-1/2 | 114 | 3.375 | 86 | P+ | 24.5 | 622 | 20.7 | 526 | 16.1 | 408 |

¹The stretch-out dimension is equal to the duct perimeter (P) plus the add-on factor for the type of duct being installed.

TECHNICAL SERVICES

Technical assistance can be obtained either from your local CertainTeed sales representative, or by calling CertainTeed Sales Support Group at 800-233-8990.

MAINTENANCE

No maintenance required.

AVAILABILITY & COST

Sold throughout the United States, Canada, and Mexico. For availability and cost contact your local distributor or call CertainTeed Sales Support Group at 800-233-8990.

WARRANTY

Refer to CertainTeed's Limited Warranty. Full warranty information can be found at certainteed.com/warranty.



CertainTeed

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