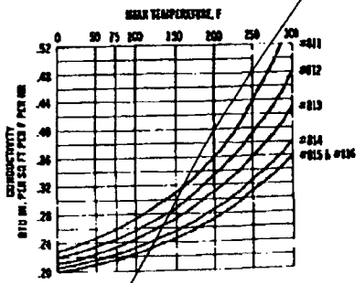
800 SERIES SPIN-GLAS Specification Data**

GENERAL PROPERTIES

Temperature (maximum) Unfaced	350°F
Faced	250°F
Moisture Absorption	Less than 0.2% by volume
Alkalinity	Less than 0.6% expressed as Na_2O
Corrosivity (with steel, copper or aluminum)	Does not cause or accelerate
Odor	None
Capillarity (after 24 hours)	Negligible
Shrinkage	None
Resistance to fungi and bacteria	Does not breed or promote

* See footnote on other side.

THERMAL CONDUCTIVITY



FACING INFORMATION

FSK Reinforced Foil and Paper (Foil-Scrim-Kraft)
Aluminum foil (minimum .7 mil thick) reinforced with fiber glass yarn mesh and laminated to 40-lb. basis weight treated, flre-resistant kraft.

*GC Glass Cloth
White, factory-sized glass cloth. Recommended for exposed ductwork where good appearance is desired. Permanent fire and smoke safety. Not a vapor barrier.

*GCVB Glass Cloth Vapor Barrier
White, factory-sized glass cloth bonded to a vapor barrier membrane. For exposed ductwork where presentable appearance is important.

*Available 9/1/70

COMPOSITE U.L. FIRE HAZARD CLASSIFICATION

All Spin Glas products meet the Fire Hazard Classification requirements of NFPA 90A and 90B Standards and FHA, as tested by UL. Faced materials are tested as composite products (insulation, adhesive and facing). UL Guide No. 40 UL3. Card R3711.

FHC 25/50

COMPLIANCE WITH GOVERNMENT SPECS

When ordering material to comply with any Government Specification, a statement of that fact must appear on the purchase order. Government regulations prohibit the certification of compliance after shipment has been made.

HH-I-558a (GSA-FSS) Form A
Class 1 (Spin-Glas types 812, 813, 814 & 815)
Class 2 (Spin-Glas types 813, 814 & 815)
HH-I-558a (GSA-FSS) Form B
Class 7 (Spin-Glas type 813)
Class 8 (Spin-Glas type 812)

DENSITIES, THICKNESSES AND FACINGS

TYPE	DENSITY (pcf)	FACINGS	THICKNESSES (inches)
811 (flexible)	1.00	FSK	1, 1½, 2, 2½, 3
811 (flexible)	1.00	(unfaced)	1, 1½, 2, 2½, 3, 3½, 4
812 (flexible)	1.60	FSK	1, 1½, 2, 2½, 3
812 (flexible)	1.60	(unfaced)	1, 1½, 2, 2½, 3, 3½, 4
813 (flex or rigid)	2.25	FSK	1, 1½, 2, 2½, 3
813 (flex or rigid)	2.25	(unfaced)	1, 1½, 2, 2½, 3, 3½, 4
814 (rigid)	3.00	FSK, GC, GCVB	1, 1½, 2, 2½, 3
814 (rigid)	3.00	(unfaced)	1, 1½, 2, 2½, 3, 3½, 4
815 (rigid)	4.25	FSK, GC, GCVB	1, 1½, 2, 2½
815 (rigid)	4.25	(unfaced)	1, 1½, 2, 2½
816 (rigid)	5.25	FSK, GC, GCVB	1, 1½, 2
816 (rigid)	5.25	(unfaced)	1, 1½, 2

STANDARD SIZE: 24" x 48" (types 811, 812 & 813 available in rolls)
Non-standard sizes available upon request.

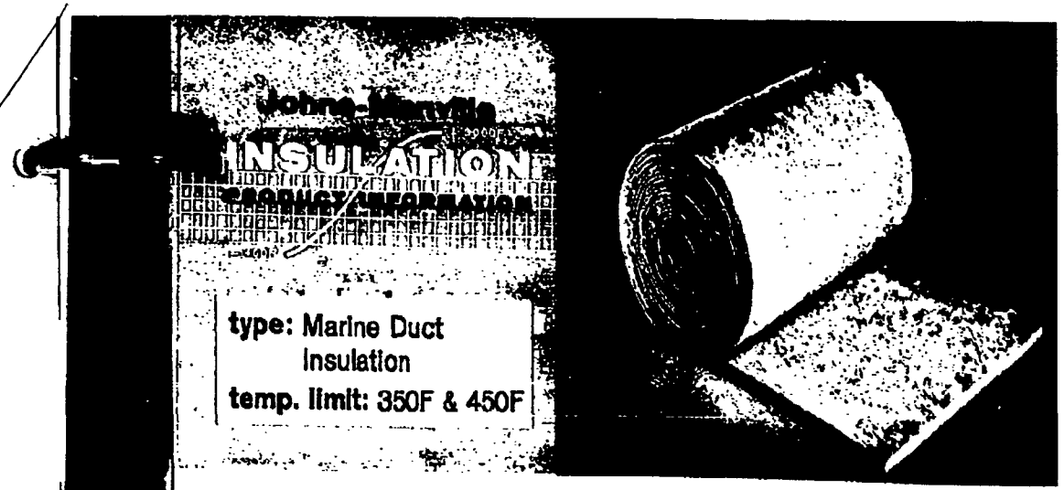
** The values given herein are average typical values obtained in accordance with accepted test methods and are subject to change. Check nearest J-M district office for latest information.

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

381558

H-685A 9/70

LITHO. IN U.S.A.



J-M MARINE MICROLITE
fiber glass duct insulation

DESCRIPTION: J-M Marine Microlite® duct insulation was especially developed as a thermal and acoustical blanket for use aboard ships. Produced from extremely fine glass fibers, it is light in weight, highly resilient and non-settling, and available in a variety of densities, thicknesses and roll lengths.

HIGH THERMAL PERFORMANCE: The extremely low conductivity of Marine Microlite assures optimum operating efficiency of shipboard heating and cooling duct systems.

SPECIFICATION COMPLIANCE: Marine Microlite has received approval as an incombustible material under U.S. Coast Guard Specification 164.009. It also complies with Maritime Administration Specifications 32-MA-3c, Classes 1, 2, 3, 4 and 5.

J-M PLAIN AND FOIL FACED MARINE BX-SPINTEX
alliceous fiber duct insulation

DESCRIPTION: J-M Marine BX-Spintex® is a lightweight, flexible or non-flexible duct insulation, available plain or foil faced. It is made by an exclusive spinning process that produces unusually fine and uniform fibers. Foil faced Marine BX-Spintex is specifically designed to meet the rigid requirements of USCG Specification sub-part 164.009 (Incombustible Materials) as a foil faced duct insulation. The facing is a factory-applied 3 mil thick smooth aluminum foil.

LOW CONDUCTIVITY: Both forms of Marine BX-Spintex have an extra low k factor and are highly effective in reducing heat transfer, thus resulting in increased system efficiency.

SPECIFICATION COMPLIANCE: Plain and Foil Faced Marine BX-Spintex have received U. S. Coast Guard approval as incombustible duct insulation under Specification 164.009. The foil faced form was tested on a *composite* basis (insulation, adhesive and facing). Both densities also meet Maritime Administration Specification 32-MA-1c.

EASE OF INSTALLATION: This product is easily installed on all types of ducts aboard ship. The 3.25 pcf flexible product can be used on round ducts as small as 4" I.D. The 6 pcf non-flexible product is intended for rectangular duct work. Joints of the foil faced duct insulation are sealed with Johns-Manville B-FF Tape, using a J-M Heat Seal Roller. B-FF Tape meets the requirements of USCG 164.012.

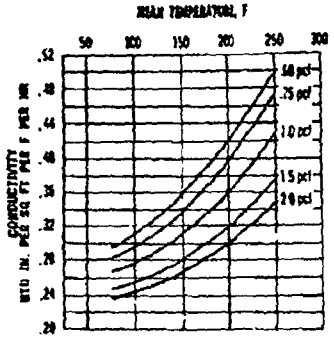
381559

PLAINTIFF'S EXHIBIT JM-2265

Specification Data

MARINE MICROLITE

THERMAL CONDUCTIVITY



COMPLIANCE WITH GOVERNMENT SPECIFICATIONS

U.S. Coast Guard Specification 164.809
Maritime Specification 52-MA-3c, class 1, 2, 3, 4 & 5
SSA-A-278A21, Type I and II, classes 1 thru 5
MIL-B-19248B, Type III and IIA 1.5 pcf; Type III and IIA 0.9 pcf

MH-I-5210, Type I, class A & B

MH-I-00550 Form B, Type IV & V
Replacing MH-I-552, 563, 5548

MH-I-00559 Form B, Type III & IV
Replacing MH-I-542, 550

SIZES AND THICKNESSES

Standard Widths: 24", 30", 36", 48"

DENSITY (pcf)	THICKNESS (Inches)	ROLL LENGTH (Feet)
.8	1, 2 3, 4	100 50
.75	1 2, 3, 4	100 50
1.	1 2, 3, 4 5, 6	100 50 25
1.5	1 2	100 50
2.	1, 2	50

MARINE BX SPINTEX

THERMAL CONDUCTIVITY

Density (pcf)	MEAN TEMPERATURE 50F	75F	100F
2.25	.34	.35	.36
6.	.33	.34	.35

Btu in. per sq ft per F per hr

COMPLIANCE WITH GOVERNMENT SPECIFICATIONS

U.S. Coast Guard Specification 164.808
U.S. Coast Guard Specification 164.807
Maritime Specification 52-MA-1c
MH-I-16406c

STANDARD SIZES AND THICKNESSES

PLAIN
Standard Widths: 15", 20", 30"

DENSITY (pcf)	THICKNESS (Inches)	LENGTH (Inches)
3.75 (Flexible)	1, 2, 3, 4, 5	20 to 72
6.00 (non-flexible)	1, 2, 3, 4	20 to 72

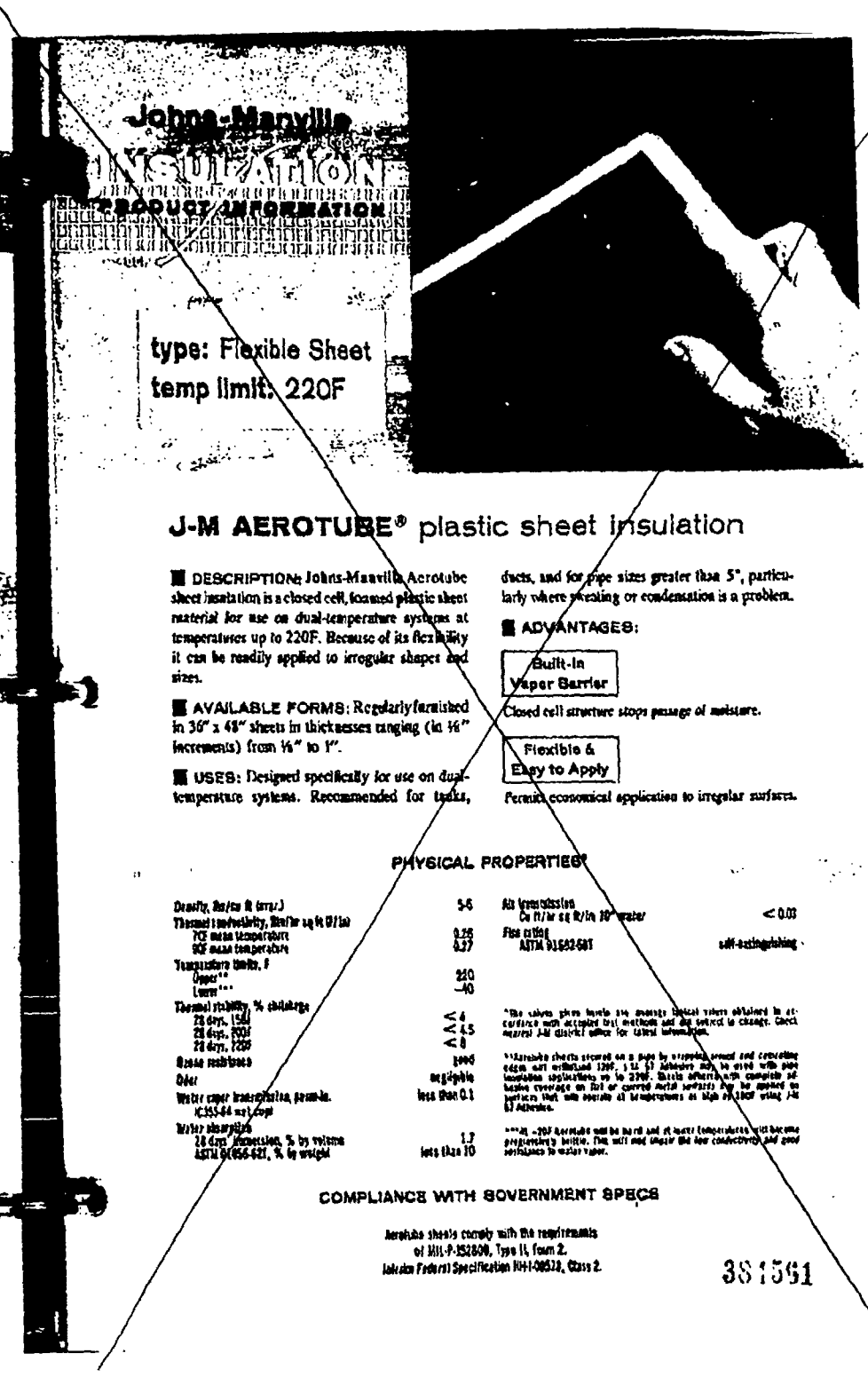
FOIL FACED
Standard Width: 30"

DENSITY (pcf)	THICKNESS (Inches)	LENGTH (Inches)
3.25 (Flexible)	1, 2, 3, 4	48 and 60
6.00 (non-flexible)	1, 2, 3, 4	48 and 60

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

3S1560

Litho in USA



J-M AEROTUBE® plastic sheet insulation

■ **DESCRIPTION:** Johns-Manville Aerotube sheet insulation is a closed cell, foamed plastic sheet material for use on dual-temperature systems at temperatures up to 220F. Because of its flexibility it can be readily applied to irregular shapes and sizes.

■ **AVAILABLE FORMS:** Regularly furnished in 36" x 48" sheets in thicknesses ranging (in ⅛" increments) from ⅛" to 1".

■ **USES:** Designed specifically for use on dual-temperature systems. Recommended for tanks, ducts, and for pipe sizes greater than 5", particularly where sweating or condensation is a problem.

■ **ADVANTAGES:**

Built-in Vapor Barrier
Closed cell structure stops passage of moisture.

Flexible & Easy to Apply
Permits economical application to irregular surfaces.

PHYSICAL PROPERTIES*

Density, lbs/cu ft (avg.)	5-6	Air transmission Cu ft/hr sq ft/in 30" water	< 0.03
Thermal conductivity, Btu/hr sq ft (F/in) 70F mean temperature 90F mean temperature	0.26 0.27	Flame spread ASTM D1692-59T	self-extinguishing
Temperature limits, F Upper** Lower***	220 -40		
Thermal stability, % shrinkage 28 days, 150F 28 days, 200F 28 days, 220F	∧∧∧ 4 ∧∧ 4.5 ∧ 8		
Flame resistance	good		
Odor	negligible		
Water vapor transmission, perm-in. ICSS-54 wet cup	less than 0.1		
Water absorption 28 days immersion, % by volume ASTM D1056-62T, % by weight	1.7 less than 10		

*The values given herein are average typical values obtained in accordance with accepted test methods and are subject to change. Check nearest J-M district office for latest information.

**Aerotube sheets covered on a pipe by wrapped cement and reinforcing open mesh cloth and 120F. 1 lb. 57 Asbestos cloth, be cured with pipe insulation applications up to 220F. Resin adhesive, with complete adhesive coverage on flat or curved metal surfaces may be applied to surfaces that will operate at temperatures as high as 180F using J-M 57 Adhesive.

***At -20F Aerotube will be hard and at most temperatures will become progressively brittle. This will not impair the low conductivity and good resistance to water vapor.

COMPLIANCE WITH GOVERNMENT SPECS

Aerotube sheets comply with the requirements of MIL-P-152800, Type II, form 2.
Jobbers Federal Specification HH-I-00520, Class 2.

3S1561