Materials Safety Data Sheet (MSDS)

Customwood® MDF - All panel types

Statement of hazardous nature

In its intact state MDF panels are not a hazardous material. Dust from MDF is hazardous and it is classified by the World Health Organization as causing cancer to humans. This product contains and may release formaldehyde. Formaldehyde has been evaluated by IARC as group 1, carcinogenic to humans. Smoke from this product is hazardous and may cause respiratory system irritation. Panel edges and broken panels may cut through skin.

Identification

Product Name	Customwood ® MDF (Medium Density Fibreboard)
Other Names	Dry process fibreboard
Manufacturer's Code	None allocated
U.N. Number	None allocated
Dangerous Goods Class:	None allocated
HAZCHEM Code:	None allocated

Toxic Substances Schedule

Uses	Construction of furniture, cabinets and doors. Substrate for a huge range of laminating and finishing techniques. Mouldings. General purpose (non-load bearing applications) building board.

Physical Description/Properties

Appearance	Wood panel boards manufactured with a wide range of thicknesses (from 2.5 to 30 mm) and densities (from 500 to 1000 kg/m3). Fresh (or recently cut) panels may have a slight odour of formaldehyde and fresh wood which will dissipate over time. MDF is chemically stable.
Boiling Point / Melting Point:	Not Applicable
Vapour Pressure:	Not Applicable
Specific Gravity:	0.5 to 1.0
Flash Point:	Not Applicable
Solubility in Water:	Not Applicable
Ignition Temperature	> 200ºC

Ingredients

Chemical Name	CAS Number	Amount
Wood fibres from plantation softwoods (pine)	–	> 79%
Urea Formaldehyde resin	9011-05-6	< 20%
Melamine Urea Formaldehyde resin	25036-13-9	< 20%
Paraffin wax	8002-74-2	< 1%
Formaldehyde (free)	50-00-0	< 0.15%

The ingredients are bonded under heat and pressure. The process cures the resin but small amounts of formaldehyde from the resin and wood may be released from the finished product. The finished product emits less than 1.5 mg/L of formaldehyde when tested to AS/NZS 4266.16 (Desiccator value).

Health Hazard Information

Health Effects

Acute (short term) Health Effects of Wood Dust	
Swallowed	May cause abdominal discomfort
Eyes	Irritation resulting in redness and watering
Skin	May result in itching and dermatitis in some people
Inhaled	Irritation of the throat, nose and lungs.

Chronic (long term) Health Effects of Wood Dust
Repeated exposure to dust increases the risk of nasal cavity cancers and lung fibrosis (scarring). Sensitisation of respiratory system and skin, asthma and dermatitis risks are increased.
The International Agency for Research on Cancer (IARC) had evaluated wood dust in Group 1: carcinogenic to humans.
The International Agency for Research on Cancer (IARC) had evaluated formaldehyde in Group 1: carcinogenic to humans.
More information on IARC evaluation on wood dust and formaldehyde can be found at www.iarc.fr
People affected by occupation asthma may suffer severe symptoms (shortness of breath, wheezing, cough) if in contact with even small amount of wood dust.

First Aid

Swallowed	Give water to drink.
Eyes	Irrigate thoroughly for at least 15 minutes.
Skin	Wash thoroughly with soapy water. Remove contaminated clothes. Wash contaminated clothes separately.
Inhaled	Remove person from contaminated area. Blow nose, rinse mouth with water (do not swallow).
First Aid Facilities	

Other Health Hazards

If the board is heated to more than 120ºC or is burning or smouldering, vapours from the paraffin may be irritating to nose, throat, eyes and skin.
Panel edges (saw cuts or broken panels) are generally sharp and can cause cuts to skin.

Precautions for use

Exposure Standards	New Zealand Department of Labour Workplace Exposure Standards for soft wood dust is: Time Weighted Average (TWA): 2.0 mg/m^3 for 8 or 12 hours. Workplace Exposure Standards for formaldehyde are: Time Weighted Average (TWA): 0.5 ppm for 8 hours and 0.33 ppm for 12 hours. Exposure ceiling 1.0 ppm. Paraffin Wax fumes: (TWA) 2 mg/m^3.
Engineering Control	When cutting, drilling, sanding, planing and routing use tools that capture all the dust at the source. Vacuum cleaners must be fitted with high efficiency particulates air filter. Clean the workplace at least daily, use a high efficiency vacuum cleaner to collect all dust. Keep the working environment well ventilated. A correct assessment of the ventilation rates of the workplace can only be made by a professional. Keep working machinery in good conditions and sharp. Blunt cutting tools generate more dust and heat releasing more formaldehyde. Use wet clean up methods (example: wipe surfaces with a wet rag).
Personal Protection	Personal Protective Equipment (PPE) must be used when working with MDF, repairing and maintaining wood working machinery and whenever there a possibility that MDF dust is airborne (example when cleaning with compressed air or dry sweeping). **Skin protection:** Use appropriate gloves (example NZS5812) and working clothes. **Eye protection:** use non-fogging dust resistant safety goggles or glasses according to AS/NZS 1336. **Respiratory protection:** use P2 disposable mask or better (cartridge half mask, etc) according to AS/NZS 1715 and 1716. Note that certain form of respiratory protection may not be safe for some people.They can make lungs and heart work harder and this could be a problem for people that suffer asthma, respiratory or heart conditions. Medical evaluation is recommended. Follow the instruction of the manufacturer of the respiratory PPE to ensure proper fit and care of the equipment.
Flammability	Avoid wood dust contact with ignition sources. Avoid smoking in the workplace and storage rooms.

Safe Handling Information

Storage and Transport	Panels must be stored in cool, well ventilated areas away from sources of heat, flames and sparks. Keep panels dry and away from damp environments.
Spills and Disposal	Dispose dust and off-cuts in closed containers according to local authorities' disposal requirements. The product it is not regulated for transport of dangerous goods.
Fire & Explosion Hazard	MDF is flammable but difficult to ignite. Early fire hazard properties when tested to AS/NZS 1530 Part 3: • Ignitability Index: 18 • Spread of Flame index: 8 • Heat evolved index: 7 • Smoke developed index: 4 All types of extinguishing media can be used. Fire fighters to wear breathing apparatus. Panels exposed to more than 50ºC for long periods (months) may spontaneously combust. Wood dust may ignite at temperatures greater than 204ºC and high concentration in air (>60g/m^3) may spontaneously explode.

Other Information

MDF panels are not to be used for load bearing applications.
More information may be requested from Daiken New Zealand Limited using the company details on the back page.

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