pinepanels

Material Safety Data Sheet

Identification of Material and Supplier

Product Name	Medium Density Fiber Board
Other Name	Pinepanels, MDF, MDF Panels
Recommended Uses	Cabinet and Furnitures, General purpose building boards
Suppliers Name	Eximcorp India Pvt Ltd Regd. Office: 25 RN Mookherjee Road, Kolkata 700 001, India email:info@eximcorp.co.in Fax:+91 11 41063444

Hazards Identification

Overall Statement of Hazardous Nature	In its intact state, the product is non hazarous in nature but, saw dust from the product is hazardous, as is common to any other saw dust from wood panel product.
Health Hazard Information:	Formaldehyde gas emission may be there when product is heated. However, in well ventilated storage areas or workplace, the concentration of formaldehyde is not likely to exceed the WHO standard of 0.1 ppm for the general environment. Exposure to wood dust , gas and vapour produced from machining or similiar other processing involving heat at work places may result in the following health effects: - Abdominal discomfort if dust is swallowed - Eye irritation causing discomfort and redness. - Skin irritation resulting in itching and occasional red rash. - Nose, throat and lung irritation, especially in people with upper respiratory tract or chest complaints such as asthma. Repeated exposure over many years to uncontrolled wood dust increases the risk of nasal cavity cancer. Inhalation of wood dust may also increase the risk of lung fibrosis (scarring). There are also increased risks of respiratory and skin sensitisation from wood dust and formaldehyde resulting in asthma and dermatitis respectively. Wood dust has been evaluated by the International Agency for Research on Cancer (IARC) as group 1, carcinogenic to humans. Formaldehyde has been evaluated by the International Agency for Research on Cancer (IARC) as group 1, carcinogenic to humans and by the European Union (EU) as a Category
Explosion Hazard:	Dry wood dust in high concentrations-in-air and at the temperatures greater then 204°C / 400°F (> 40 grams of dust per m3 of air) may spontaneously explode.
Dangerous goods class & Subsidiary Risks:	None Allocated.
Poisons schedule Number:	None Scheduled

Composition / Information on Ingredients

Substances Following raw materials are generally used to manufacture the product.

Chemical Name	CAS No	
Wood - Radia Pine from plantations:	None	>78%
Urea Formaldehyde (UF) Resin:	9011-06-5	<20%
Melamine Urea Formaldehyde (MUF) Resin:	25036-13-9	<20%
Paraffin Wax:	8002-74-2	<2%

Note:
1) The ingredients are bound together under heat and pressure. The process cures the resin but small amounts of formaldehyde from the resin may be released from the finished product. The finished product contains less than 1.0 mg/lt of formaldehyde when tested to AS/NZS 4266.16 (Desiccator test).
2) The proportion of paint on coated products is less than 1% of the board mass.
3) A proportion of less than 1% of dyes and/or pigments may be used to colour wood fibres in certain products.

First Aid Measures

Swallowed Give water to drink. If abdominal discomfort occurs seek medical attention.

Eyes Flush with flowing water for at least 15 minutes. If symptoms persistss, seek medical attention.

Skin Wash with mild soap and running water. Remove clothes contaminated with dust. Do not rub or scratch skin, if becomes irritated.

Inhalation Leave dusty area.

First Aid Facilities : Provide eye wash facility.

Advice to Doctor Treat symptomatically

Fire Fighting Measures

Extinguishing media: Water, Carbon dioxide, Foam or dry chemicals, fire extinguishers.

Hazards from combustion products Burning or smouldering boards or dust can generate carbon dioxide, carbon monoxide, oxides of nitrogen, hydrogen cyanide and other pyrolysis products which are irritating to respiratory tract.

Protective precautions for fire fighters: Fire fighters to wear breathing apparatus.

Hazchem code: None allotted,

Accidental Release Measure

Emergency procedures: Not applicable

Methods & material for containment clean up Not applicable,

Handling and Storage

Handling information See personal protection,

Storage information The boards should be stored in well ventilated areas away from sources of heat, flame or sparks. Avoid smoking in storage or working areas.

Exposure controls / Personal Protection

Exposure Standards: India does not have any law on exposure standards. However, the values under Australian NOHSC[1003 (1005) and New Zealand OSH New Zealand May (1995)) Exposure Standards is given below:

Wood dust (softwoods) : 5 mg/m3 TWA
10 mg/m3 STEL
Listed as a Sensitiser

Wood dust (hasrdwoods) : 1 mg/m3 TWA
Listed as a Sensitiser

Formaldehyde : 1.0 ppm (1.2 mg/m3) TWA
2.0 ppm (2.5 mg/m3) STEL (short term exposure of 15 minutes)
Listed as a Sensitiser and Category 2 carcinogen (probable human carcinogen)

Paraffin wax fumes : 2 mg/m3 TWA

Biological limit values : Not applicable

Engineering controls: All work with these boards should be carried out in such a way as to minimise the generation of, and exposure to dust. Under factory conditions, sawing, drilling, sanding etc. should be done with equipment fitted with exhaust devices capable of removing wood dust, at source. Hand power tools should be fitted with dust bags
and used in well ventilated areas. Work areas should be well ventilated. These should be cleaned at least daily, and dust removed by vacuum cleaning or wet sweeping method.
Inhalation of airborne particles from other sources in the work environment, including those from cigarette smoke, may increase the risk of contracting lung diseases associated with exposure to dust from this product.All work and storage areas be smoke free and other airborne contaminants be kept to a minimum.

For fire prevention avoid build-up of dust and keep working areas well ventilated. Avoid sources of heat and ignition including those associated with electrical equipment included the ones associated with dust extraction equipment.

Ventilation	Local exhaust ventilation should be provided at areas of cutting to remove airborne dust. General dilution ventilation should be provided as necessary to keep airborne dust below the applicable exposure limits and guidelines. The need for ventilation systems should be evaluated by a professional industrial hygienist, while the design of specific ventilation systems should be conducted by a professional engineer.
Personal Protective Equipment:	

Skin protection: Wear loose, comfortable clothing. Long sleeved shirts and trousers are recommended to prevent skin irritation. Wash work clothes regularly and separately from other clothes. Wear comfortable work gloves to avoid hand cuts when handling panels.

Eye protection: Wear industrial safety glasses or non fogging goggles when machining products.

Respiratory protection: Avoid breathing dust. Wear a class P1 or P2 replaceable filter or disposable half face-piece respirator when machining products. Respirators should comply with AS/NZS 1716 and be selected, used and maintained in accordance with AS/NZS 1715.

Physical and Chemical Properties

Appearance:	The products are manufactured as pressed medium density fibreboards. These are made primarily from wood fibres bonded with resins and may contain other additives. Panels are made of a variety of sizes and thicknesses. Mouldings may be totally or partially paint coated.
Odour:	Newly manufactured boards and freshly cut surfaces
pH:	Not determined
Vapour density:	Not determined
Vapour pressure:	Not determined
Boiling Point:	Not applicable
Melting point:	Not applicable
Solubility in water:	Negligible
Specific gravity:	0.45 to 1.1
Flammability:	These products are flammable but difficult to ignite
Flash point:	Not applicable
Flammable limits in air:	Not applicable
Ignition temperature:	>200%

Early fire hazard properties when tested to AS/NZS 1530 Part 3: Ignitability index:	14 - 16
Spread of flame index:	8
Heat evolved index:	7-9
Smoke developed index:	3-5
Potential for dust explosion	Yes
Additional Information	
Specific heat value	Not applicable
Particle size:	Not applicable
Volatile Organic Compounds content:	Not applicable
Evaporation rate:	Not applicable
Viscosity:	Not applicable
Percent volatile:	Not applicable
Octanol / water partition coefficient:	Not applicable
Saturated vapour concentration:	Not applicable
Decomposition temperature:	Not applicable

Stability and Reactivity

Chemical stability:	The product is chemically stable under normal conditions.
Conditions to avoid:	Avoid open flames and environments with high moisture and temperatures.
Incompatible material:	Avoid contact with oxidizing agents and strong acids.
Hazardous decomposition products:	Thermal and /or thermal oxidative decomposition or burning or smouldering boards or dust can generate carbon dioxide, carbon monoxide, oxides of nitrogen, hydrogen cyanide and other pyrolysis products.
Hazardous reactions	Not applicable

Toxicological Information

General

Any health hazards associated with these products have been evaluated on the basis of the individual ingredients, and these hazards should be assumed to be additive. The hazards described in this document have been evaluated based on a threshold of 1.0% for all hazardous ingredients and 0.1% for all carcinogens

Acute effects:

The dust, which may be generated during manual or mechanical cutting, drilling, sanding or other abrading processes, and the smoke generated by heating or laser cutting, may cause temporary irritation of the eyes and upper respiratory system .

The symptoms are expected to subside after exposure has stopped and are not expected to cause any long term effects. Allergic skin and lung reactions have been reported with exposure to various wood panels dusts due to the chemicals presented in wood and cured resin. These rashes resemble other allergic skin reactions caused by plants, and usually heal rapidly

Chronic effects:

The risk of nasal cancer has been associated with wood dust exposure. In the 1960s, studies linking wood dust exposure in the furniture industry with nasal cancer were first reported in England. The link was confirmed in several other European countries and furniture industries. The studies showing a link to nasal cancer have been primarily conducted in industries using hardwood.

The International Agency for Research on Cancer (IARC) evaluated dusts from both hardwood and softwood in 1995 and concluded that: "there is sufficient evidence in humans for the carcinogenicity of wood dust. There is inadequate evidence in experimental animals for the carcinogenicity of wood dust. Wood dust is carcinogenic to humans (Group 1)".

The IARC also evaluated formaldehyde in 19951 and concluded that:" There is limited evidence in humans for the carcinogenicity of formaldehyde; and that overall, formaldehyde is probably carcinogenic to humans (group 2A)". The IARC again evaluated formaldehyde in June 2004 2 and concluded that:" There are adequate data available from humans for an increased risk of nasopharyngeal cancer" and that formaldehyde should now be classified as Group 1, carcinogenic to humans. Whilst this wood panel product contains less then 0.01% free formaldehyde, people cusing the product may be exposed to low concentration of formaldehyde if the boards are heated (as in laminating), are cut by laser cutting machines, and/or if dust particles come in contact with the moist mucous membranes lining the upper respiratory track.

Extensive literature searches and research carried out by independent occupational and environmental health specialists has not indicated any risks over and above those associated with wood dust without binder. This research includes the 1999 formaldehyde risk assessment carried out by US scientists in collaboration with the
US EPA and Health Canada.

The risk assessment concludes that if a non-smoking worker were exposed to 0.004 ppm of formaldehyde continuously for 80 years, and also to 0.1 ppm for 40 years at work, then the predicted additional risk of respiratory tract cancer would be 4.1 per 1,000,000,000. The controls needed for minimising the potential for formaldehyde exposure from this product will be the same as those for control of dust exposures. These risk assessments and conclusions are in no way altered by the reclassification of formaldehyde to Group 1 by the IARC.

Reference:

1. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Volume 62: Wood dust and formaldehyde. IARC, Lyon, France. 1995.
2. IARC Press Release No 153, 15 June 2004. IARC, Lyon, France.

Ecological Information

Ecotoxicity:	These products should be used only for its designated purposes.
Persistence and degradability:	Not determined
Mobility:	Not determined
Environmental fate:	Not determined
Bio accumulative	Not determined

Disposal considerations

Disposal method and containers:	These products are not regulated as a hazardous waste by authorities. Off-cuts and general waste material should be placed in containers and disposed of at approved landfill sites or burnt in an approved furnace or incinerator in accordance with disposal authority guidelines

Special precautions for landfill or incineration: Do not burn in barbecues, combustion stoves or open fires in the home as irritating gases are emitted.

Transportation Information

India does not have any such regulation. However, the regulatory information in the country of origin in Australia and New Zealand is furnished below:

UN Number : None allocated

UN Proper shipping name : None allocated

Class and subsidiary risk : None allocated

Packing group : None allocated

Special precautions for user : None allocated

Hazchem Code : None allocated

These products are not regulated as dangerous goods. No special transport requirements are necessary.

Regulatory Information

India does not have any statutory regulations on occupastional hazards or safe conditions in work place in so far as wood panel products are concerned.

Assessed in accordance with the criteria of the National Occupational Health and Safety Commission in Australia -OHSC:1008(1999) and NOHSC:10005 (1999), it is concluded that occupational exposure to dust, smoke or fume from this product is hazardous according to the criteria of the NOHSC.

No special regulations are there to deal with the product as hazardous substance. The product is not listed in the Standard for the Uniform Scheduling of Drugs and Poisons in Australia, New Zealand or India.

Wood dust - Certain hardwoods such as beech and oak and Softwood dusts are listed in the 1999 NOHSC list of Designated Hazardous Substances: NOHSC: 10005(1999).

Formaldehyde is listed in the 1999 NOHSC list of Designated Hazardous Substances: NOHSC: 10005(1999) if present in concentrations of 0.2% or more (this wood panel product contains <0.01% formaldehyde).

Health & Safety Information to Users

Ingredients: Wood fibre or particles and heat cured resin.

Risk: Dust and smoke from this product are irritating to eyes, skin and respiratory system. May cause sensitisation by inhalation (asthma) and skin contact (dermatitis). Repeated inhalation of the dust increases the risk of nasal cavity cancer and may increase the risk of lung fibrosis (scarring).

Safety: Avoid repeated or prolonged contact with skin.
Avoid contact with eyes.
Avoid breathing dust and smoke.
Wear suitable clothing, standard duty gloves, and dust resistant eye protection.
If machining without adequate dust or smoke extraction or if dusty or smoke, respiratory protection (particulate dust mask) must be worn.
Keep work areas clean by wet sweeping and/or vacuuming.
Wash work clothes regularly and separately from other clothes.

First Aid: Irrigate eyes with plenty of water. Wash skin with soap and water.

Disposal: Follow above safety instructions, and:
Collect in containers for disposal as trade waste in accordance with local authority guidelines.
The intact product and dust must not be burnt in barbecues, combustion stoves, or open fires in the home, as irritating gases are emitted.

Other Information

Disclaimer The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for you consideration, investigation and verification. Buyer assumes all risk of use, storage and handing of the product in compliance with applicable Central, State and Local laws and/or regulations. Eximcorp India Pvt Ltd makes no warranty of any kind, express or implied, concerning the accuracy or completeness of the information and data herein. Eximcorp India Pvt Ltd will not be liable for claims relating to any party's use of, or reliance on, information and data contained herein regardless of whether it is claimed that the information and data are inaccurate, incomplete or otherwise misleading. It is incumbent upon the user to obtain the most up-to-date information.

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Sources of data: IARC Monographs on the evaluation of Carcinogenic Risks to Humans. Vol:62 Wood dust and Formaldehyde.
IARC, Lyon France 1995.
IARC Press Release Vol:153 Formaldehyde.
IARC, Lyon France 1995.
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