



# FIBERGLAS™ FLEXWRAP®

## PIPE & TANK FIBERGLASS INSULATION



### PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	VALUE
Operating Temperature (Maximum)	ASTM C411	850 °F (454 °C)
Density	ASTM C303	2.5 pcf (40 kg/m³)
Compressive Resistance (Minimum)	ASTM C165	25 lbs/ft² (1200 Pa)
Corrosiveness (Steel)	ASTM C1617	0 to 1000 °F
Corrosion (Copper & Aluminum)	ASTM C665	Meets Requirements
Stress Corrosion (Austenitic Stainless Steel) <sup>A</sup>	ASTM C795, ASTM C692	Meets Requirements
Chemical Analysis <sup>A</sup>	ASTM C795, ASTM C871, NRC 1.36	Meets Requirements
Fungi Resistance	ASTM C1338	Meets Requirements
Odor	ASTM C1304	Meets Requirements
Water Vapor Sorption (Max. by Weight)	ASTM C1104	1%
Facing Temperature Limit (Maximum)	ASTM C1136	150 °F (66 °C)
Facing Water Vapor Permeance	ASTM E96	0.02 Perm
Surface Burning Characteristics <sup>B</sup>	UL723 and ASTM E84	Flame Spread 25, Smoke Developed 50

A When ordering material to comply with these specifications, the customer's purchase order must clearly state the need, such that specific lot testing can be conducted and a certification of compliance can be provided.

B The Surface Burning Characteristics of these products have been determined in accordance with UL723 and ASTM E84. Values were reported to the nearest 5.

### DESCRIPTION

Fiberglas™ FLEXWRAP® is a flexible pipe and tank insulation product made from fiberglass blanket bonded together with a thermosetting resin. The fibers are oriented to provide good compressive strength while providing flexibility during installation.

FLEXWRAP® insulation is suitable for operating temperatures up to 850°F (454°C) and is available in both FRK (Foil-Reinforced-Kraft) and ASJ MAX (White All Service Jacket with polymer film surface) facings.

### FEATURES

- A cost-effective alternative to larger-sized pre-formed pipe insulation.
- Potential to reduce inventory requirement caused by multiple diameters of molded pipe.
- The continuous blanket of material easily wraps tanks, pipes, and irregular-shaped objects without the efficiency losses related to strip delamination of fabricated and segmented wrap.
- Low thermal conductivity compared to segmented products, which means less thickness is required for equivalent heat flow.
- FLEXWRAP® facings meet the needs for most interior applications, avoiding the need for additional jacketing.

### STANDARDS, CODES COMPLIANCE

- ASTM C1393 "Standard Specification for Perpendicularly Oriented Mineral Fiber Roll and Sheet Thermal Insulation for Pipes and Tanks"; Types I, II, IIIA, IIIB; Category 2.
- Does not contain the fire retardant decabrominated diphenyl ether. (decaBDE)
- ASTM C612 "Standard Specification for Mineral Fiber Block and Board Thermal Insulation"; Type IA, Category 2.
- ASTM C795 and NRC 1.36. When ordering material to comply with these specifications, a statement of that fact must appear on the purchase order. Specific lot testing will be conducted and a certification of compliance can be provided.

### AVAILABILITY

THICKNESS		WIDTH		LENGTH		MIN. WRAP DIAMETER	
Inches	mm	Inches	mm	feet	m	NPS	mm
1.5"	38	48"	1219	30'	9.14	8"	203
2"	51	48"	1219	26'	7.92	10"	254
2.5"	64	48"	1219	20'	6.10	12"	305
3"	76	48"	1219	18'	5.48	16"	406
3.5"	89	48"	1219	15'	4.58	18"	457
4"	102	48"	1219	13'	3.96	20"	508

Note: FLEXWRAP® is available in rolls 48" in width and thicknesses from 1.5" to 4". Standard roll lengths are given in the table above.

## STRETCH-OUT REQUIREMENTS

The following table may be used to estimate the stretch-out length required for various size pipes and ducts. Notice that the stretch-out length for the same size duct changes with the thickness of FLEXWRAP®. It is also important to note that these stretch-out lengths DO NOT consider a staple flap. If a staple flap is desired, 3 to 4 inches should be added to the value in the table.

### FLEXWRAP® PIPE AND TANK WRAP THICKNESS

NPS	ACTUAL PIPE OD	1.5 Inches (38 mm)		2.0 Inches (51 mm)		2.5 Inches (64 mm)		3 Inches (76 mm)		3.5 Inches (89 mm)		4 Inches (102 mm)	
	Inches	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
8	8.6	36.5	928	-	-	-	-	-	-	-	-	-	-
10	10.8	43.4	1103	46.5	1182	-	-	-	-	-	-	-	-
12	12.8	49.7	1263	52.8	1342	55.9	1420	-	-	-	-	-	-
14	14	53.4	1357	56.6	1438	59.7	1517	-	-	-	-	-	-
16	16	59.7	1517	62.8	1596	66.0	1677	69.1	1756	-	-	-	-
18	18	66.0	1677	69.1	1756	72.3	1837	75.4	1916	75.4	1916	-	-
20	20	72.3	1837	75.4	1916	78.5	1994	81.7	2076	81.7	2076	88.0	2236
22	22	78.5	1994	81.7	2076	84.8	2154	88.0	2236	88.0	2236	94.2	2393
24	24	84.8	2154	88.0	2236	91.1	2314	94.2	2393	94.2	2393	100.5	2553
26	26	91.1	2314	94.2	2393	97.4	2474	100.5	2553	100.5	2553	106.8	2713
28	28	97.4	2474	100.5	2553	103.7	2634	106.8	2713	106.8	2713	113.1	2873
30	30	103.7	2634	106.8	2713	109.9	2792	113.1	2873	113.1	2873	119.4	3033
32	32	109.9	2792	113.1	2873	116.2	2952	119.4	3033	119.4	3033	125.6	3191
34	34	116.2	2952	119.4	3033	122.5	3112	125.6	3191	125.6	3191	131.9	3351
36	36	122.5	3112	125.6	3191	128.8	3272	131.9	3351	131.9	3351	138.2	3511

## THERMAL CONDUCTIVITY

MEAN TEMPERATURE	CONDUCTIVITY-k	MEAN TEMPERATURE	CONDUCTIVITY-λ
°F	BTU.in/Hr.ft².°F	°F	W/m.°C
75	0.23	25	0.034
100	0.25	50	0.037
200	0.29	100	0.044
300	0.36	150	0.053
400	0.45	200	0.064
500	0.57	250	0.079

## APPLICATIONS

- Fiberglas™ FLEXWRAP® insulation is used to insulate either hot or cold surfaces of pipes, tanks, storage vessels, ducts, and similar round or irregular-shaped surfaces.
- All joints and facing penetrations must be sealed with appropriate pressure-sensitive tape or vapor retarder mastic when the application requires a vapor seal.
- The product is intended for indoor use and should be weather protected for use outdoors.

## INSTALLATION

When determining the length required, simply determine the circumference of the piece being insulated and remember to add twice the thickness of the FLEXWRAP® insulation when calculating the diameter. If a lap is desired, add 3-4" of length and remove the additional insulation to form the lap. Take care to not cut the facing when removing the lap portion of the insulation. The FLEXWRAP® insulation is installed around the surface to be insulated, secured and either outward clenching stapled or taped. If necessary, a vapor retarder mastic is applied. Adjacent sections should be butted together and sealed with tape. Use of bands or impalement pins for securement purposes are permitted but should be sealed as necessary with mastic.

## ENVIRONMENTAL AND SUSTAINABILITY

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## CERTIFICATIONS AND SUSTAINABLE FEATURES

- Safe-Use-Information-Sheet (SUIS) is available in publication OCIS00025.
- FLEXWRAP® LEED Information is available in publication 10011704-C.

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