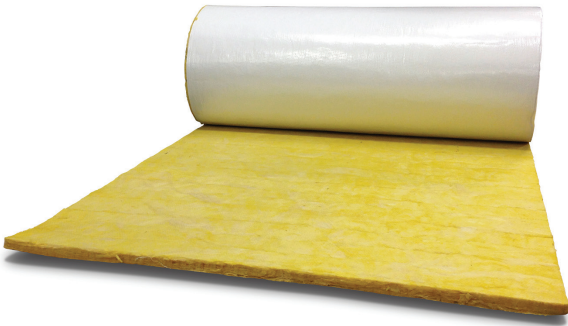




# FIBERGLAS™ FLEXWRAP®

## PIPE & TANK FIBERGLASS INSULATION



### 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.

### 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)                |
| Corrosion to Steel   | ASTM C1617                     | Meets Requirements                  |
| Stress Corrosion (Austenitic Stainless Steel) <sup>1</sup> | ASTM C795, ASTM C692           | Meets Requirements                  |
| Chemical Analysis <sup>4</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                     | 5%                                  |
| Facing Temperature Limit (Maximum)                         | ASTM C1136                     | 150 °F (66 °C)                      |
| Facing Water Vapor Permeance                               | ASTM E96                       | 0.02 Perm                           |
| Surface Burning Characteristics <sup>2</sup>               | UL723 and ASTM E84             | Flame Spread 25, Smoke Developed 50 |

<sup>1</sup> 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.

<sup>2</sup> The Surface Burning Characteristics of these products have been determined in accordance with UL723 and ASTM E84. Values were reported to the nearest 5.

### 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 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.

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**OWENS CORNING INSULATING SYSTEMS, LLC**  
ONE OWENS CORNING PARKWAY  
TOLEDO, OH 43659 USA  
**1-800-GET-PINK®**  
**[www.owenscorning.com](http://www.owenscorning.com)**