



MATERIAL SAFETY DATA SHEET

Section 1 : Product Identification and Supplier

Product Name : Evergreen Medium Density Fibreboard

Manufacturer : Evergreen Fibreboard (Nilai) Sdn Bhd

Address : 5776 Nilai Industrial Estate,
71800 Nilai,
Negeri Sembilan, Malaysia.

Telephone : 606-7992355

Facsimile : 606-7992344

Contact Person: Mr Lee Meng Wei

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Website : www.evergreengroup.com.my

Uses : Construction of furniture, cabinets, doors and general purpose building boards.

Section 2 : Hazard Identification

Not classified as hazardous. The following classifications are not applicable :-

Dangerous Goods Class : None Allocated
UN Number : None Allocated
Hazchem Code : None Allocated
Poison Schedule : None Allocated

Potential Health Effects :-

Skin :

Prolonged and repeated skin exposure may cause irritation such as itchiness, redness or allergic dermatitis.

Eyes :

Eye contact with dust and vapour may be painful and irritating and may cause redness and discomfort.

Ingestion :

Quite unlikely to happen. However, swallowing the dust may result in minor abdominal discomfort or pain.

Inhalation :

Inhalation of wood dust and vapour may be irritating to the nose, throat and lungs.

Chronic :

Provided that the precautions and practices noted in this MSDS are followed and airborne dust is in controlled, one should not anticipate any chronic health effects. However, for some people who are repeatedly exposed to uncontrolled dust from the product over a long time, they may have allergic dermatitis, chronic nose and throat irritation or asthma.

Section 3 : Composition / Information On Ingredients

<u>Ingredients</u>	<u>Proportion</u>
Wood	>83%
Urea formaldehyde resin (UF)	<15%
Melamine urea formaldehyde resin (MUF)	<15%
Paraffin Wax	<2%

Note :-

1. The ingredients are bonded together under heat and pressure. The process cures the resin.
2. MUF resin is used to substitute UF resin for production of HMR board.
3. MDF E2 grade will be produced using E2 resin. Formaldehyde emission level according to EN120 will be within > 8mg/100g wood to 30mg/100g wood.
4. MDF E1 grade will be produced using E1 resin. Formaldehyde emission level according to EN120 will be ≤ 8mg/100g wood. Formaldehyde emission level according to JIS A1460 will be > 0.5mg/litre to 1.5mg/litre.
5. MDF E0 grade will be produced using E0 resin. Formaldehyde emission level according to EN120 will be ≤ 5mg/100g wood. Formaldehyde emission level according to JIS A1460 will be ≤ 0.5mg/litre.
6. MDF Super E0 grade will be produced using Super E0 resin. Formaldehyde emission level according to JIS A1460 will be ≤ 0.3mg/litre.
7. MDF CARB grade will be produced using CARB resin. Formaldehyde emission level according to ASTM6007 will be ≤ 0.21ppm for Phase 1 and ≤ 0.11ppm for Phase 2.

Section 4 : Suggested First-Aid Measures And Protection Gear

Swallowed / Inhaled :

If dust is swallowed, give water to drink. Seek medical attention if any abdominal discomfort. If dust is inhaled, leave the dusty area.

Wear Class P1 or P2 disposable face piece or replaceable filter when working with the product.

Eyes :

Irrigate eyes thoroughly with plenty of water for at least 15 minutes. If symptoms persist seek medical attention.

Wear safety glasses or goggles when working with the product.

Skin :

Wash thoroughly with mild soap and water. Remove clothing if contaminated with dust. If irritation persists, seek medical attention.

Wear long sleeve shirts and trousers.

Working Environment :

Minimize the generation of dust and fine particles in all works carried out with the product. Ensure all wood working equipment is fitted with exhaust devices capable of removing dust and vapour.

The product should be stored in well ventilated areas and the conditions should be reasonably dry. Clean wood dust in work areas regularly.

Flammability :

The product is flammable but not easily ignite. Therefore, it is advisable to avoid any sparks and sources of ignition and earth all electrical equipment, dust extraction equipment and sources of radiant heat and flame at all time. Smoking and burning should be prohibited in all working area.

Section 5 : Physical And Chemical Properties

Appearance :	The products are manufactured as pressed medium density fibreboards. These are made primarily from wood fibres bonded with resin and may contain other additives. Panels are made of a variety of sizes and thickness.
Colour :	Light to dark brownish. White if surface prime-coated.
Odour :	Characteristic
Density :	650-850 kg/m ³
pH :	Not applicable
Vapour Pressure :	Not applicable
Vapour Density :	Not applicable
Boiling Point :	Not applicable
Melting Point :	Not applicable
Flash Point :	Not applicable

Solubility In Water : Not soluble
 Flammability : These products are flammable but not easy to ignite
 Flammability Limit : Not available
 Auto Ignition Temp : Does not auto ignite if < 220⁰C
 Viscosity : Not applicable
 Evaporation Rate : Not applicable
 VOCs Content : Not applicable
 Volatile Percent : Not applicable

Section 6 : Physical And Mechanical Properties

Properties	Unit	Range Of Thickness (mm)				
		2.4 - 4 (+/-0.20)	>4 - 6(+/-0.20)	>6 - 12 (+/-0.2)	>12 - 19(+/-0.2)	>19 - 30(+/-0.2)
Thickness Tolerance (within panel)	mm	2.4 - 4 (+/-0.20)	>4 - 6(+/-0.20)	>6 - 12 (+/-0.2)	>12 - 19(+/-0.2)	>19 - 30(+/-0.2)
Size Tolerance (within panel)	mm	(±2mm max in length and width)				
Squareness	mm	(±2mm)				
Density	kg/m ³	770 - 800	750 - 800	710 - 760	690 - 720	680 - 710
Density Profile @ Core	%	85	85	80	80	75
Internal Bond	N/mm ²	0.65	0.65	0.6	0.55	0.5
Module of Rupture	N/mm ²	30	25	22	20	18
Module of Elasticity	N/mm ²	n/a	2700	2500	2200	2000
Surface Soundness	N	2600	2600	2400	2400	2200
Screw Holding						
Face	N	n/a	n/a	n/a	1000	900
Edge	N	n/a	n/a	n/a	800	600
Thickness Swelling (24hr)	%	35	30	15	12	10
Water Absorption (24hr)	%	60	50	30	25	20
Dimensional Stability (rh 35-85%)						
Length / Width	%	0.5	0.5	0.5	0.4	0.4
Thickness	%	6	6	6	5	5

Section 7 : Safe Handling Information

Storage And Transport :

Store under cool and dry conditions, out of exposure from direct sunlight and away from sources of possible ignition. No special transport requirements are considered necessary as this product is not regulated as dangerous good.

Spillage And Disposal :

Any disposal of general waste generated from processing of the products including off cuts, sanding dust and fine particles should be directed to the approved landfill sites or burned in approved incinerators by the local authorities. The intact product and dust must not be burnt in barbecues, combustion stoves or open fires in the home, as irritating gases are emitted.

Fire And Explosion Hazards :

The dust produced when machining or sanding the products is finer and more readily dispersed into the atmosphere. Therefore, an efficient extraction system is required to prevent accumulation of dust, which might create fire risk. Should fire happen, water and/or dry foam extinguishers should be used to extinguish it.

The details in this Material Safety Data Sheet are given as an awareness basis and to our best knowledge only. It also serves as a recommended user guide to the handling and use of the products.

Further information may be obtained by contacting the telephone number mentioned in Section 1.