

# MINWOOL-1200® INDUSTRIAL BOARD

WATER-REPELLENT, HIGH-TEMPERATURE MINERAL WOOL INSULATION

**DATA SHEET** 

## MINWOOL-1200® INDUSTRIAL BOARD INSULATION

MinWool-1200 Industrial Board Insulation is a water-repellent mineral wool insulation 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**

**Water-Repellent.** MinWool-1200 Industrial Board insulation is water-repellent to help mitigate the risk of water intrusion. MinWool-1200 Industrial Board performs in accordance with BS EN 1609:2013 , absorbing less than 0.35 kg/m² of water during water absorption tests at temperatures up to 425°F (218°C).

**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, these unfaced insulation boards have a flame spread rating of 0 and a smoke developed rating of 0. The faced insulation has a flame spread rating of 25 and a smoke developed rating of 5.

Non-Combustible. MinWool-1200 Industrial Board is rated as noncombustible in accordance with ASTM E136 and ISO 1182.

**Mold Resistant**. MinWool-1200 Industrial Board 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 FORMS AND SIZES**

MinWool-1200 Industrial Boards are available in five nominal densities in accordance with ASTM C612 and in a range of standard thicknesses:

Туре							
Nominal Density	1240	1260	1280	1210	1212		
lb/ft³	4	6	8	10	12		
kg/m³	64	96	128	160	192		

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

Standard Thicknesses: 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.

ASTM C612 TYPES				
1A-4A 1240				
4B	1260, 1280, 1210, 1212			

R-Value @ 75°F				
IB 1240 4.2 per inch of thicknes				
IB 1260-IB 1212	4.3 per inch of thickness			

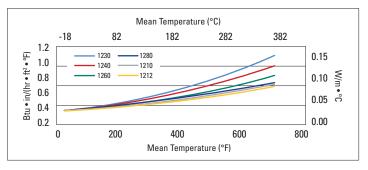


Operating Temperature Limit: 1200°F (650°C)

#### **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 Corrosion: Austenitic 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 0/0 or less Faced 25/5 or less
ASTM E136 and ISO 1182 Non-Combustible	Passes
BS EN 1609:2013 Water Absorption	<0.35 kg/m²

### THERMAL CONDUCTIVITY



\*MinWool-1200 Industrial Board Insulation as tested in accordance with ASTM C518.

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### THERMAL PERFORMANCE (IP UNITS) \*

Apparent Thermal Conductivity							
MeanTemp (°F)	1240	1260	1280	1210	1212		
25	0.21	0.22	0.22	0.22	0.22		
75	0.24	0.23	0.23	0.23	0.23		
100	0.26	0.25	0.25	0.25	0.25		
200	0.32	0.30	0.30	0.30	0.30		
300	0.40	0.36	0.36	0.35	0.35		
400	0.49	0.42	0.42	0.41	0.40		
500	0.62	0.53	0.49	0.47	0.46		
600	0.75	0.63	0.56	0.54	0.52		
700	0.90	0.75	0.64	0.62	0.59		

# **THERMAL PERFORMANCE (SI UNITS) \***

Apparent Thermal Conductivity							
Mean Temp (°C)	1240	1260	1280	1210	1212		
-4	0.030	0.032	0.032	0.032	0.032		
24	0.035	0.033	0.033	0.033	0.033		
38	0.037	0.036	0.036	0.036	0.036		
93	0.046	0.043	0.043	0.043	0.043		
149	0.058	0.052	0.052	0.050	0.050		
204	0.071	0.061	0.061	0.059	0.058		
260	0.089	0.076	0.071	0.068	0.066		
316	0.108	0.091	0.081	0.078	0.075		
371	0.130	0.108	0.092	0.089	0.085		

<sup>\*</sup>MinWool-1200 Industrial Board Insulation as tested in accordance with ASTM C518.

#### SOUND ABSORPTION COEFFICIENTS

Thickness			1/3 Octave Band Center Frequencies, Hz						
Type	(in)	(mm)	125	250	500	1000	2000	4000	NRC
1240	1 ½	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	1 ½	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
	4	100	0.99	1.01	1.10	1.03	1.03	1.05	1.05
1280	1 ½	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
1210	1 ½	40	0.22	0.77	1.00	1.02	0.99	0.99	0.95
	2	50	0.43	0.89	1.00	0.99	0.98	0.99	1.00
	3	75	0.88	0.88	0.96	1.01	1.01	1.01	1.00
	4	100	0.91	0.88	0.96	1.02	1.01	1.01	0.95

### 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 IND-CSP-3 for Certification Procedures and Charges. Call customer service for more information.

# **QUALITY STATEMENT**

Johns Manville 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.

## **ADDITIONAL INFORMATION AND SDS**

Please visit our website at www.jm.com/industrial Customer Service, Technical & General Information: (800) 866-3234



717 17th St. Denver, CO 80202 (800) 866-3234 JM.com Technical specifications as shown in this literature are intended to be used as general guidelines only. Please refer to the Safety Data Sheet and product label prior to using this product. The physical and chemical properties of the MinWool-1200® Industrial Board Insulation listed 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. Any references to numerical flame spread or smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Regional Sales Office nearest you for current information.

All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions, which includes a Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions or for information on other Johns Manville thermal insulation and systems, visit www.im.com/terms-conditions or call (800) 654-3103.