OWENS CORNING®

INNOVATIONS FOR LIVING®

Fiberglas™ Insul-Quick® Insulation

Product Data Sheet

Availability

Sizes, in. (m)		Thickness, in. (mm)
24 x 48	(0.6 x 1.2)	1 through 4 (25 through 102) in ½ (13) increments
36 x 48	(0.9 x 1.2)	
48 x 48	(1.2 x 1.2)	

Physical Property Data

Property	Test Method	Value
Hot Surface Performance	ASTM C 411	Up to 850°F (454°C) Maximum thickness 6" (152 mm) Up to 650°F (343°C) Maximum thickness 8" (203 mm)
Compressive Strength at 10% Deformation at 20% Deformation	ASTM C 165	90 lb/ft² (4309 Pa) 130 lb/ft² (6225 Pa)
Nominal Density	ASTM C 303	3.0 pcf (48 kg/m³)
Water Vapor Sorption	ASTM C 1104	< 2.0% by weight, at 120°F (49°C), 95% R.H.
Shot Content	ASTM C 1335	Negligible
Composite Surface Burning Characteristics Flame Spread[1] Smoke Developed	UL 723,* ASTM E 84* or CAN/ULC-S102-M*	25 50

1. The surface burning characteristics of these products have been determined in accordance with UL 723, ASTM E 84 or CAN/ULC-S102-M.This standard should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest 5 rating.

Description

Fiberglas™ Insul-Quick® Insulation is a lightweight insulation composed of glass fibers bonded together in a semi-rigid, boardlike form with a special high temperature binder.

Uses

Fiberglas™ Insul-Quick® Insulation is designed for use on power and process boilers, breechings, ducts, precipitators, chimney liners and other heated equipment operating at temperatures up to 850°F (454°C). It is used in applications where an outside facing of metal or metal mesh with a finishing cement is required. It can also be used as insulation in a metal panel system.

Product Attributes

Thermal Efficiency

Its consistent fibrous glass composition enables Fiberglas™ Insul-Quick® Insulation to help conserve energy and lower costly heat loss.

Lightweight

Lightweight Fiberglas™ Insul-Quick® Insulation is easy to handle and install, even when large size boards are used. There's no tendency for pin-holes to become elongated in vibration situations; this eliminates a major source of heat leaks.

No Crumbling, Breaking, Slumping

Fiberglas™ Insul-Quick® Insulation is easy to handle because it won't crumble or break during installation. It cuts cleanly and easily. It resists tearing and pulling apart, which contributes to excellent long-term installed thermal performance.

Large Size Availability

Boards in sizes to 4 by 8 ft. (1.2m x 2.4m) help reduce the number of joints, speeding installation and eliminating potential sources of heat leakage. This feature helps improve installed cost.

Specification Compliance

- ASTM C 612, Mineral Fiber Block & Board Thermal Insulation, Types IA, IB, II
- ASTM C 795, Thermal Insulation for Use Over Austenitic Stainless Steel*
- Nuclear Regulatory Commission Guide 1.36, Non-Metallic Thermal Insulation*
- U. S. Coast Guard Approval No. 164.109, Noncombustible Materials
- CAN/CGSB-51.10 – Type 1, Class 1

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

Application Recommendations

Fiberglas™ Insul-Quick® Insulation is used in panel systems. It is secured to the panel using pins and clips with metal mesh. Panels can be erected flush to heated surfaces or away from them and secured to buckstays or breeching and ductwork angle iron stiffeners.

Fiberglas™ Insul-Quick® Insulation can be installed directly to hot,

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flat or curved surfaces. It can be attached using welded pins or studs and finished with sheet metal; or using metal mesh and insulating cement, then canvassed and painted. Pins with speed washers or studs and nuts should be installed on 12" (300mm) x 18" (450mm) (approx.) centers and the insulation impaled over them. The sheet metal or metal mesh is secured to the same fasteners. Joints of the sheet metal are offset from joints of the insulation.

For temperatures over 400°F (204°C), good practice suggests double layer application, regardless of insulation type. Single layer installation requires good workmanship to minimize heat loss and hot spots at insulation joints.

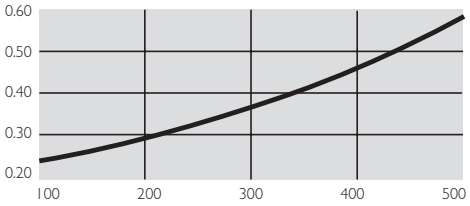
Fiberglas™ Insul-Quick® Insulation may be installed in either single or multiple layers up to a maximum of 6" (152mm) at all temperatures up to 850°F (454°C), or to a maximum of 8" (203mm) at temperatures not over 650°F (343°C).

Thermal Performance, ASTM C 680

Thickness, in. (mm)		Operating Temperature, °F (°C) 450 (232) HL	450 (232) ST	550 (288) HL	550 (288) ST	650 (343) HL	650 (343) ST	750 (399) HL	750 (399) ST	850 (454) HL	850 (454) ST
1	(25)	106	179	154	213	213	251	285	294	372	341
2	(51)	58	141	84	162	117	187	156	214	203	245
3	(76)	40	125	58	141	80	159	107	180	140	203
4	(102)	31	116	44	129	61	144	82	160	107	179
5	(127)	25	110	36	121	50	134	66	148	86	164
6	(152)	21	106	30	116	42	126	56	139	72	153
7	(178)	18	103	26	112	36	121	48	132		
8	(203)	16	101	23	108	32	117	42	127		

The above table provides approximate heat loss values (HL), Btu/hr•ft2, and Surface Temperatures (ST), °F, for flat surfaces. Values are based on horizontal heat flow, vertical flat surface, 80°F ambient temperature, still air, weathered aluminum jacket. To convert heat loss values to W/m2, multiply values by 3.15. To convert surface temperatures, use the formula: °C=(°F-32) 1.8.

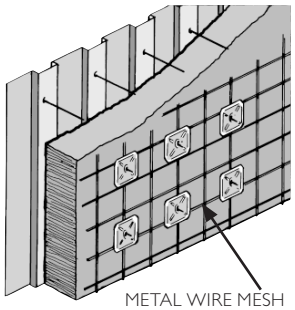
Thermal Conductivity



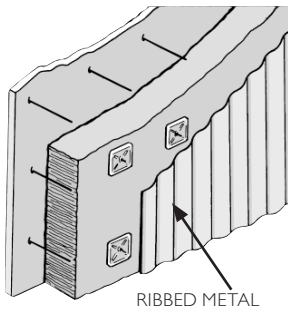
Apparent thermal conductivity curve determined in accordance with ASTM Practice C 1045 with data obtained by ASTM Test Method C 177. Values are nominal, subject to normal testing and manufacturing tolerances.

Mean Temp. °F	k Btu•in/ hr•ft2•°F	Mean Temp. °C	λ W/m•°C
75	0.23	25	0.033
100	0.24	50	0.037
200	0.30	100	0.045
300	0.37	150	0.054
400	0.46	200	0.066
500	0.58	250	0.081

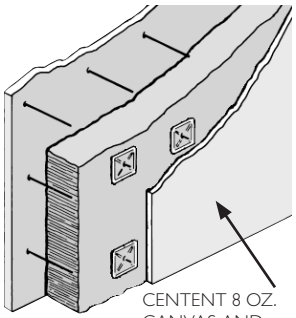
PANEL CONSTRUCTION



FLUSH APPLICATION – METAL LAGGING



FLUSH APPLICATION – CANVASSED, PAINTED



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