

Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Common Name NORBORD OSB	Chemical name Not applicable
Supplier/ Manufacturer Norbord Industries Inc. 1 Toronto Street, Suite 500 Toronto, Ontario M5C 2W4	Chemical formula Not applicable CAS # Mixture
Synonym Not available	Validation Date 25/11/2003
Trade name Norbord OSB Board, Norbord OSB Solar Board	Print Date 25/11/2003
Product description This panel product contains hardwood and/or softwood strands bonded with resin (phenol formaldehyde copolymer) and wax. Solar Board OSB is a radiant barrier sheathing product consisting of a sheet of OSB laminated on one side with a radiant barrier foil.	Responsible Name Norbord Industries Inc.
Material Uses Not Available	In Case of Emergency (450) 447-6659

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	LD50	LC50	Exposure Limits
Hardwood dust (e.g., aspen, sweet gum, etc.)	Not available	95	Not available	Not available	ACGIH (2000) 1 mg/m ³ TWA A1 OSHA PEL 15 mg/m ³ TWA Total 5 mg/m ³ Respirable Ontario OEL-reg 833 (2000) Proposed 3 mg/m ³ TWAEV Total dust BC reg 296-97 (1997) Non-allergenic 1 mg/m ³ K1, A RQMT (Quebec) (1999) 5 mg/m ³ TWA Total
Softwood dust (Southern Yellow Pine)	Not available	95	Not available	Not available	ACGIH (2000) 5 mg/m ³ TWA 10 mg/m ³ STEL/C OSHA PEL 15 mg/m ³ TWA Total 5 mg/m ³ Respirable Ontario OEL-reg 833 (2000) Proposed 3 mg/m ³ TWAEV Total dust BC reg 296-97 (1997) Non-allergenic

Continued on Next Page

Phenol Formaldehyde Resin Solids	Not available	1-3%	Not available	Not available	2.5 mg/m ³ K1 RQMT (Quebec) (1999) 5 mg/m ³ TWA Total No Exposure Value
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Section 3. Hazards Identification

Emergency Overview	Manual or mechanical cutting or abrasion processes performed on the OSB Board may result in generation of wood dust. Manual or mechanical cutting or abrasion processes performed on the Solar Board may result in generation of wood dust and aluminum dust.
Routes of Entry	Inhalation and contact with skin and eyes.
Potential Acute Health Effects	No test data exists on actual mixture. Listed below is the data available on the identified ingredients. May cause irritation to upper respiratory system, eyes and skin.
Potential Chronic Health Effects	No test data exists on actual mixture. Listed below is the data available on the identified ingredients. Wood Dust Carcinogenicity IARC (Group 1)- Carcinogenic to Humans ACGIH (A1)- Certain hard woods, Confirmed Human Carcinogen BC (K1)- A Confirmed Human Carcinogen For further information concerning toxic and hazardous information consult the MSDSs for wood dust.
See Toxicological Information (section 11)	

Section 4. First Aid Measures

Eye Contact	Wood dust may cause mechanical irritation. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, holding lids apart to ensure flushing of each entire eye. Get medical attention immediately.
Skin Contact	Various species of wood dust may cause allergic contact dermatitis in sensitized individuals. In case of contact, flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and footwear. Get medical attention if rash or persistent irritation or dermatitis occurs. Wash clothing before reuse.
Inhalation	Depending on species, wood dust may cause respiratory sensitization and/or irritation. If inhaled, remove to fresh air. Get medical advice if persistent irritation, severe coughing or breathing difficulty occurs.
Ingestion	Not likely to occur.
Notes to Physician	Respiratory ailments or pre-existing skin conditions may be aggravated by exposure to wood dust.

Section 5. Fire Fighting Measures

Flammability of the Product	FLAMMABLE.
Auto-ignition Temperature	204 to 260 C
Flash Points	Not available.
Flammable Limits	Higher: undetermined (varies with composition particle size, moisture level, rate of heating and dust concentration). Lower: 40 grams/m ³ (LEL) wood dust.
Products of Combustion	Burning of wood products produces irritating and toxic emissions, including carbon dioxide, carbon monoxide, aldehydes and organic acids.
Fire Hazards in Presence of Various Substances	There is risk of fire when fine dust particles come in contact with a source of ignition as heat or flame.
Explosion Hazards in Presence of Various Substances	Dust explosion is strongly possible if dust concentrations rise to critical values (above 40 grams/m ³) and if there is a source of ignition present (flame, heat, static discharge, etc.). May explode when in contact with strong acids and oxidants.
Sensitivity/mechanical impact	Not available.
Sensitivity/static discharge	Not available.
Fire Fighting Media and Instructions	Use water spray or carbon dioxide when fighting fires involving this material. Use dry sand or earth to smother fire.

Section 6. Accidental Release Measures

Spill and Leak	Sweep or vacuum and avoid creating airborne dust conditions. Remove ignition source and provide good ventilation where dust conditions may occur. Place recovered wood dust in a container for proper disposal.
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Section 7. Handling and Storage

Precautions	Avoid any source of heat and avoid creating "clouds" of dust which can be source of fire and explosion. Wash thoroughly after handling. Wash clothing before reuse. AVOID CONTACT WITH EYES AND SKIN. AVOID BREATHING DUST.
Storage	Store away from incompatibles. Keep in a closed container in a cool and dry area. Keep away from any ignition source.
Incompatibility	Avoid contact with oxidizing agents and drying oils. Avoid open flame.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	For reducing exposure to below recommended exposure limits, methods include mechanical ventilation using diluting or control of process, and process conditions or personal enclosure. System design should consider nature of contaminants and any explosive characteristics. Eyewash stations are recommended.
Personal Protection	<p>Eyes AVOID CONTACT WITH EYES*. Use safety glasses with side shields or dust resistant safety goggles. Suitable eye protection should always be worn whenever cutting or shaping products with power tools. *For more details refer to CSA Standard Z94.3-M88 "Industrial Eye and Face Protection".</p> <p>Body AVOID CONTACT WITH SKIN. Wear Coveralls. Remove and wash dust contaminated clothing before reuse.</p> <p>Respiratory AVOID BREATHING DUST. When engineering controls and work practices are not effective in controlling exposure to recommended exposure limits, wear suitable respiratory protection. If respirator required, use an appropriate NIOSH/MSHA approved device, and institute comprehensive program as per CSA Z94.4-M1984.</p>

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Hands AVOID CONTACT WITH SKIN.

Wear leather work gloves to protect skin from contact with wood dust, mechanical irritation and splinters.

Feet Not applicable
As determined by normal job requirements.

Protective Clothing (Pictograms)



Consult Section 2 for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Solid	Odor	Dependent on wood species and time since dust was generated.
Molecular Weight	Not applicable	Taste	Not available
Molecular Formula	Not applicable	Color	Light to dark brown
pH (1% Soln/Water)	Basic		
Boiling/Condensation Point	Not available		
Melting/Freezing Point	Not applicable		
Critical Temperature	Not available		
Specific Gravity	Variable (dependent on wood species and moisture content)		
Vapor Pressure	Not applicable		
Vapor Density	Not available		
Volatility	Not available		
Odor Threshold	Not available		
Evaporation Rate	Not available		
Water/oil dist. coeff.	Not applicable		
Viscosity	Not applicable		
Ionicity (in Water)	Not available		
Dispersion Properties	Not available		
Solubility	Insoluble in cold water, hot water.		

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	Not available
Incompatibility with Various Substances	Wood dust can ignite if it comes in contact with strong oxidizing agents such as perchloric acid and nitric acids, and with strong acids such as sulfuric acid and if it comes in contact with drying oils such as linseed oil.
Hazardous Decomposition Products	Thermal and/or thermal oxidative decomposition can produce irritating and toxic fumes and gases, including carbon monoxide, hydrogen cyanide, aldehydes, organic acids and polynuclear aromatic compounds.

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Corrosivity Not applicable

Section 11. Toxicological Information

Routes of Entry Inhalation and contact with skin and eyes.

Chronic Effects on Humans No test data exists on the actual mixture. Listed below is the data available on wood dust :

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 health hazard to these individuals.

Acute Effects on Humans No test data exists on the actual mixture.

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 as well a exposure to formaldehyde during cutting or sanding operations of this product. However, because the quantity of resin in this product is very small, the risk of exposure to formaldehyde during cutting and sanding operations must be considered of very low.

Skin Absorption Not available

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.**
No test data available on actual mixture. Data available on identified ingredients are listed below.

Inhalation of wood dust may irritate the respiratory tract by causing: drying of the mucus, sneezing, irritating cough and expectoration. May cause some difficulty in breathing such as: bronchitis, nasal discharge, respiratory tract obstruction and more. May sensitize the respiratory system and cause asthmatic symptoms and signs. People with existing respiratory tract ailments, (e.g. bronchitis) should avoid exposures to wood dust as they may suffer severe irritation and difficulty in breathing.

Some reports suggest that formaldehyde may cause respiratory sensitization, such as asthma, and pre-existing respiratory sensitization may be aggravated by exposure. However, because the quantity of resin contained in this product is very small, the risk of exposure to formaldehyde during cutting and sanding operations must be considered of very low.

Ingestion Not applicable
Not likely to occur.

Irritancy of product No test data available on the actual mixture.

Sensitization No test data available on actual mixture.

Carcinogenic Effects No test data available on actual mixture.
Data available on:

Formaldehyde	
IARC (Group 2A)-	Probably Carcinogenic to Humans
ACGIH (A2)-	Suspected Human Carcinogen
BC (K2)-	A Suspected Human Carcinogen
Wood Dust	
IARC (Group 1)	Carcinogenic to Humans

Nasal carcinoma has been reported in furniture industries and an increase of Hodgkin's disease has been reported in other wood working industries especially in sawmills.

ACGIH (A1)	Certain hard woods-Confirmed Human Carcinogen
BC (K1)-	A Confirmed Human Carcinogen

Teratogenicity Not available

Mutagenicity	No test data available on actual mixture. Data available on: Wood dust Exposure to wood dust may cause cellular changes in the nasal epithelium.
Reproductive Effects	No test data available on the actual mixture.
Name of toxicological synergistic products	Not available

Section 12. Ecological Information

Ecotoxicity	Not available
BOD5 and COD	Depending on the kind of wood
Products of Biodegradation	Depending on the kind of wood Possibly hazardous short term degradation products are unlikely. Long term degradation products may arise due to formaldehyde.
Toxicity of the Products of Biodegradation	Not available
Special Remarks on the Environment	Biodegradation of the wood may lower oxygen levels in water which may be hazardous to aquatic life.

Section 13. Disposal Considerations

Waste Information	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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Section 14. Transport Information

Classification	Not applicable
PIN	Not applicable
Special Provisions for Transport	Not available

Section 15. Regulatory Information

U.S. Federal Regulations	The product is not controlled under the US Hazard Communication Rule (29 CFR 1900.1200).
Canadian Regulations	The product is not controlled under WHMIS. It has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.
Other Regulations	Not available

Section 16. Other Information

Other Special Considerations	The 16 heading format MSDS complies with WHMIS criteria and follows the structure set forth by ANSI Z400.1-1998.
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Notice to Reader

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