



ROBIN

**FR 1 MDF**

(FLAME RETARDANT CLASS 1) MDF





## Description

- Robin FR 1 MDF is specially made for critical applications where Class 1 flame retardant material is required.
- Robin FR 1 MDF has a significantly delayed combustion and does not contribute to flame spread.
- Robin FR 1 MDF is ideal for interior and non-structural use, especially in public areas such as schools, hotels, hospitals, airports, theaters, etc.

## BS 476-7:1997 Classification of spread of flame

- This method of test is to determine the classification of the surface spread of flame of products. It basically covers the distance of MDF burnt by heat within a specific time of 1.5 minutes and 10 minutes exposure.
- Based on the test performance table shown below, materials classified as Class 1 is the best classification and Class 4 is the worst classification. Class 4 materials are considered high risk.

## Evaluate BS 476-7 classification of spread of flame

Classification of spread of flame		
Classification	Spread of flame at 1.5 min, Limit (mm)	Final spread of flame (10 min), Limit (mm)
Class 1 (No flame spread)	165	165
Class 2 (Slight flame spread)	215	455
Class 3 (Average flame spread)	265	710
Class 4 (High flame spread)	Exceeding the limits for class 3	

## Physical and Mechanical Properties of Standard Grade Rubberwood FR 1 MDF

Board Property	Test Method	Unit	Range of Nominal Thickness (mm)		
			9.0	>9.0 - 12.0	>12.0 - 18.0
Density	EN 323	kg/m <sup>3</sup>	760 - 800	770 - 790	750 - 770
Board Moisture	EN 322	%	4 - 9	4 - 9	4 - 9
Modulus of Rupture	EN 310	N/mm <sup>2</sup>	32	30	28
Internal Bond	EN 319	N/mm <sup>2</sup>	0.70	0.70	0.65
Screw Holding (Face)*	EN 320	N	-	-	1050
Screw Holding (Edge)*	EN 320	N	-	-	850
Thickness Swelling**	EN 317	%	17	15	12
Thickness tolerance	EN 324-1	mm	+/- 0.20		
Dimension (length/width) tolerance	EN 324-1		+/- 2 mm/m; maximum +/- 5 mm		
Squareness	EN 324-2	mm/m	2		
Edge straightness	EN 324-2	mm/m	1.5		
Minor stains, fibre marks, scratch lines			Free on one side		
Latex spots			Not more than 5 spots		
Size of latex spots			Not more than 6 mm		

\* Screw holding only for thickness 15 mm and above

\*\* 24-hour immersion in 20 (+/-1) degrees Celsius water

## Formaldehyde Emission

Type of Test	Test Method	Unit	Classification
Perforator Method	EN 120	mg/100g o.d.	E1 - ≤ 8.0
			E2 - ≤ 30.0
Small Chamber (CARB)	ASTM D 6007	ppm	≤ 0.11 (CARB Phase 2)



**Robin Resources (Malaysia) Sdn Bhd** (289258-U)

(A member of the Robin Group of Companies)

No.1, Jalan Industri 5, Taman Perindustrian Temerloh, 28400 Mentakab, Pahang Darul Makmur, Malaysia

Tel : +609 - 271 9000 / Fax : +609 - 271 9100

E-mail : contact@robinmdf.com / Web-site : www.robinmdf.com