FIBERGLAS™ UTILICORE® HP5 MAT INSULATION

Owens Corning® Fiberglas™ UtiliCore® HP5 Mat insulation is a flexible white blanket 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

- HP5 Mat is a needled blanket with no binder
- HP5 Mat can be used in applications up to 1,100°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

Standards, Codes Compliance

- ASTM C553, Mineral Fiber Blanket Thermal Insulation, Types I, II, III, IV, V, and VI
- ASTM C795, Thermal Insulation for Use in Contact with Austenitic Stainless Steel[1]
- Nuclear Regulatory Commission Guide 1.36, Non-Metallic Thermal Insulation[1]
- Mil. Spec. MIL-DTL-32585, Insulation, Thermal and Acoustic, Fibrous Glass, Types I and II; HP5 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 Requirements[1]; Type XVI
- U.S. Coast Guard Approval No. 164.109, Non-combustible Materials
- Complies to ASTM E136, Behavior of Materials in a Vertical Tube Furnace at 750°C (Non-combustible rating)
- Does not contain the fire-retardant decabrominated diphenyl ether (decaBDE)

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

Applications

Fiberglas™ UtiliCore® HP5 Mat insulation product offers outstanding dimensional stability, allowing ease of handling in fabrication, assembly, and installation of removable and reusable industrial pipe covers.

Fiberglas™ UtiliCore® HP5 Mat 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
Density	ASTM C167	5.0 pcf (80 kg/m3)
Operating Temperature Range[2]	ASTM C411	Rated to 1,100°F (593°C)
Water Vapor Sorption	ASTM C1104	<2% by weight at 120°F (49°C), 95% R.H.
Fungi Resistance	ASTM C1338	Meets requirements
CORROSION RESISTANCE		
Corrosion to Steel	ASTM C1617	Meets Requirements
Stress Corrosion Evaluation on external stress corrosion cracking tendency of austenitic stainless steel	ASTM C795 and ASTM C6921	Meets Requirements
Chemical Analysis for Cl-, Fl-, Na+, SiO3	ASTM C795 and ASTM C871[1]	Results fall within acceptability limits
FIRE		
Surface Burning Characteristics[3]	UL 723 and ASTM E84	UNFACED: Flame Spread < 25 Smoke Developed < 50

2 Maximum thickness at 1,100°F (593°C) is 2" (50 mm).
3 The surface burning characteristics of these products have been determined in accordance with UL 723, ASTM E84 and CAN/ULC-S102. Values are reported to the nearest 5 rating.

Thermal Conductivity

MEAN TEMPERATURE °F	k BTU•IN/HR•FT²•°F	MEAN TEMPERATURE °C	λ W/M•°C
75	0.22	24	0.032
100	0.23	38	0.033
200	0.27	93	0.039
300	0.31	149	0.045
400	0.36	204	0.052
500	0.42	260	0.061
600	0.48	316	0.069
700	0.56	371	0.081
800	0.64	427	0.092

NOTE: Apparent thermal conductivity values determined in accordance with ASTM practice C1045 with data obtained by ASTM test method C177. Values are nominal, subject to normal testing and manufacturing tolerance.

Acoustic — Insertion Loss in dB per ASTM E1222

UtiliCore HP5 II Mat — made and tested as a removable pad

	1" THICK (NO SOUND BARRIER)	2" THICK (NO SOUND BARRIER)	1" THICK (WITH A 1# VINYL SOUND BARRIER)	2" THICK (WITH A 1# VINYL SOUND BARRIER)
FREQUENCY (HZ)	INSERTION LOSS (DB)	INSERTION LOSS (DB)	INSERTION LOSS (DB)	INSERTION LOSS (DB)
315	-9	-9	-8	-8
400	-8	-8	-4	-5
500	-11	-11	-6	-8
630	-7	-8	-1	1
800	-5	-7	-1	-3
1000	1	0	6	6
1250	3	0	7	9
1600	4	2	8	12
2000	4	2	5	14
2500	7	8	16	18
3150	10	11	20	19
4000	12	14	20	20
5000	12	13	20	19

Sound Absorption Coefficient, ASTM C423 — Type A Mounting

THICKNESS	1/3 OCTAVE BAND CENTER FREQUENCIES, HZ							
	125	250	500	1000	2000	4000	NRC	SAA
1	.0.05	0.31	0.94	1.08	1.01	0.98	0.85	0.84
2[4]	0.22	1.11	1.01	1.02	0.98	0.96	1.05	1.01

4 Two 1-inch layers together.

NOTE: Nominal samples were measured in accordance with ASTM C423. 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 configuration.

Availability

- Fiberglas™ UtiliCore® HP5 Mat insulation is available with 1-inch thickness.
- Contact your local Owens Corning sales representative for availability.

Certifications and Sustainable Features[5]

- 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.

5 Results representative of core insulation only.

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.

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For more information, visit www.SCSglobalservices.com.

Notes

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

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