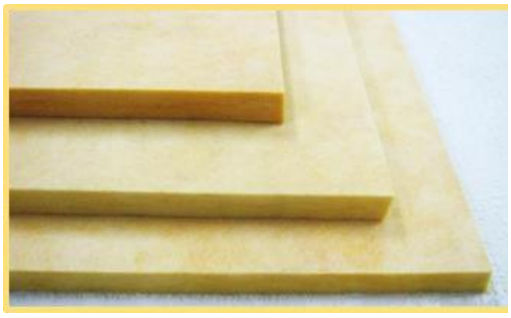
1. DESCRIPTION



Thermal and acoustic insulation of bio soluble fiber glass wool bonded together using a thermosetting resin and formed into flat, rigid acoustical boards, one side mat faced, with smooth surface on one side.

2. SCOPE

This specification applies to customer acceptance requirements on ACOUSTICAL BOARD.

REFERENCE		DESCRIPTION
MF	Mat Faced	Flat, rigid, acoustical boards, mat faced, with smooth surface on one side. Mat faced could be MFL Type when a low weight low covering mat is applied or MFH Type when a high weight, high covering capacity is applied. Final appearance of the color from pale yellow to dark yellow.
PLAIN	Unfaced	Flat, rigid, acoustical boards, unfaced. No smooth surface; not sanded surface. Final appearance of the color from pale yellow to dark yellow.

3. END USE CHARACTERISTICS AND LIMITATIONS

Acoustical Base Board 6#MF (Mat Faced) has been designed as thermal and acoustical insulation with high performance in applications where high acoustical efficiency is required, such as sound transmission barrier in office partitions, ceiling panels, walls, etc. It is intended for use in acoustical panels. Boards are sold in a plain, faced, uncoated condition: if customers choose to face or laminate, or coat in any manner, proper procedures should be developed to insure adequate adhesion characteristics of materials to insulation surface.

The insulation shall have a uniform pale to bright yellow color throughout.

This product has been designed for easy cutting, handling, manufacturing and installation, as well as to keep its properties after installation. It should not be exposed to abnormal conditions of temperature and humidity. **ASTM C612** Standard Specification for Mineral Fiber Block and Board Thermal Insulation.

This product is not recommended and its properties are not warrantable if it is used in any of the following areas:

- Bath, shower or pool cover areas adjacent or near steam pipes or chimneys, kitchens, or laundry areas that require to be washed with disinfectant substances, hydrocarbons or water vapor.
- Areas where the material needs to be washed or cleaned with disinfectant substances, hydrocarbons or water vapor.
- Areas where the material may be subject to physical abuse, sport areas or other areas where it may be beaten with an object.
- Areas where the material may be exposed to chemical vapors such as laboratories, industrial production facilities, etc.

4. PRODUCT REQUIREMENTS

PRODUCT (1)	LENGTH mm (1) (- 0 + 5 mm)	WIDE mm (1) (-0 +3 mm)	THICKNESS (2) ± 1.5 mm	NET WEIGHT ± 10% (3) kg/m² (g/ft²)
6# *MFL* 48" x 24" x 7/8"	1219	610	22	2.11 (196.09)
6# *MFL* 48" x 24" x 15/16"	1219	610	24	2.30 (213.75)
6# *MFL* 96" x 48" x 1"	2438	1219	25	2.40 (223.04)
6# *MFL* 96" x 48" x 1.5"	2438	1219	38	3.65 (339.21)
6# *MFL* 96" x 48" x 1.7/8"	2438	1219	48	4.61 (428.43)
6# *MFL* 96" x 48" x 2"	2438	1219	50	4.80 (446.09)
6# *MFH* 48"x 24" x 7/8"	1219	610	22	2.11 (196.09)
6# *MFH* 96"x 48" x 1"	2438	1219	25	2.40 (223.04)
6# *MFH* 96" x 48" x 2"	2438	1219	50	4.80 (446.09)
6# Plain 48" x 24" x 7/8"	1219	610	22	2.11 (196.09)
6# Plain 96" x 48" x 1"	2438	1219	25	2.40 (223.04)
6# Plain 96" x 48" x 1.5"	2438	1219	38	3.65 (339.21)
6# Plain 96" x 48" x 2"	2438	1219	50	4.80(446.09)

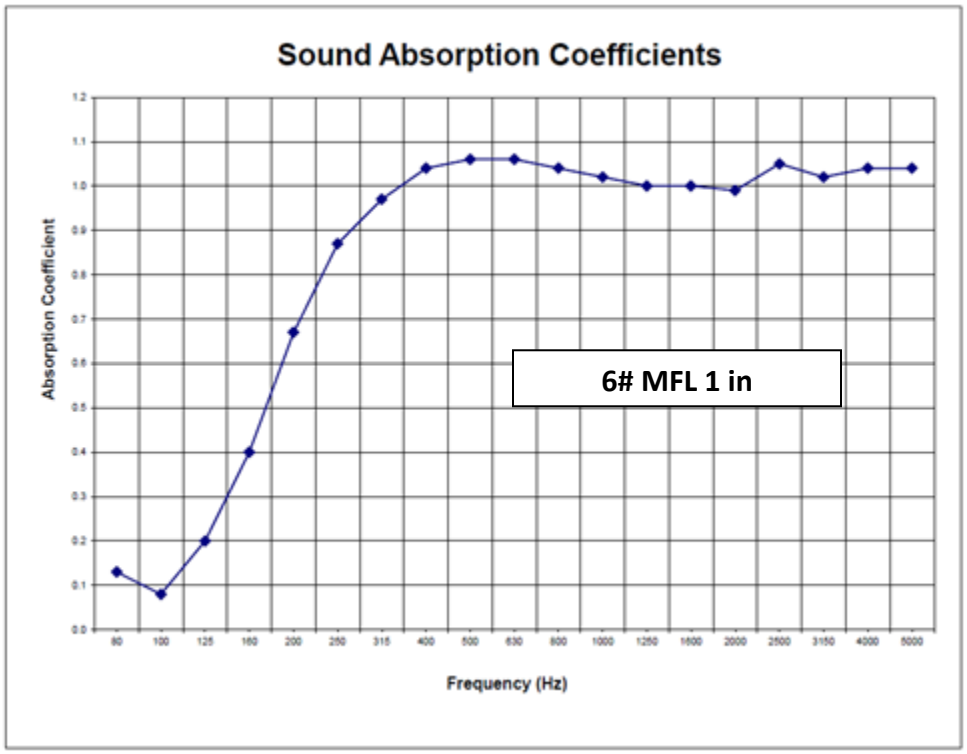
(1) Standard board 96"x48", available in different length and wide in the thickness indicated. Length: minimum 48", maximum 121", specified in 1" increments. Wide: minimum 46", maximum 49", specified in ¼" increments.
(2) Average of 4 measurements taken from the stack pile (packaging height) on the centers. Divide the average by the boards package count. Minimum 7/8", maximum 2", specified in 1/8"or 1/4" increments.
(3) Average of taking one package and weighing individual boards. For the edges take a 2" stripe by 39.37" length and weighs pieces.(including the facing). For width between 48" up to 121", ± 20% weight variation. Mimimum 3#, maximum 6#; 2.5# for minimum thickness 1", minimum length 96".
(4) Squareness: máximum 3 mm. Take two boards, rotate one of it, measure deviation (slide gauge). Mat alignment MD maximum 5mm.

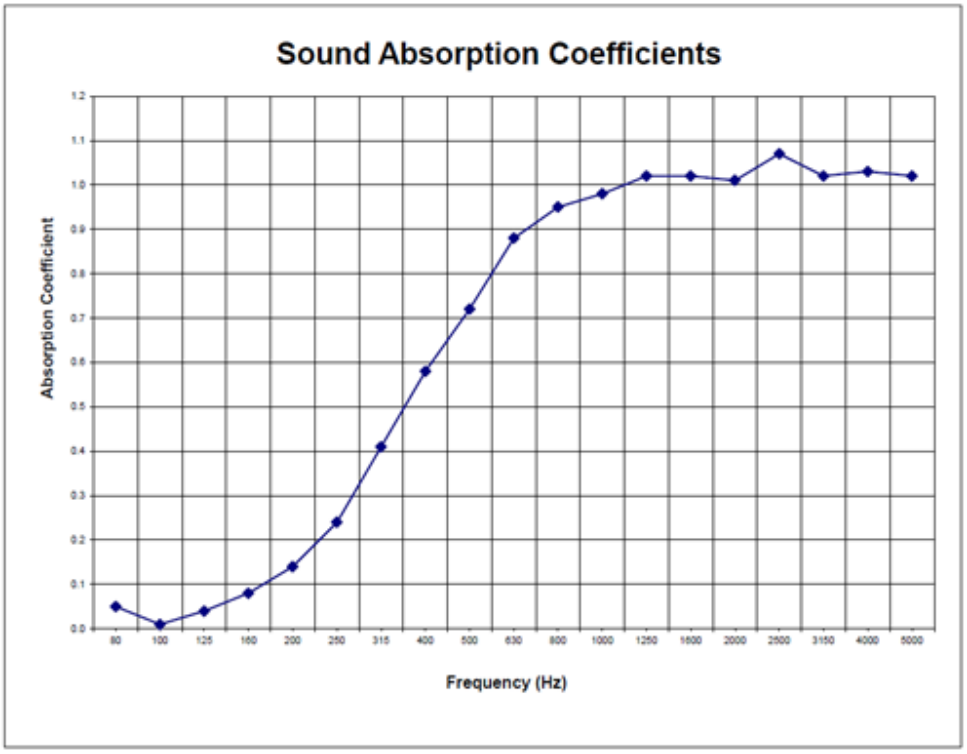
PROPERTIES	STANDARD	DESCRIPTION
Operating limits	ASTM C411	Maximum Temperature 450°F (232 °C)
Corrosiveness	ASTM C665/ASTM C795	Meets requirements
Thickness and density	ASTM C167	
Water Vapor Sorption	ASTM C1104/1104M	<5% weight-120°F (49°C), 95% R.H.
Thermal performance (Thermal conductivity)	ASTM C518	0.033 W /m.°C. at 24°C Mean Temp.) Typical value (0.23 BTU.in/hr.ft².°F at 75°F Mean Temp.)
Lineal shrinkage	ASTM C356	2% Maximum
Fungi Resistance	ASTM C1338	Meets requirements
Odor Emission	ASTM 1304	Meets requirements
Surface Burning Characteristics	ASTM E84 UL 723	Flame Spread Index <25 Smoke Developed Index <50
Limited Combustibility -plain	NFPA 259	<3500 BTU/lb
DBE Content	Oregon State	FREE, Meets requirements

Acoustical performance:

THICKNESS	DENSITY		OCTAVE BAND CENTER FRECUENCIES, Hz						
	pcf	kg/m³	125	250	500	1000	2000	4000	NRC (1)
Plain 1 in	6	96	0.3	0.34	0.68	0.87	0.97	1.06	0.70
Plain 2 in	6	96	0.39	0.63	1.06	1.13	1.09	1.10	1.00
MFL 1"	6	96	0.04	0.24	0.72	0.98	1.01	1.03	0.75
MFL 2"	6	96	0.20	0.87	1.06	1.02	0.99	1.04	1.00

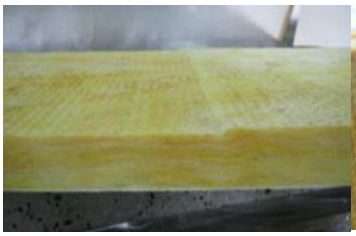
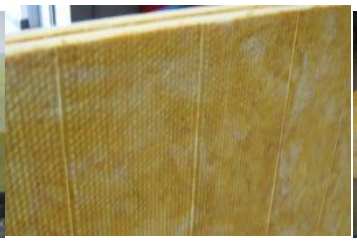
(1) NRC: Noise reduction coefficient. ASTM C423 Standard Test Method for Sound Absorption Coefficients by the Reverberation Room Method. (A Mounting: Material placed against a solid backing such as a block wall).


Sound Absorption Coefficients
Absorption Coefficient
6# MFL 1 in
Frequency (Hz)


Sound Absorption Coefficients
Absorption Coefficient
Frequency (Hz)

5. VISUAL STANDARD

CHARACTERISTICS	ACCEPTANCE GUIDE
Color	The board has a uniform pale to bright yellow color throughout. Variations of tonality between batches are acceptable; they do not affect the thermal or acoustic performance. Small dark spots can be visible (maximum 3 spots of 5 mm/board). The low mat weight is intended to obtain a flat surface and not to achieve a specific color surface.
Surface appearance Top surface: mat faced side	Smooth surface up to 6#, thickness between 7/8" to 2". The mat faced surface might have up to two uneven flights with maximum +/- 1.5 mm deviation. For thickness below 1"(25.4mm) up to two uneven flights with maximum +/- 2 mm deviation. Not waves accepted on any part of the surface.
Surface Appearance Bottom surface: unfaced surface	. It might have flight marks (prints from the flight holes as well as the cross section vein between flights), wrinkles up to 3 mm deep, up to two uneven flights with maximum +/- 2.0 mm deviation. For thickness below 1"(25.4mm) up to two uneven flights with maximum +/- 2.5 mm deviation. No waves accepted on any part of the surface, some brown spots accepted at random.
Bowing (the surface not being flat from end to end or width to width)	The surface cannot "have the bowing effect" more than 3 mm (1/8") from end to end or width to width. (On the flat measuring table take two boards facing against facing and take the measurements on the 4 corners to check for bowing)
Surface Appearance	Surfaces should be uniform without hard spots of binder (Bakelite) or not adhered areas. Occasionally white or wet spot may be present.

6. RECYCLED CONTENT

(1) PI Post Industrial Recycled Content: Collected from Manufacturers or industry
(2) PC Recycled Content Post-Consumer: Collected from end uses

PRODUCT	TOTAL RECYCLED CONTENT	POST-INDUSTRIAL RECYCLED CONTENT PI (1)	POST-CONSUMER RECYCLED CONTENT PC (2)
6#MF MFL 2"	66 %	66 %	0%
6#MF MFH 2"	65 %	65 %	

Updated. November/2014

7. PACKAGING

PRODUCT	UNITS/PACKAGE	AREA/PACKAGE (m^2)	NET WEIGHT ± 10% kg/PACKAGE
6# *MFL* 48"x 24" x 7/8"	11	8.17	17.25
6# *MFL* 48" x 24" x 15/16"	10	7.43	17.10
6# *MFL* 96" x 48" x 1"	6	17.83	47.79
6# *MFL* 96"x 48" x 1.5"	4	11.88	43.39
6# *MFL* 96" x 48" x 1.7/8"	3	8.91	41.10
6# *MFL* 96"x 48" x 2"	3	8.91	42.79
6# *MFH* 48"x 24" x 7/8"	11	8.17	17.25
6# *MFH* 96"x 48" x 1"	8	23.77	57.06
6# *MFH* 96" x 48" x 2"	3	8.91	14.10
6# Plain 48" x 24" x 7/8"	11	8.17	17.26
6# Plain 96" x 48" x 1"	6	17.83	42.79
6# Plain 96" x 48" x 1.5"	4	11.88	43.39
6# Plain 96" x 48" x 2"	3	8.91	42.79

GROSS WEIGHT (kg/package) = NET WEIGHT (kg/package) + 0.3 kg approx.
Package: Cardboard liner with polyethylene thermo shrinkable and self-adhesive label.

8. MARKS

Each package will be identified with legible marks, which should contain the information that follows:

6#MFL or 6#MFH or 6#PLAIN NOMINAL DIMENSIONS, UNITS PER PACKAGE, SHIFT CODE and Certification of Quality Management System ISO9001 SGS label.
Note: Additional marks when agreed as a requirement with the customer.

9. STANDARDS

ASTM C1071 Standard Specification for Fibrous Glass Duct Lining Insulation (Thermal and Sound Absorbing Material)

ASTM C665 Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing

ASTM C795 Standard Specification for Thermal Insulation for Use in Contact with Austenitic Stainless Steel

ASTM C167 Standard Test Methods for Thickness and Density of Blanket or Batt Thermal Insulations

ASTM C423 Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method

ASTM 1071 Standard Specification for Fibrous Glass Duct Lining Insulation (Thermal and Sound Absorbing Material

ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials

NFPA 255 Standard Method of Test of Surface Burning

ASTM C177 Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus

Performance of High-Temperature Thermal Insulation

ASTM C1304 Standard Test Method for Assessing the Odor Emission of Thermal Insulation Materials

ASTM C1104/ C1104M Standard Test Method for Determining the Water Vapor Sorption of Unfaced Mineral Fiber Insulation

ASTM C1338 ASTM C1338 Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings

ASTM 518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus

ASTM C411 Standard Test Method for Hot-Surface

SYSTEM CERTIFICATION
ISO 9001
SGS

N° CO11/4442

Sistema de Gestión de la Calidad para la producción y venta de membranas impermeabilizantes modificadas (mantos) (con o sin recubrimiento autoprotector) y emulsiones asfásticas. Cielo rasos en fibra de vidrio con acabado decorativo. Láminas y rollos flexibles en fibra de vidrio para la fabricación y recubrimiento interno y externo de conductos para transporte de aire acondicionado. Aislamientos térmicos y acústicos rígidos, flexibles y preformados.

Norma-ISO 9001:2008

Producto fabricado bajo un sistema de administración de calidad certificado de conformidad con ISO 9001.

Reported values are typical of tests carried out on samples taken from standard production and may be updates without notice.

The user is responsible for determining if the product is recommended for a particular surface and if it satisfies the application requirements. The user must make application testing and product testing required for that purpose.

Not controlled copy. Information on this document may be updated without notice.

APENDIX. RECOMENDACIONES DE INSTALACIÓN

1. Set the panels in the room where they will be installed.
2. Prepare the wall for the panels. Check to see if there are any uneven areas on the wall. Level out uneven areas with a small amount of drywall mud and a trowel. Spread the mud over the wall until they are flat. Let the mud dry overnight.
3. Set the fiberglass paneling on the wall. Check the size of the paneling. Trim the paneling to size with a circular saw fitted with a carbide blade
4. Apply paneling adhesive to the back of the cut panel with a notched trowel. Spread the adhesive over the entire surface of the back of the wall in a cross hatch pattern.
5. Set the fiberglass panel in place on the wall. Use a laminate roller to roll over the surface of the panels. The roller will ensure that the adhesive sticks to both the wall and the panel. Rolling over the paneling will also ensure that you eliminate any air bubbles from behind the panels.
6. Continue installing the panels. Leave approximately 1/8" space between each of the panels to allow for expansion and contraction.
7. Install divider and cap molding on the top edge of the panels. Cut the moldings to size on a miter saw and apply silicone caulk along the back of each molding before setting them in place at the top and sides of the panels.