



# MATERIAL SAFETY DATA SHEET

## SECTION 1: IDENTIFICATION

**PRODUCT** Medium Density Fiberboard (Urea-Formaldehyde Bonded)  
Raw and Laminated

**PRODUCT NAME** All MDF products

**MANUFACTURER'S NAME** Uniboard Canada Inc.

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## SECTION 2: HAZARDOUS INGREDIENTS

Under some conditions, the following hazardous chemicals or components may be released from medium density fiberboards and/or products manufactured from same. Wood dust may also be developed from machining of various wood products.

Chemical Component	(CAS #)	ACGIH TLV	OSHA PEL
Formaldehyde	50-00-0	Ceiling 0.3 ppm	TWA 0.75 ppm STEL 2.0 ppm
Wood dust	N/A	TWA 5 mg/m <sup>3</sup> (Softwood) STEL 10 mg/m <sup>3</sup> (Softwood) STEL 1 mg/m <sup>3</sup> (Beech and oak)	TWA 5 mg/m <sup>3</sup> (all except Red Cedar) STEL 10 mg/m <sup>3</sup> (all except Red Cedar) TWA 2.5 mg/m <sup>3</sup> (Western Red Cedar)

### SECTION 3: PHYSICAL CHARACTERISTICS

<b>Description:</b>	Composite panel product composed primarily of wood fibers and Urea-Formaldehyde binder pressed into flat panels
<b>BOILING POINT (°C)</b>	N/A
<b>SPECIFIC GRAVITY (Water=1)</b>	Variable but generally under 1.0
<b>VAPOR PRESSURE (mm Hg)</b>	N/A
<b>APPEARANCE AND ODOUR</b>	Straw yellow to light brown. No distinctive odour.
<b>MELTING POINT (°C)</b>	N/A
<b>VAPOR DENSITY (air=D)</b>	N/A
<b>REACTIVITY IN WATER</b>	N/A
<b>EVAPORATION RATE</b>	N/A

### SECTION 4: FIRE AND EXPLOSION DATA

<b>FLASH POINT</b>	N/A
<b>AUTO IGNITION TEMPERATURE</b>	218 to 246 °C
<b>FLAMMABLE LIMITS</b>	Formaldehyde Lower Explosion Limit: 7 % Formaldehyde Upper Explosion Limit: 73 %
<b>FIRE EXTINGUISHER MEDIA</b>	Water spray, CO <sub>2</sub> and sand
<b>SPECIAL FIRE FIGHTING PROCEDURES</b>	Fire fighting procedures for wood products are well known.
<b>UNUSUAL FIRE AND EXPLOSION HAZARDS</b>	MDF boards are not an explosion hazard.  Sawing, sanding and/or machining MDF could result in the by-product wood dust. Wood dust may present a strong to severe explosion hazard if a dust cloud contacts an ignition source. According to data contained in NFPA (National Forest Products Association) standards, 40 g/m <sup>3</sup> (.040 ounce/ft <sup>3</sup> ) is the minimum explosive concentration for wood dust.

## SECTION 5: REACTIVITY DATA

<b>STABILITY</b>	Stable
<b>CONDITIONS TO AVOID</b>	High relative humidity and high temperature increase the formaldehyde emission rate from particleboard.
<b>INCOMPATIBILITY (MATERIAL TO AVOID)</b>	Strong oxidizing agents, strong acids and drying oils.
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	Thermal and/or thermal-oxidative decomposition (burning) can produce irritating and toxic fumes and gases, including carbon monoxide, olefinic and paraffinic compounds, trace amounts of organic acids, ketones, aldehydes and alcohols
<b>HAZARDOUS POLYMERIZATION</b>	Will not occur.

## SECTION 6: HEALTH AND HAZARD DATA

### SIGNS AND SYMPTOMS OF EXPOSURE:

#### ***1. FORMALDEHYDE***

<b>ACUTE EXPOSURE</b>	May cause temporary irritation of skin, eyes or respiratory system. May cause sensitization in susceptible.
<b>CHRONIC EXPOSURE</b>	Rats exposed to 14 ppm formaldehyde developed nasal cancer. The National Cancer Institute (NCI) epidemiology study on 26,000 workers found little evidence linking formaldehyde exposure to cancer. The Environmental Protection Agency (EPA) has classified formaldehyde a B-1 probable human carcinogen. Formaldehyde is classified by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) as Group 2A chemical - probable human carcinogen.

## **2. WOOD DUST**

### **ACUTE EXPOSURE**

**Skin contact:** Causes irritation and sensitization. Dermatitis has been reported in humans. Nature of the wood and origin of the dust has to be taken into consideration.

**Eye contact:** Causes eye irritation. Conjunctivitis has been reported in humans. Nature of the wood and origin of the dust has to be taken into consideration.

**Inhalation:** Causes irritation and sensitization. Inhalation of wood dust may irritate the respiratory tract by causing: drying of the mucus, sneezing, irritation cough and expectoration. May cause some difficulties in breathing such as : bronchitis, nasal discharge, respiratory tract obstruction and more. May sensitize the respiratory system and cause asthmatic symptoms and signs.

### **CHRONIC EXPOSURE**

Exposure to wood dust may cause asthmatic symptoms and signs. Chronic exposure to some species of wood and sensitivity of some workers may cause the outbreak of some allergies that can become a potential hazard to these individuals.

Irritancy to skin, respiratory system and eyes.

Sensitization of skin and respiratory system.

**Carcinogenicity:** Group 1 - human carcinogen (IARC). Nasal carcinoma has been reported in furniture industries and an increase of Hodgkin's disease has been reported in other wood working industries.

**Mutagenicity:** Exposure to wood dust may cause cellular changes in the nasal epithelium.

### **MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:**

Respiratory conditions or allergies.

### **EMERGENCY FIRST AID PROCEDURES:**

**INHALATION**

Remove to fresh air. If persistent irritations, breathing difficulties or rash occur, seek medical advice.

**EYES**

Remove to fresh air. Flush eyes immediately with clear water for 10 minutes. If irritation persists, get medical attention.

**SKIN**

Remove to fresh air. Wash skin with a mild soap or detergent and water, or flush affected area with water for a few minutes. If a rash or persistent irritation occurs, get a medical advice before returning to work where wood dust is present

## **SECTION 7: SPILL/LEAK PROCEDURES**

### **PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

Provide adequate ventilation to reduce the possible build-up of formaldehyde gas, particularly when high temperatures occur.

Provide adequate ventilation where dust conditions may occur.

### **STEPS TO BE TAKEN IF SPILLED OR RELEASED:**

See above for formaldehyde.

Sweep or vacuum spills of dust for recovery or disposal; avoid creating dust conditions.

### **WASTE DISPOSAL METHOD:**

Incinerate or landfill in accordance with local, provincial, federal or state regulations.

## **SECTION 8: SPECIAL PROTECTION INFORMATION**

### **RESPIRATORY PROTECTION:**

Avoid prolonged or repeated breathing of wood dust in the air.

Wear NIOSH (National Institute for Occupational Safety and Health) approved breathing protection for exposure to wood dust. Respirators are required if air contaminants exceed American Conference of Governmental Industrial Hygienists - Threshold Limit Value (ACGIH - TLV).

### **VENTILATION:**

#### **LOCAL EXHAUST:**

Necessary to remove dust in sanding, sawing and machining processes.

**MECHANICAL:** Ventilate to assure formaldehyde and wood dust concentrations are less than ACGIH - TLV).

**EYE PROTECTION:** Wear safety goggles in dusty environments.

**SKIN PROTECTION:**

Wear appropriate work gloves to prevent contact with skin.

<b>DISCLAIMER</b>
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## CHANGE REGISTER

REVISED #	DATE	RAISONS OF CHANGES	BY
2		Updating under the new corporate name - Uniboard Canada Inc.	
3	94/08/15	Updating regarding wood dust	Jean Brière
4	95/08/08	Updating regarding wood dust	Lorraine Rouisse
5	95/02/28	Upgrading the short term exposure limit	Lorraine Rouisse
6	99/08/17	3-year review process - includes all MDF products into on MSDS	Jean Brière
7	02/09/19	3-year review process –adding some products	Pierre Martin
8	05/04/04	3-year review process - includes all MDF products into one MSDS. Description change	Pierre Martin