

# Foundry Service & Supplies, Inc.

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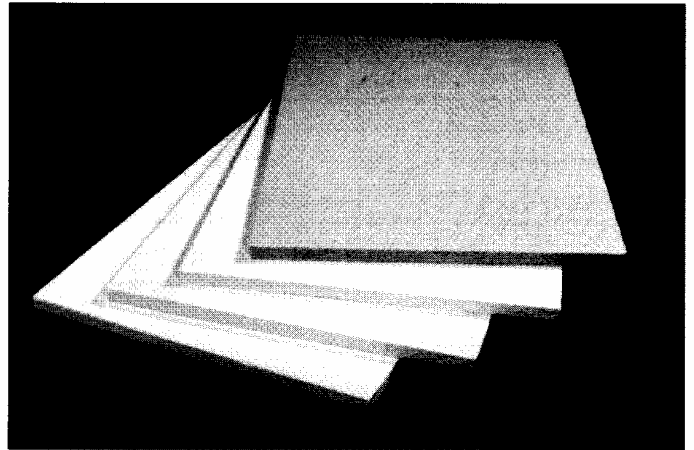
## Typical Property Data Sheet

### LOW-TEMPERATURE COMPOSITION KAOWOOL® M BOARD

- Rigid, self-supporting fiber insulation
- Available in variety of sizes and thicknesses
- Design temperature rating of 2300°F
- Different strength ranges in lightweight fiber form
- Multiple certifications for fire protection use
- Low-cost, general-duty insulation product

Thermal Ceramics Kaowool M board is processed from a slurry consisting of Kaowool ceramic fibers and binders. The fiber raw material is kaolin, a naturally occurring high-purity, alumina-silica fireclay. Each Kaowool M Board has machined edges to control squareness and trueness. One surface is smooth, screen-like in appearance, while the other is generally bark-like. Boards up to 36" wide may be ordered with both surfaces machined smooth to a close thickness tolerance. The application of special hardening agents and production of organic-free boards are available upon request.

Kaowool M Board can be formed into custom shapes and is designated as VF 2300.



### Physical Properties

Color .....	beige
Nominal density, pcf .....	16
Maximum temperature rating, °F .....	2300
Continuous use limit, up to °F .....	1800
Melting point, °F .....	3200
Dielectric strength, v/mil .....	35 - 40
Modulus of rupture, psi .....	100 - 130
Modules of rupture, psi (2000°F for 24 hrs) .....	70
Compressive strength, psi	
@ 5% deformation .....	20 - 30
@ 10% deformation .....	30 - 40
Linear shrinkage, %	
24 hrs @ 1500°F .....	1.2
@ 1800°F .....	2.2
@ 2000°F .....	2.8

### Chemical Analysis

(% weight basis after firing)

Alumina .....	Al <sub>2</sub> O <sub>3</sub> .....	42
Silica .....	SiO <sub>2</sub> .....	56
Other .....		2
Loss on ignition .....	L.O.I. ....	4 - 7
Organic material .....		3 - 6

### Chemical Properties

Thermal Ceramics Kaowool M Board exhibits good resistance to chemical attack. Exceptions include hydrofluoric acid, phosphoric acid, and strong alkalis.

A small amount of combustible organic binder will burn out at approximately 300°F. Caution should be exercised during the initial heating. Adequate ventilation should be provided to avoid potential flash ignition of the binder outgassing and to avoid air entry while at elevated temperature.

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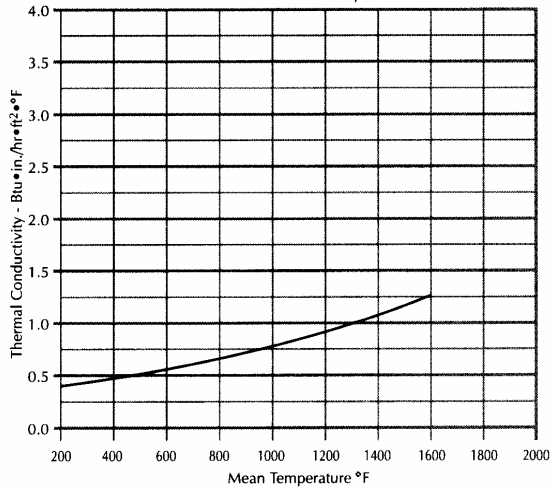
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## Kaowool M Board (continued)

### Thermal Properties

Kaowool® M Board  
Thermal Conductivity



### Standard Sizes

Kaowool M board is manufactured in the following thicknesses and sizes:

Thickness range, in. ....	1/2 - 3
Standard board sizes, in. ....	36 x 12
	36 x 24
	36 x 48
	48 x 24

### Typical Applications

- Furnace, kiln, and oven hot face linings
- Flue and chimney linings
- Glass tank side, end wall, and port neck insulation
- Insulation as backup to firebrick, insulating firebrick, refractory castables and rammed plastic. Due to their high thermal efficiency, Kaowool boards reduce the thickness of backup insulation up to 50% when replacing insulating firebrick or castables.

### M-Board Certifications

#### Noncombustibility

- Underwriters Laboratories  
ASTM-E-84/UL 723
- Warrington Research Center  
BS 476 Parts 4 & 5
- Research Institute of Marine Engineering  
Sales - 1960/BS476-Part 1  
Sales - 1974/Imco -A-270

#### Penetration Seal Systems

- National Gypsum Co./Factory Mutual  
(with silicone foam)  
ANI/MAERP Method/ASTM E 119

#### Noncombustibility and Toxicity

- N.Y. City Dept of Building  
MEA-162-79-M

#### Acoustic Testing

- Riverbank Acoustical Laboratories  
ANSI/ASTM C423-81A and E 795

#### Stress Corrosion Testing

- Lehigh Laboratories  
U.S.A.E.C. Reg. Guide 1.36

#### Military and Federal Specifications

- Lehigh Laboratories  
Mil-I-24244
- U. S. Dept of Transportation  
HH-I-558B, FORM A Class 5

Data are average results of tests conducted under standard procedures and are subject to variation. Results should not be used for specification purposes.

Refer to the Material Safety Data Sheet (MSDS) for recommended work practices and other product safety information.