Frog Insulation Manufacturers Inc.

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Technical Data Sheet

Description:

Eco-Frog™ Fiberglass Duct Wrap is used to insulate rectangular and round heating, ventilating and air conditioning ductwork. Eco-Frog™ Fiberglass Duct Wrap 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.

It is is a blanket-type insulation composed of tan, uniformly textured, inorganic fibrous glass formed with a formaldehyde-free, plant-based binding agent. It is available unfaced or with FSK, gray PSK or white PSK vapor retarder facing.

Eco-Frog™ Fiberglass 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 Eco-Frog™ Fiberglass Duct Wrap and from 35°F to 450°F (1.7°C to 232°C) for unfaced Eco-Frog™ Fiberglass Duct Wrap.

Installation:

Sheet metal ducts must be clean, dry and sealed tightly prior to insulating with Eco-Frog™ Fiberglass Duct Wrap. To ensure installed thermal performance, Eco-Frog™ Fiberglass 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 other side. 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.

Eco-Frog™ Fiberglass 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 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, Eco-Frog™ Fiberglass 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).

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Main physical Properties:

ECO-FROG FIBERGLASS INSULATION WRAP		
PROPERTIES	**PERFORMANCE**	**TEST METHOD**
Operating Limits: Temperature	Unfaced: 35˚-450˚F (1.7-232˚C) Faced: 35˚-250˚F (1.7-121˚C)	ASTM C411
Surface Burning Characteristics: Fire Hazard Classification	Maximum: Flame Spread Index: 25 Smoke Developed Index: 50	UL 723 ASTM E84 CAN/ULL-S102
Water Vapor Sorption	< 5% by weight	ASTM C1104
Water Vapor Transmission: Facing only	FSK and White PSK: 0.02 Perms Gray PSK: 0.09 Perms	ASTM E96, Desiccant Method
Corrosiveness	Pass	ASTM C665
Fungi Resistance	Pass	ASTM C1338
Odor Emission	Pass	ASTM C1304
Noncombustible	Pass (insulation only)	ASTM E136

Thermal Performance:

ECO-FROG FIBERGLASS INSULATION WRAP								
DESCRIPTION	**TYPE**	**THICKNESS**		**K-VALUE**		**R-VALUE**		**INSTALLED R-VALUE**	
		IN.	**MM.**	**Btu / h•ft²•°F**	**W / m²•°C**	**h•ft²•°F / Btu**	**m²•°C / W**	**h•ft²•°F / Btu**	**m²•°C / W**
A blanket-type insulation composed of glass fibers bonded together with a thermosetting resin. It is available unfaced or with FSK or PSK vapor retarder facing. On faced products, a 2" (51 mm) stapling/taping tab is provided on one edge.	75	1	25	0.26	.038	3.8	0.67	3.0	0.53
	75	1½	38	0.29	.042	5.2	0.92	4.2	0.74
	75	2	51	0.29	.042	6.9	1.22	5.7	1.00
	75	2⅛	54	0.29	.042	7.3	1.29	6.0	1.06
	75	2½	64	0.29	.042	8.6	1.51	7.1	1.25
	75	3	76	0.29	.042	10.2	1.69	8.3	1.41
	75	4	102	0.30	.043	13.5	2.38	11.0	1.94
	100	1	25	0.26	.038	3.8	0.67	3.0	0.53
	100	1½	38	0.26	.038	5.7	1.00	4.5	0.79
	100	2	51	0.26	.038	7.6	1.34	6.1	1.07
	150	1	25	0.24	.035	4.1	0.72	3.2	0.56
	150	1½	38	0.24	.035	6.2	1.09	4.8	0.85
	150	2	51	0.24	.035	8.3	1.46	6.4	1.13

Applicable Standards:

Complies with:

– ASTM C1290
  Type I – Unfaced
  Type II – Gray PSK Faced
  Type III – FSK Faced and White PSK Faced

– ASTM C553
  Type I – Type 75, 100 and 150
  Type II – Type 100 and 150
  Type III – Type 150

– CAN/CGSB-51.11-92

– ASTM C1136 (Facings)
  Type II – FSK Faced and White PSK Faced
  Type IV – Gray PSK Faced

– Thermal performance determined by: ASTM C177 and/or ASTM C518

– GREENGUARD® Certification Standards: Low-emitting products for the indoor environment. Meets product emission standard under GREENGUARD Gold.