# THERMOBESTOS SCORED BLOCK INSULATION

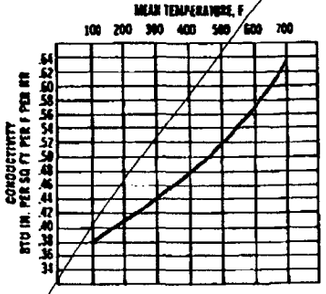
## Specification Data

### PHYSICAL PROPERTIES*

| | |
|---|---|
| Density (dry) | 13 lbs per cu ft |
| Transverse Strength (modulus of rupture) | 95 psi |
| Compressive Strength (based on 2" thickness of block) | 145 psi to produce 5% compression |
| Linear Shrinkage | 1.5% after 24-hr soaking period at 1200F |
| Maximum Service Temperature | 1200F |

*The physical and chemical properties of Johns-Manville Thermobestos 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. Check the Johns-Manville district office to assure current information.

### THERMAL CONDUCTIVITY




### COMPLIANCE WITH GOVERNMENT SPECS

Block Insulation:

MIL I 2819
Class 1 to 600F (except k at 200F)
Class 2 to 1200F

NAVY-523 Type I, to 1200F

### COMPLIANCE WITH ASTM STANDARDS

Block Insulation:

C533

Johns-Manville

22 East 40th Street · New York, N. Y. 10016

Sales Offices in Principal Cities

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IN 379A 8-71

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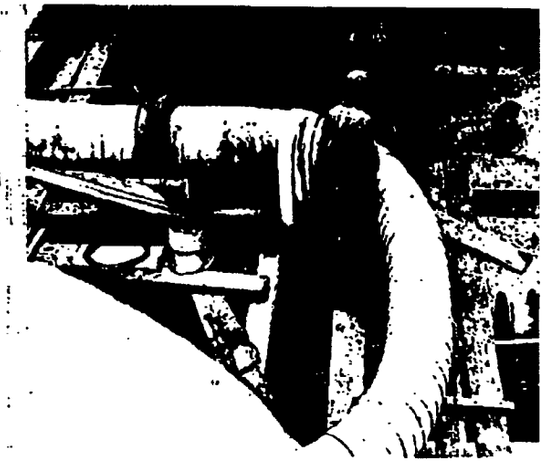
Johns-Manville

PRODUCT INFORMATION



type: Felt

temp. limit: 250F

## J-M WEATHERPROOFING JACKETS

**DESCRIPTION:** Johns-Manville produces a complete line of weatherproofing jackets for every hot and cold insulation requirement. Most are made from asbestos felts which are saturated and coated with asphalt. These jackets, in various thicknesses and weights, may be used for fire protection as well as weatherproofing purposes.

**AVAILABLE TYPES:**

**Double Coated Flexstone*** An asphalt-saturated asbestos felt coated with a mineral-filled asphalt. Designed for long life and extra heavy weatherproofing. Will not embrittle under prolonged exposure to sunlight. Supplied in rolls 36 in. wide, each roll containing 1 square and weighing 50 lbs.

**Asbestos Firetard*** A weatherproofing jacket designed for use where resistance to the spread of fire is of primary importance. Firetard is a lamination of heavy asphalt-saturated felt and plain asbestos felt, and affords excellent insulation protection. Because the unsaturated asbestos is incombustible, it prevents flame from traveling along the surface of an insulated pipe line. Supplied in rolls 32 in. wide, each roll containing 1 square and weighing 55 lbs.

**No. 50*** An asphalt-saturated asbestos felt jacket designed for medium long life. Supplied in rolls 36 in. wide, each roll containing 2 squares and weighing 32 lbs per square.

**No. 7700** An asphalt-saturated and coated asbestos felt with a smooth outer surface. Good weatherproofing jacket designed to be given a field coating of asphalt. Supplied in rolls 32 in. wide, each roll containing 2 squares weighing 35 lbs each.

**No. 15-A*** A lightweight asphalt-saturated asbestos finishing felt. Supplied in rolls 36 in. wide, each roll containing 3 squares and weighing 15 lbs per square.

**White Surface Asbestos** 3-ply asbestos felt consisting of two inner layers asphalt-saturated and one outer layer unsaturated. Features fire resistance and medium life. Supplied in rolls 32 in. wide, each roll containing 1 square and weighing 53 lbs.

**No. 45-A*** Asphalt-saturated asbestos felt with a sand finish. A heavy, long life weatherproofing jacket supplied in rolls 36 in. wide, each roll containing 1 square and weighing 42 lbs.

**No. 55-R*** Asphalt-saturated and coated organic felt. Heavy weatherproofing jacket supplied in rolls 36 in. wide, each roll containing 1 square and weighing 55 lbs.

**No. 45-R*** Asphalt-saturated and coated organic felt for medium weatherproofing protection. Supplied in rolls 36 in. wide, each roll containing 1 square and weighing 45 lbs.

**No. 30-R*** Asphalt-saturated organic felt for light weatherproofing protection. Supplied in rolls 36 in. wide, each roll containing 2 squares and weighing 30 lbs per square.

**No. 15-R*** Asphalt-saturated organic felt which gives very light protection against weather. Supplied in rolls 36 in. wide, each roll containing 4 squares and weighing 15 lbs per square. (Note: This felt when furnished by Pittsburg, Cal., plant comes in rolls containing 3 squares.)

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*Available perforated.

PLAINTIFF'S EXHIBIT JM-2296

## ACCESSORIES:

With all factory-applied jackets enough 16 gauge galvanized wire and J-M Laptite® asphalt-plastic cement to seal joints will be furnished. In addition, a butt strip of the same jacket material, 7 in. wide and having the same circumferential length as the jacket, will also be supplied.

**USES:** Especially recommended for weather proofing insulated outdoor piping and small diameter equipment.

## ADVANTAGES:

**Wide Jacket Selection**

Eleven different jackets give user a choice to meet every requirement.

**Factory Applied**

All J-M weatherproofing jackets can be furnished factory-applied thus eliminating the necessity of separate application at the job site.

## COMPLIANCE WITH GOVERNMENT SPECS

**No. 15-A** perforated or unperforated complies with HH-F-185, Type I perforated, Class A and Type II plain, Class A.

**No. 15-R** complies with HH-F-191a, Type I.

**No. 30-R** complies with HH-F-191a, Type II.

**No. 15-R** (from Waukegan plant only) complies with HH-F-201, Type I.

**FACTORY-APPLIED JACKETS FOR EVERY PURPOSE**

In addition to its line of weatherproofing jackets, Johns-Manville manufactures jacketing materials for every commercial and industrial purpose. These materials, which include kraft paper, canvas, asphalt felts, asbestos felts, and aluminum, can be furnished factory-applied to J-M Thermobestos calcium silicate pipe insulation. The felts, paper and canvas can also be factory-applied to J-M 85% Magnesia and J-M Superex-M pipe insulations. All can be supplied in roll form for large area protection or for field application.

## SHORT FORM SPECIFICATIONS

**WEATHERPROOFED OUTDOOR PIPING** "All outdoor pipe insulation shall be finished with a weatherproof jacket of _____ (fill in name). All joints shall be lapped at least 3", horizontal joints lapping downward to shed water. Longitudinal laps on vertical pipe shall be sealed with J-M Laptite. All other joints shall be left unsealed.

"The jacket shall be secured with loops of No. 16 galvanized wire applied on not greater than 4" centers, or ½" x 0.015" corrosion-resistant metal bands and clips applied on not greater than 6" centers, with one loop on each end lap, or two on each 7" butt strip."

**WEATHERPROOFED FITTINGS** "On pipe bends, fittings and flanges, the jacket shall lap about 4" over the mastic-type weatherproofing." Note: See data sheet on J-M Insulkote® weather protective coatings for specifications on bends, fittings and flanges.

**FIRE PROTECTION** "Where fire hazard must be considered due to the fact that flame may be carried along exposed piping when fire occurs adjacent to such lines, a fire-retarded weatherproof jacket of Asbestos Firetard shall be applied."

**UNDERGROUND PIPING** "All pipe insulation in underground tunnels or conduits shall be protected from water submersion with a No. 50 asbestos weatherproof felt, perforated. All joints shall be lapped about 1½" and left unsealed. Longitudinal laps shall be located on top of pipe to permit ready escape of steam after submersion."

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22 East 40th Street, New York, N.Y. 10016
Sales offices in principal cities

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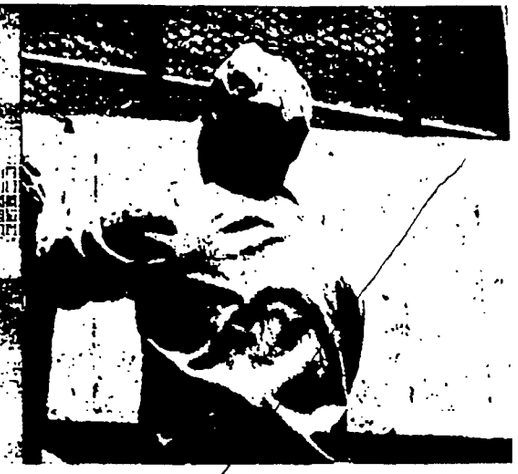
INSULATION
PRODUCT INFORMATION



type: Board
temp. limit: 850F

# J-M NO. 1000 SERIES SPIN-GLAS* BOARD
## glass fiber insulation

**DESCRIPTION:** A semi-rigid board produced by a unique felting process that combines Spin-Glas fiber and controlled amounts of organic binder into an insulation with superior handling properties and insulating effectiveness at minimum cost.

**AVAILABLE FORMS:** Furnished in board form only in thicknesses from 1" to 6" in ½" increments. (can be made up to 8" by plying two layers); widths of 24"; lengths 24", 36" or 48". Other sizes available on special order.

**USES:** For insulating furnaces, boilers, heated vessels, ducts and tanks.
*Special Note: No. 1000 Series Spin-Glas Board can only be used when properly held in place and supported with pins, studs or clips, and fully contained with metal mesh and/or finishing cement, sheet metal or other weather proofing finish. For temperatures over 600F, double-layer application is recommended.*

* J-M Trademark

## ADVANTAGES:

**Easy Application**

The firm, lightweight structure of this semi-rigid material makes possible impaling of insulation directly on studs or clips.

**Full Size Range**

Wide variation of standard sizes eliminates trimming during installation, reducing application costs.

**Low Conductivity**

No. 1000 Series Spin-Glas Board has a K factor of .36 at 500F mean.

**Corrosion Resistant**

When tested in accordance with the corrosion resistant section of U.S. Maritime Administration specification 32-MA-le.

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