

## Marine Duct Wrap Insulation

### PRODUCT DESCRIPTION

**Basic Use:** Marine Duct Wrap Insulation is used to insulate rectangular and round heating, ventilating and air conditioning ductwork for marine and general insulation applications.

**Benefits:** Marine Duct Wrap Insulation provides 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.

**Composition and Materials:** Marine Duct Wrap is a blanket-type insulation composed of glass fibers bonded together with a thermosetting resin. It is available unfaced or with FSK vapor retarder facing. On faced products, a stapling/taping tab is provided on one edge.

**Limitations:** The product should be kept clean and dry from the time of manufacture through job site installation and system operation. Marine Duct Wrap is 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 Marine Duct Wrap, and from 35°F to 450°F (1.7°C to 232°C) for unfaced Marine Duct Wrap.

**Sizes:** See table on back for available sizes. Contact CertainTeed for other sizes and minimum order quantities.

### INSTALLATION

Sheet metal ducts should be clean, dry and sealed tightly prior to insulating with CertainTeed Marine Duct Wrap.

To ensure installed thermal performance, CertainTeed Marine Duct Wrap should 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 back. 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.

CertainTeed Marine Duct Wrap is 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 should be stapled with outward-clinching staples on approximately 6" centers. Where a vapor retarder is required, all seams, joints, tears, punctures and/or other penetrations of the duct wrap should 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, CertainTeed Marine Duct Wrap should 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).

### AVAILABILITY AND COST

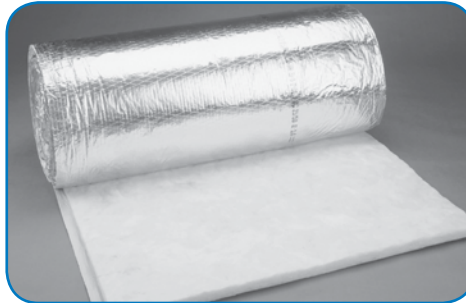
Manufactured and sold throughout the United States. For availability and cost contact your local distributor, or call CertainTeed Sales Support Group at 800-233-8990.

### WARRANTY

Refer to CertainTeed's Limited One-Year Warranty for Fiber Glass Duct Wraps (30-29-047).

### MAINTENANCE

An inspection and preventative maintenance program for the HVAC system is recommended to ensure optimum performance.



<b>Product Name</b>	CertainTeed Marine Duct Wrap Insulation
<b>Manufacturer</b>	CertainTeed Corporation
<b>Address</b>	20 Moores Road Malvern, PA 19355
<b>Phone</b>	610-893-6000 • 800-233-8990
<b>Website</b>	<a href="http://www.certainteed.com/insulation">www.certainteed.com/insulation</a>

### TECHNICAL DATA

#### Applicable Standards

- Model Building Codes:
  - ICC
- Material Standards:
  - ASTM C1290
  - ASTM C553
    - Type I; Type 75 Duct Wrap
    - Type II; Type 100 & 150 Duct Wrap
    - Type III; Type 150 Duct Wrap
  - CAN/CGSB-51.11-92
  - ASTM C1136
    - Type II: FSK
- Fire Safety Standards:
  - NFPA 90A, NFPA 90B
- Certifications:
  - Non-Combustible Material (IMO)
    - IMO FTP, Part 1, Annex 1
    - USGC Certificate #164.109/58/0
  - Interior Finish (IMO)
    - IMO FTP, Parts 2 & 5, Annex 1
    - USGC Certificate #164.112/122/0

#### Fire Resistance

- Fire Hazard Classification:
  - UL 723, ASTM E84
  - CAN/ULC-S102
  - Max. Flame Spread Index: 25
  - Max Smoke Developed Index: 50
- Non-Combustible:
  - ASTM E136
  - Meets tests requirements

#### Physical/Chemical Properties

- Thermal Performance:
  - See table on other side
- Operating Limits/Temperature: ASTM C411
  - Faced: Max. 250°F (121°C)
  - Unfaced: Max. 450°F (232°C)
- Water Vapor Sorption: ASTM C1104
  - ≤ 5% by weight
- Water Vapor Transmission – Facing: ASTM E96
  - Desiccant Method
  - FSK: Max. 0.02 perms
  - (1.15 x 10<sup>-9</sup> g/Pa•s•m<sup>2</sup>)
- Corrosiveness:
  - ASTM C665: Pass testing
- Fungi Resistance:
  - ASTM C1338: Pass testing
- Odor Emission:
  - ASTM C1304: Pass testing

#### Quality Assurance

CertainTeed's commitment to quality and environmental management has ensured the registration of the Athens, Chowchilla and Kansas City plants to ISO 9001:2000 and ISO 14001:2004 standards. The GREENGUARD Environmental Institute has certified Marine Duct Wrap for low emissions of total particle, formaldehyde and other Volatile Organic Compounds (VOCs).

## 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.

## FILING SYSTEMS

- CertainTeed Pub. No. 30-36-081
- Additional product information available upon request.

AVAILABLE SIZES							
Product Type	Facing	Thickness		Length		Width	
		in.	mm	ft.	m	in.	mm
75	FSK	1½	38	100	30.5	48	1219
		2	51	75	22.9		
		2½	64	75	22.9		
		3	76	50	15.2		
100	FSK	1	25	100	30.5		
		1½	38	100	30.5		
		2	51	75	22.9		
150	FSK	1	25	100	30.5		
		1½	38	75	22.9		
		2	51	50	15.2		

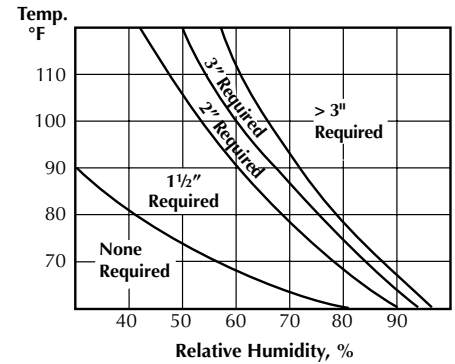
THERMAL PERFORMANCE									
Product		Uncompressed R-Value		Installed Duct R-Value		Uncompressed K-Value		Installed Duct K-Value	
Type	Thickness		h•ft²•°F Btu	m²•°C W	h•ft²•°F Btu	m²•°C W	Btu•in h•ft²•°F	W m•°C	Btu•in h•ft²•°F
	in.	mm							
75	1	25	3.8	0.67	3.0	0.53	0.26	0.038	0.25
	1½	38	5.2	0.92	4.2	0.74	0.29	0.042	0.27
	2	51	6.9	1.22	5.7	1.00	0.29	0.042	0.26
	2½	64	7.3	1.29	6.0	1.06	0.29	0.042	0.27
	2½	64	8.6	1.51	7.1	1.25	0.29	0.042	0.26
	3	76	10.2	1.69	8.3	1.41	0.29	0.042	0.28
100	1	25	3.8	0.67	3.0	0.53	0.26	0.038	0.25
	1½	38	5.7	1.00	4.5	0.79	0.26	0.038	0.25
	2	51	7.6	1.34	6.1	1.07	0.26	0.038	0.25
150	1	25	4.1	0.72	3.2	0.56	0.24	0.035	0.23
	1½	38	6.2	1.09	4.8	0.85	0.24	0.035	0.23
	2	51	8.3	1.46	6.4	1.13	0.24	0.035	0.23

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 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 Dimensions¹					
					Round Duct		Square Duct		Rectangular Duct	
in.	mm	in.	mm		in.	mm	in.	mm	in.	mm
1½	38	1.13	29	P+	9.5	241	8	203	7	178
2	51	1.50	38	P+	12	305	10	254	8	203
2¼	57	1.69	43	P+	13.5	343	11.5	292	9	229
2½	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+	22.0	559	18.5	470	14.5	368

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

## 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.



## CertainTeed Corporation

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20 Moores Road Malvern, PA 19355 Professional: 800-233-8990 Consumer: 800-782-8777 [certainteed.com](http://certainteed.com)