



Fiberglas™ UtiliCore® Insulation

Fiberglass Insulation



Description

Owens Corning® Fiberglas™ UtiliCore® Insulation products are flexible white blankets designed for high temperature commercial and industrial applications. The pliable, lightweight insulation offers outstanding thermal performance, making it an excellent choice as core insulation for removable and reusable industrial pipe covers, and other industrial pads and blankets.

Features

- L Series products are low-binder blankets, while the HP5 II Mat is a needled blanket with no binder
- User friendly fibers result in less itch and irritation for installers
- HP5 II Mat can be used in applications up to 1100°F, L Series, up to 1000°F
- Flexible, lightweight material that makes it easy to install and wrap around curved surfaces
- Stitches can be sewn directly through material
- Low water absorption
- Lightweight insulation provides for easy cutting both in shop and in the field

Applications

Fiberglas™ UtiliCore® Insulation products offer outstanding dimensional stability allowing ease of handling in fabrication, assembly and installation of removable and reusable industrial pipe covers.

Fiberglas™ UtiliCore® Insulation is used in:

- Industrial Piping System Insulation Covers
- Valve Insulation Covers
- Flange Insulation Covers
- Exchanger Insulation Covers
- Filter Insulation Covers
- Flow Meter Insulation Covers
- Strainer Insulation Covers

Physical Properties

Property	Test Method	Value
Operating Temperature Range	ASTM C411	L Series: up to 1000°F (538°C) HP5 II Mat: up to 1100°F (593°C)
Corrosion Resistance	ASTM C665	Meets requirements
Fungi Resistance	ASTM C1338	Meets requirements
Odor	ASTM C1304	No objectionable odor
Moisture Sorption	ASTM C1104	< 3% by weight
Composite Surface Burning Characteristics ¹	ASTM E84, UL 723, and CAN/ULC-S102	Flame Spread < 25 Smoke Developed < 50

1. The surface burning characteristics of these products have been determined in accordance with ASTM E84, UL 723, and CAN/ULC-S102. Values are reported to the nearest 5 rating.

Standards, Codes Compliance

- ASTM C553, Mineral Fiber Blanket Thermal Insulation, Type V - All UtiliCore® products
- ASTM C795, Thermal Insulation for Use in Contact with Austenitic Stainless Steel²
- Nuclear Regulatory Commission Guide 1.36, Non-Metallic Thermal Insulation²
- Mil. Spec. MIL-DTL-32585, Insulation, Thermal and Acoustic, Fibrous Glass; Type I and II;
 - L1, L2.5, L3.7 - Form 2; Facing A
 - HP-5 II Mat - Form 3; Facing A
- MIL-I-22023D Insulation Felt, Thermal and Sound Absorbing Felt, Fibrous Glass, Flexible. See MIL-I-22023D Compliance and Variances
- MIL-DTL-I-24244D (Ships) Insulation Material with Special Corrosion, Chloride, and Fluoride Requirements²; Type XVI
- U.S. Coast Guard Approval No. 164.109, Noncombustible Materials
- NOTE: All UtiliCore® products comply to the Noncombustible requirements of IMO FTP Code
- ASTM E136, Behavior of Materials in a Vertical Tube Furnace at 750°C (Noncombustible rating)
- Doesn't contain the fire retardant decabrominated diphenyl ether (decaBDE)

2. Preproduction qualification testing complete and on file. Chemical analysis of each production lot required for total conformance.

Table 1: MIL-I-22023D Compliance and Variances³

Density Variance: UtiliCore® products comply to MIL-I-22023D, with the exception of Section 1.2 Classification; Table 1 Nominal Density; Type I and Type II, for Class 6, which is slightly below the -10% allowance, but complies to all properties required for these Classes. Table 1 below aligns the UtiliCore® product for Type I and Type II Classes.

	Density Required pcf (lb/ft ³)	UtiliCore® Product	Product Density pcf (lb/ft ³)	Density Compliance
Class 3	1.0	L1	1.0	Yes
Class 6	3.0	L2.5	2.5	0.2 pcf below tolerance

3. UtiliCore® offers no Class 2 product.

Thermal Conductivity⁴

	L1	L2.5	L3.7	HP5 II Mat
Thickness ⁵ (inches)	1.0	1.0	1.0	1.0
Density (pcf)	1.0	2.5	3.7	5.0
Nominal "k" BTU·in/hr·ft. ² ·°F (R-value = thickness/K)				
75°F	0.26	0.22	0.21	0.21
300°F	0.51	0.35	0.31	0.30
500°F	0.85	0.52	0.44	0.42
Nominal "λ" W/mK				
23°C	0.037	0.032	0.031	0.031
149°C	0.074	0.050	0.045	0.044
260°C	0.123	0.075	0.063	0.060

4. Thermal Conductivity on core insulation only.

5. Thickness value is nominal. Product control is on thermal conductivity.

Sound Absorption Coefficient, ASTM C423— Type A Mounting⁶

Octave Band Center Frequencies, Hz.										
Product	Thickness (inches)	Thickness							NRC	SAA
		125	250	500	1000	2000	4000			
L1	1.0	0.09	0.31	0.65	0.85	0.90	0.90	0.70	0.68	
L2.5	1.0	0.08	0.34	0.81	0.98	1.03	1.03	0.80	0.79	
L3.7	1.0	0.10	0.57	1.09	1.17	1.12	1.17	1.00	0.99	
HP5 II Mat	1.0	0.13	0.43	0.84	1.05	1.02	0.94	0.85	0.83	

6. Nominal samples were measured in accordance with ASTM C 423. These measured absorption coefficients were adjusted to values representative of the product with mean specification properties. While these values are an accurate representation of our product, they are for design approximations only. Production, testing, and application variabilities will alter results. Specific designs should be evaluated in end-use configurations.

Availability

- Fiberglas™ UtiliCore® L Series Insulation:
 - 1" and 2" thicknesses
- Fiberglas™ UtiliCore® HP5 II Mat Insulation:
 - 1" thickness
- Other thicknesses may be available upon request. Contact your local Owens Corning sales representative for availability.

Environmental and Sustainability

Owens Corning is a worldwide leader in building material systems, insulation and composite solutions, delivering a broad range of high-quality products and services. Owens Corning is committed to driving sustainability by delivering solutions, transforming markets and enhancing lives. More information can be found at www.owenscorning.com.

Notes

For additional information, refer to the Safe Use Instruction Sheet (SUIS) found in the SDS Database via <http://sds.owenscorning.com>.

Certifications and Sustainable Features⁷

- Certified by SCS Global Services to contain an average of 53% recycled glass content, 31% pre-consumer and 22% post-consumer
- GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg

7. Results representative of core insulation only.



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SCS Global Services provides independent verification of recycled content in building materials and verifies recycled content claims made by manufacturers. For more information, visit www.SCSglobalservices.com.



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