Technical Data Sheet

11/07

Medium Density Fiberboard
Moisture Resistant Grade

MR Board

Norbord MR Board is a moisture resistant MDF manufactured using European technology developed at Norbord's UK operation and produced at Deposit, N.Y. In addition to all the properties of Premium Grade MDF, it has special properties which make it suitable for interior applications where there is the risk of occasional wetting or prolonged exposure to high levels of humidity. Norbord MR is not warranted for exterior applications.

MR Board is a solution to the concerns of designers and fabricators in many applications such as bathroom and kitchen cabinetry, institutional hospital and school casework and counters, residential kitchen counter tops, display fixtures, store fixtures, door cores, marine furniture and various other applications for high humidity conditions. Its low thickness swell properties and smooth surface make it an ideal substrate for thin paper and foil, specially when used with water based adhesives.

MR Board can be machined or fabricated using standard tools and techniques. It meets or exceeds all the requirements of ANSI.A208.2-2002.

MR Board is available from our distributor network. For the location nearest to you please check our website or call 1-800-367-6338.

Property	Units	Avg. Typical Values (3/4")
Density	lbs/ft^3	48
Internal Bond	lbs	150
Screw Holding Face	lbs	375
Edge	lbs	325
Modulus of Elasticity	psi	450,000
Modulus of Rupture	psi	5,000
Thickness swell (24 hrs)	%	8
IB after cyclic testing	lbs	30
Thickness swell after cyclic testing	%	8
Moisture Content	%	5-7
Formaldehyde Emission	ppm	0.30
Linear Expansion (35 - 85% R.H.)	%	0.30
Thickness	inches	± 0.005

Availability: Stocking Thickness: 1/2", 5/8", 3/4"
Sizes: 5' x 16' & 5' x 18'

Other thickness & sizes available, certain minimum quantities apply. Check mill for details.

Important Notice

Norbord's Moisture Resistant (MR) has been designed specifically for use in interior applications. Its performance characteristics make it very suitable for use in areas subject to periods of high humidity or occasional wetting. The user should understand that MR's tendency is to, initially, swell like any other wood-based product. However, unlike other wood-based products, the swelling will subside and the board will shrink back very near to its original dimensions. For this to occur, the board must have the opportunity to dry out after exposure in order to perform properly and to allow any swelling to subside. A reasonable performance expectation is that MR board will last significantly longer than other wood-based products when exposed to repeated wettings. However, like all wood products, it will eventually degrade if the proper finishes are not applied to protect the wood fibers.

Each fabricator must decide for themselves the suitability of Norbord's MR product for their end use. Factors to consider include the severity of the end use and the degree of expertise they possess for applying the protective coating. In deciding to use the product for a non-warranted purpose, the fabricator assumes all risk for the product's performance.

As such, Norbord does not warrant the use of MR board in exterior applications, or in areas of consistent and prolonged direct moisture exposure.

LEED: This product can be used to earn up to four LEED credits (4.1, 4.2, 5.1, 5.2). View our website for further information – www.norbord.com

Norbord

Deposit, NY 1-800-367-6338
www.norbord.com

Conditions of Use

Definitions: For our purpose, the following definitions will apply.

	Moisture Content of MDF	Relative Humidity of Surrounding "air"
"Dry" conditions	corresponding to a temperature of 68°F	exceeding 65% only for a few weeks per year
"Humid" conditions	corresponding to a temperature of 68°F	exceeding 85% only for a few weeks per year
General Purpose Application	general including furniture and fittings	
Load Bearing Application	instantaneous, short term or all load duration categories	

Norbord Moisture Resistant MDF is classified as a general purpose grade for use in humid conditions.

The cyclic testing (EN321:2001) as performed is a three cycle accelerated aging procedure[1] followed by testing of thickness swell and strength retention. Its purpose is to assess the likely performance of MDF when subject to long-term exposure to extreme damp conditions. The values below, after cyclic test, are minimum standards set to co-relate to the results of field trials.

Thickness		3/8" – 1/2"	9/16" - 3/4"	13/16" - 1"
Swelling in thickness after cyclic test	%	10	8	7
Internal bond after cyclic test	psi	45	30	25

(Extracted from EN321:2001)

Norbord Moisture Resistant MDF has superior resistance to moisture for interior applications involving exposure to relative humidity up to 80% and short term exposure to higher relative humidities. This enhanced performance is achieved by upgrading process procedures and the resin binder. All the desired properties of MDF are retained with the additional feature of strength retention and lower thickness swell when used in extreme, interior conditions.

As a precaution, especially where intermittent contact with water is likely, special care should be taken with sealing/finishing treatments particularly at cut edges or ends. A seal is a protective coating which prevents the ingress of moisture. The performance of Norbord Moisture Resistant MDF is positively effected by the correct treatment with a suitable protection system. High solids sealers maybe used with appropriate topcoats.

Suppliers of suitable systems are: P.P.G. Industries (412) 434-3131, www.ppg.com
The Sherwin-Williams Co., 1-800-474-3794, www.sherwin-williams.com

The surface of Norbord MDF is sufficiently smooth for painting/sealing without much preparation. However, all cut edges and machined areas should be sanded smooth. Sharp edges or profiles should be gently rounded to allow for a satisfactory, uniform build up of coating material. Fastening devices should always be predrilled. Nail or screw holes should be filled with a shrink resistant filler and then sanded before sealing.

MR Board should be properly sealed on all four sides especially when used in contact with the floor or in any location that allows moisture to collect and remain in contact. Certain alkaline based commercial detergents or cleaning fluids are detrimental to all types of wood or wood fiber based materials including MDF and comprehensive sealing can help protect against long-term damage.

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[1] a. Immersion in water at 68 °F for three days
b. Freezing in air at 10 °F for one day
c. Exposure to air at 158 °F for three days