



MinWool-1200® Industrial Board

HIGH TEMPERATURE INSULATION

DESCRIPTION

IIG MinWool-1200 Industrial Board Insulation is made of inorganic fibers derived from basalt, a volcanic rock, with a thermosetting resin binder. Advanced manufacturing technology ensures consistent product quality, with high fiber density and low shot content, for excellent performance in high temperature thermal control and fire resistance applications.

ADVANTAGES

Thermal Performance. Good thermal conductivity values help maximize control of heat loss, contributing to reduced operating costs and greater energy savings.

Lightweight, Low Dust. Easy to handle and fabricate, these boards are easy to cut with a knife. Clean handling properties help reduce irritation and minimize job clean-up time and expense.

Low Smoke & Flame Spread. When tested in accordance with ASTM E84, UL 723, CAN/ULC-S102-M, these unfaced insulation boards have a flame spread rating of 5 and a smoke developed rating of 0. The faced insulation has a flame spread rating of 25 and a smoke developed rating of 5.

Noncombustible. MinWool-1200 Industrial Board is rated as noncombustible in accordance with ASTM E136 and CAN4-S114-M.

Mold Resistant. IIG MinWool-1200 does not support growth of fungi.

APPLICATIONS

MinWool-1200 Industrial Board Insulation provides excellent thermal insulation performance for mechanical, power and process systems operating from sub-ambient to 1200°F(650°C). These industrial board insulations are easily fabricated, cutting cleanly and easily with a knife. Very low in-service shrinkage helps prevent gaps from forming at joints, preventing costly thermal leaks. The insulation is designed to be field-jacketed. It may be installed directly on hot surfaces; system shut-down and staged heat-up are not required.

AVAILABLE TYPES

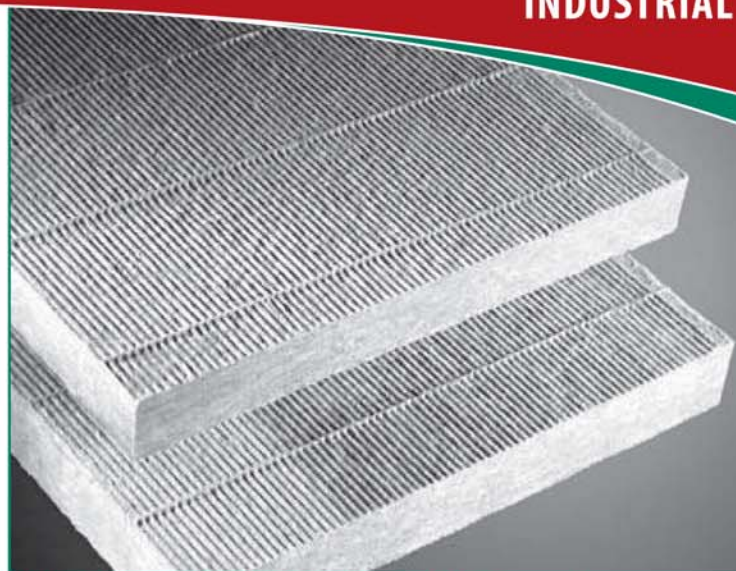
IIG MinWool-1200 Industrial Boards are available in six nominal densities in accordance with ASTM C612 and in a range of standard thicknesses, as follows:

	Type					
Nominal Density	1230	1240	1260	1280	1210	1212
lb/ft ³	3	4	6	8	10	12
kg/m ³	48	64	96	128	160	192

Standard Sizes: 24" x 48"(610mm x 1219mm)
36" x 48"(914mm x 1219mm)

Standard Thicknesses: 1" to 4" (25 mm to 102 mm).

1½" to 4" (38 mm to 102 mm) industrial boards are available with FSP (Foil Scrim Polyethylene) facings on a made-to-order basis. Minimum order quantities will apply. Other thicknesses may be available upon request.



MinWool-1200® Industrial Board

Operating Temperature Limit: 1200°F (650°C)

SPECIFICATION COMPLIANCE

ASTM C612 Material Specification	Complies
ASTM C356 In-Service Shrinkage	0% at 1050°F (566°C); <2% at 1200°F (650°C)
ASTM C447 Maximum Service Temperature	1200°F(650°C)
ASTM C665 Corrosivity to Steel	Passes
ASTM C795/C871/C692 Stainless Steel	Passes
ASTM C1104 Water Vapor Sorption	<1% by Weight, <.02% by Volume @ 120°F(50°C), 95% RH
ASTM C1335 Shot Content	<25%
ASTM C1338 Fungi Resistant	Passes
ASTM E84 Flame Spread/Smoke Developed	Unfaced 5/0 or less Faced 25/5 or less
ASTM E136 Noncombustible	Passes
UL 723, CAN/ULC-S102-M	Unfaced 5/0 or less Faced 25/5 or less

ASTM C612 TYPES

1A-4A	All Boards
4B	1280, 1210, 1212

R-Value @ 75°F

IB 1230	4.0 per inch of thickness
IB 1240	4.2 per inch of thickness
IB 1260-IB 1212	4.3 per inch of thickness

MinWool-1200® Industrial Board

HIGH TEMPERATURE INSULATION

THERMAL PERFORMANCE (IP UNITS) *

THERMAL PERFORMANCE (SI UNITS) *

ACOUSTICAL PERFORMANCE

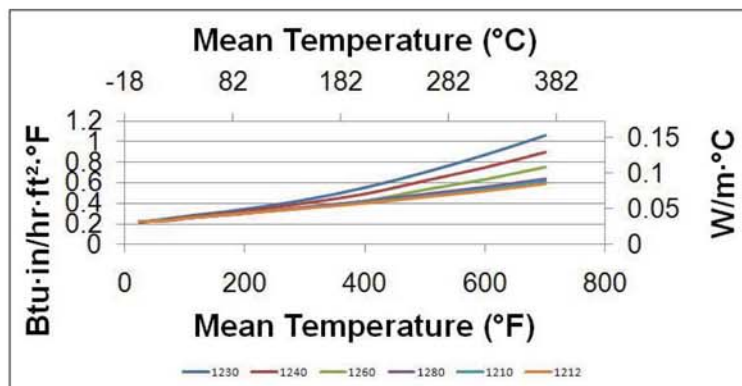
Apparent Thermal Conductivity						
Mean Temp. (°F)	Btu · in/(hr · ft² · °F)					
	1230	1240	1260	1280	1210	1212
25	0.21	0.21	0.22	0.22	0.22	0.22
75	0.25	0.24	0.23	0.23	0.23	0.23
100	0.27	0.26	0.25	0.25	0.25	0.25
200	0.34	0.32	0.30	0.30	0.30	0.30
300	0.43	0.40	0.36	0.36	0.35	0.35
400	0.55	0.49	0.42	0.42	0.41	0.40
500	0.70	0.62	0.53	0.49	0.47	0.46
600	0.87	0.75	0.63	0.56	0.54	0.52
700	1.06	0.90	0.75	0.64	0.62	0.59

Apparent Thermal Conductivity						
Mean Temp. (°C)	W/m · °C					
	1230	1240	1260	1280	1210	1212
-4	0.030	0.030	0.032	0.032	0.032	0.032
24	0.036	0.035	0.033	0.033	0.033	0.033
38	0.039	0.037	0.036	0.036	0.036	0.036
93	0.049	0.046	0.043	0.043	0.043	0.043
149	0.062	0.058	0.052	0.052	0.050	0.050
204	0.079	0.071	0.061	0.061	0.059	0.058
260	0.101	0.089	0.076	0.071	0.068	0.066
316	0.125	0.108	0.091	0.081	0.078	0.075
371	0.153	0.130	0.108	0.092	0.089	0.085

Sound Absorption Coefficients									
Type	Thickness		1/3 Octave Band Center Frequencies, Hz						
	(in)	(mm)	125	250	500	1000	2000	4000	NRC
1240	1½	40	0.13	0.48	1.02	1.08	1.02	1.01	0.90
	2	50	0.20	0.61	1.07	1.06	1.04	1.07	0.95
	4	100	0.88	1.14	1.17	1.08	1.06	1.10	1.10
1260	1½	40	0.18	0.62	1.08	1.08	1.03	1.07	0.95
	2	50	0.25	0.85	1.15	1.10	1.04	1.06	1.05
	3	75	0.80	1.07	1.11	0.99	0.98	0.96	1.05
1280	1½	40	0.13	0.64	1.08	1.04	1.04	1.07	0.95
	2	50	0.32	0.90	1.11	1.01	1.01	1.05	1.00
	4	100	1.11	0.91	1.03	1.06	1.06	1.07	1.00

* MinWool Industrial Board Insulation as tested in accordance with ASTM C177 and ASTM C518.

THERMAL CONDUCTIVITY



PRODUCT CERTIFICATION

When ordering material to comply with any government specification or any other listed specification, a statement of that fact must appear on the purchase order. Government regulations and other listed specifications require specific lot testing, and prohibit the certification of compliance after shipment has been made. There may be additional charges associated with specification compliance testing. Please refer to IIG-CSP-3 for Certification Procedures and Charges. Call customer service for more information.

QUALITY STATEMENT

IIG Products are designed, manufactured and tested to strict quality standards in our own facilities. This along with third party auditing is your assurance that this product delivers consistent high quality.



Industrial Insulation Group, LLC is a Johns Manville company. IIG manufactures MinWool-1200® mineral fiber pipe, block and a variety of other insulations; Thermo-12® Gold Calcium Silicate pipe and block insulation; Super Firetemp® fireproofing board; SprouleWR-1200® Perlite pipe and block insulation; high temperature adhesives, and insulating finishing cement.

The physical and chemical properties presented herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Numerical flame spread and smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Customer Service Office to assure current information. All Industrial Insulation Group products are sold subject to the IIG Limited Warranty and Limitation of Remedy. For a copy of the IIG Limited Warranty and Limitation of Remedy, email - info@iig-llc.com.