INSULPURE™ DUCT WRAP AND 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.

TECHNICAL DATA

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

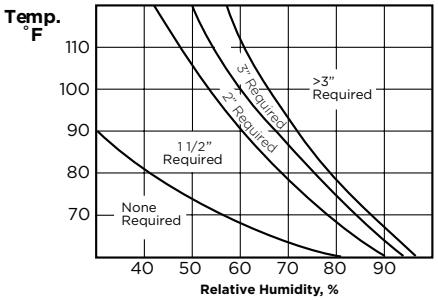
Thermal Performance: See table on other side

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•m2)
Noncombustability:	ASTM E136	Pass
Odor Emission:	ASTM C1304	Pass
Corrosion Resistance:	ASTM C665	Pass
Fungi Resistance:	ASTM C1338	Pass
Stainless Steel:	ASTM C795	Pass

CertainTeed SAINT-GOBAIN

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 (outof- 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.

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) 60 (WideWrap)	1219 (Duct Wrap) 1524 (WideWrap)
	1 1/2	38	100	30.5		
	2	51	75	22.9		
	2 1/8	54	75	22.9		
	3	76	50	15.2		
	4	102	50	15.2		
	4 1/2	114	40	12.2		
100	1	25	100	30.5		
	1 1/2	38	100	30.5		
	2	51	75	22.9		
150	1	25	100	30.5		
	1 1/2	38	75	22.9		
	2	51	50	15.2		

THERMAL PERFORMANCE

TYPE	PRODUCT THICKNESS		UNCOMPRESSED R-VALUE		INSTALLED DUCT R-VALUE		UNCOMPRESSED K-VALUE		INSTALLED DUCT K-VALUE	
	IN	MM	$\frac{H \cdot FT^2 \cdot °F}{BTU}$	$\frac{M^2 \cdot °C}{W}$	$\frac{H \cdot FT^2 \cdot °F}{BTU}$	$\frac{M^2 \cdot °C}{W}$	$\frac{BTU \cdot IN}{H \cdot FT^2 \cdot °F}$	$\frac{W}{M \cdot °C}$	$\frac{BTU \cdot IN}{H \cdot FT^2 \cdot °F}$	$\frac{W}{M \cdot °C}$
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
	4 1/2	114	15.2	2.68	12	2.11	0.30	0.043	0.28	0.041
100	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
	2	51	7.7	1.35	6.0	1.06	0.26	0.038	0.25	0.036
150	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

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

WARRANTY

Refer to CertainTeed's Lifetime Limited Warranty for Fiberglass Building Insulation. (30-32-113)

MAINTENANCE

No maintenance required.

AVAILABILITY AND COST

For availability and cost, contact your local contractor or distributor, or call Customer Experience team at 800-233-8990.

TECHNICAL SERVICES

Technical assistance can be obtained from your local CertainTeed sales representative and our Customer Experience team, 800-233-8990, or GetHelp@saint-gobain.com.

SAINT-GOBAIN

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