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SAFETY DATA SHEET

DRICORE SUBFLOOR R+

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Safety Data Sheet

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

EMERGENCY CONTACT

Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

Synonym

Oriented Strand Board

Product Description

These panel products contain hardwood and/or softwood strands bonded with phenol formaldehyde copolymer adhesive resin and/or polymeric diphenylmethane diisocyanate (PMDI) adhesive resin and wax. The Solarbord product has a heat-reflecting foil laminated onto one side of the OSB (Oriented Strand Board) board.

SECTION 2. HAZARD (S) IDENTIFICATION

GHS Classification

This product is not classified as hazardous according to GHS criteria

WHIMS Classification

This product is not classified as hazardous according to WHIMS criteria

Other Hazards

Sawing, sanding or machining processes performed on these products may result in generation of dusts (wood dust and polymerized resin dust).

Emergency Overview

Sawing, sanding or machining wood or wood products can generate combustible dust. Wood dust may ignite or form explosive mixture with air in the presence of an ignition source. Product dust may be irritating to eyes, skin or respiratory system

POTENTIAL HEALTH EFFECTS:

The wood panels in purchase form do not represent health hazard. The health effects mentioned below could happen if the panel is mechanically processed and dusts (wood and polymerized resin) are generated in the environment.

Potential Acute Health Effects

Inhalation Inhalation of dust may cause irritation to upper respiratory system

Skin May cause chemical and/or mechanical irritation of the skin

Eyes May cause chemical and/or mechanical irritation of the skin

Ingestion Not an expected route of entry

Medical conditions aggravated by overexposure Respiratory ailments or pre-existing skin conditions may be aggravated by exposure to wood dust.

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.
Extinguishing Media	Use water spray, dry chemical or carbon dioxide when fighting fires involving this material. Dry sand or earth can be used for small fire.
Hazardous Combustion Products	Burning of wood panel produces irritating and toxic emissions, including carbon dioxide, carbon monoxide, noxious fumes, aldehydes and organic acids.
Special Fire-Fighting Equipment/Procedure	Firefighters must wear fire resistant protective equipment. Wear self-contained breathing apparatus with full face piece operated under positive pressure demand mode.
Fire Hazards in Presence of Various Substances	There is risk of fire/explosion when high concentrations of 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	These products are not sensitive to mechanical impact.
Sensitivity/static discharge	These products are not sensitive to static discharge. However, fine dust clouds may be sensitive to static discharge and lead to a dust explosive hazards.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	See protective measures in section 8.
Environmental Precautions	None
Spill and Leak	Not likely to occur as a wood panel. Wood dust spill, sweep or vacuum and avoid creating airborne dust conditions. Dried wood dust can be a source of combustible and explosion hazard. Remove ignition source and provide good ventilation where dust conditions may occur. Place recovered wood dust in a container for proper disposal.

SECTION 7. HANDLING AND STORAGE

Safe Handling Procedures	Avoid any source of heat or ignition and avoid creating "clouds" of dust during mechanical processes (sawing, sanding, drilling...) on wood panel. Wood dust can be source of fire and explosion hazards. Use in a well-ventilated area. Wash thoroughly after handling. Wash clothing before reuse. AVOID DUST CONTACT WITH EYES AND SKIN. AVOID BREATHING DUST.
Storage Requirement	Store away from incompatibles. Keep in a cool, dry and well-ventilated area. Keep away from any ignition source.
Incompatibility	Avoid contact with oxidizing agents and drying oils. Avoid open flame.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ingredients	USA ACGIH (2015)	USA OSHA 29CFR1910.1000	QUEBEC OSHA (OEL S-2.1, r.15 - 2010)	ONTARIO OSHA OEL-reg 833 (2005)
Variety of Hardwood (e.g., Aspen, Poplar, Black Poplar, Birch etc.) and/or Softwood (Southern Yellow Pine, Lodgepole Pine, Tamarack, Spruce, ,) - But not Western Red Cedar	TLV-TWA (Inhalable Dust) 1 mg/m ³	PEL-TWA ¹ (Total Dust as PNOR) 15 mg/m ³ PEL-TWA ¹ (Total Dust) 5 mg/m ³ STEL-TWA ¹ (Total Dust) 10 mg/m ³	TWAEV (Total Dust) 5 mg/m ³	TWAEV (Total Dust) 5 mg/m ³
Cured Phenol Formaldehyde Adhesive Resin Solid. (less than 0.01% of free formaldehyde)	None Established	None Established	None Established	None Established

Cured Polymeric Diphenylmethane Diisocyanate (PMDI) Adhesive (Once pressed these wood panels do not contain free or unreacted MDI)	None Established	None Established	None Established	None Established
Formaldehyde	TWA/Ceiling ² 0.3 ppm	PEL 0.75 ppm STEL 2.0 ppm (See 29CFR1910.1048)	TWAEV/Ceiling 2.0 ppm	STEV 1 ppm Ceiling 1.5 ppm
Heat Reflecting Foil (Solarbord Only)	None Established	None Established	None Established	None Established
Slack Wax (as Paraffin Wax Fume)	TWA 2 mg/m ³	Not Regulated	TWAEV 2 mg/m ³	TWAEV 2 mg/m ³
Zinc Borate (as inorganic compounds)	TWA (Inhalable Dust) 2 mg/m ³	PEL-TWA (Total Dust as PNOR) 15 mg/m ³	TWAEV (Total Dust as PNOR) 10 mg/m ³	TWAEV 2 mg/m ³

¹ In *AFI - CIO v. OSHA*, 965 F. 2d 962 (11th Cir. 1992), the court overturned OSHA's 1989 Air Contaminants Rule, including the specific PELs for wood dust that OSHA had established at that time. The 1989 PELs were: TWA - 5.0 mg/m³; STEL(15 MIN.) - 10.0 mg/m³ (all soft and hard woods, except Western Red Cedar); Western Red Cedar; TWA - 2.5 mg/m³.

Wood dust is now officially regulated as an organic dust under the Particulates Not Otherwise Regulated (PNOR) or Inert or Nuisance Dust Categories at PELs noted under Section 8 of this MSDS. However, a number of states have incorporated provisions of the 1989 Standard in their state plans. Additionally, OSHA indicated that it may cite companies under the OSH Act General Duty Clause under appropriate circumstances for non-compliance with the 1989 PELs.

²The OSHA 'Action Level' for Formaldehyde is 0.5 ppm based on an 8-hour TWA under 29 CFR 1910.1048. This level is not achieved under normal occupational exposures to these products. The Occupational Health and Safety Regulation's 8-hour TWA is 0.3 mg/m³ with the As Low As Reasonably Achievable (ALARA) designation.

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

Eyes Not required if no transformation is performed on the product.
AVOID CONTACT WITH EYES.

Use safety glasses with side shields or dust resistant safety goggles if manual or mechanical cutting or abrasion processes is performed on the product.

Body Not required if no transformation is performed on the product.
AVOID CONTACT WITH SKIN.

Coveralls or long-sleeved shirt is recommended if manual or mechanical cutting or abrasion processes is performed on the product.

Remove and wash dust contaminated clothing before reuse.

Respiratory Not required if no transformation is performed on the product.
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 dust respirator N95 or higher.

Hands **AVOID CONTACT WITH SKIN.**

Wear leather work gloves to protect skin against mechanical irritation and splinters. Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before accessing to eating area.

Advice on general occupational hygiene

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid	Odor	Depend on wood species and time since panel was produced.
Appearance	Wood panel	Threshold Odor	Not available
pH	Not available	Color	Light to dark brown

Melting /Freezing point (°C)	Not available	Vapour pressure (@20 °C)	Not available
Boiling point (°C)	Not available	Vapour density (Air=1)	Not available
Flash point (°C)	Not available	Solubility (in water)	Not soluble
Evaporation rate	Not available	Coefficient of water/oil distribution	Not Available
Auto-ignition temperature	204 to 260 °C	Decomposition temperature	Not available
Flammability (Solid, gas)	These wood panels are flammable in presence of ignition source		
Upper flammability/explosive limit (% by volume)	Higher: undetermined (varies with composition particle size, moisture level, rate of heating and dust concentration)		
Lower flammability/explosive limit (% by volume)	40 grams/m ³ (wood dust)		
Relative density (@25 °C)	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.)		
Viscosity	Variable (dependent on wood species and moisture content)		
	Not applicable		

SECTION 10. STABILITY AND REACTIVITY

Reactivity	Not available
Stability	Stable under normal conditions
Possible hazardous reactions	Not hazardous reactions will occur
Conditions to avoid	Keep away of ignition sources (excessive heat, open flames, sparks) and incompatible materials
Materials to avoid and incompatibility	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, aldehydes, isocyanate, organic acids and polynuclear aromatic compounds.

SECTION 11. TOXICOLOGICAL INFORMATION

In purchase form these products do not represent health hazard

Routes of exposures	Inhalation, skin and eyes contact
Toxicological data	No test data exists on the purchased form products. Listed below is the data available on individual chemical ingredients entering in the composition of the wood panels and wood dust. Exposure to wood dust may cause asthmatic symptoms and signs.

Chemical ingredients	LD ₅₀		LC ₅₀ (4-hours)		GHS
	Oral	Dermal	Inhalation	Irritation	
Polymeric Diphenylmethane Diisocyanate (PMDI) Adhesive	>5,000 mg/kg (rat)	>5,000 mg/kg (rat)	0,49 mg/l (rat)	100 mg (Mild) (rabbit)	Acute toxicity, Inhalation of dusts, category 2
Phenol Formaldehyde Adhesive Resin Solid.	>2,500 mg/kg (rat)	>5,000 mg/kg (rat)	0,49 mg/l (rat)	No Data	Acute toxicity, Inhalation of dusts, category 2
Free Formaldehyde	100 - 830 mg/kg (rat)	270 mg/kg (rabbit)	0,20 - 0.59 mg/l (rat) 0.45 mg/l (mouse)	No Data	Acute toxicity, Inhalation of dusts, category 1
Slack Wax	No Data	No Data	No Data	No Data	No Data
Heat Reflecting foil	No Data	No Data	No Data	No Data	No Data
Zinc Borate	10,000 mg/kg (rat)	10,000 mg/kg (rabbit)	5 mg/l (rat)	No Data	Acute toxicity, Inhalation of dusts, category 4

Variety of Hardwood (e.g., Aspen, Poplar, Black Poplar, Birch, etc.) and/or Softwood (Southern Yellow Pine, Lodgepole Pine, Tamarack, Spruce, etc.) - But not Western Red Cedar	No Data	No Data	No Data	No Data	No Data
Skin Irritation	No test data available on the wood panel itself. Data available on identified ingredients are listed below.				
Eye Irritation	Dermatitis has been reported in humans; nature of the wood and origin of the dust has to be taken into consideration during cutting or sanding operations of this product.				
Skin Sensitization	Conjunctivitis has been reported in humans, nature of the wood and origin of the dust has to be taken into consideration.				
Respiratory Sensitization	No test data available on the wood panel itself. Data available on identified ingredients are listed below.				
Mutagenicity	Repeated 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.				
Carcinogenicity	However, considering the small quantity of the resins contained in these products and the polymerization of these resins during the press cycle, the risk of exposure to formaldehyde and/or MDI during cutting and sanding operations must be considered of very low.				
Formaldehyde	No test data available on the product itself. Data available on identified ingredients are listed below.				
Wood Dust	Inhalation of wood dust may sensitize the respiratory system and cause asthmatic symptoms and signs.				
Teratogenicity	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.				
Synergetic Effects	Some reports suggest that formaldehyde and MDI may cause respiratory sensitization, such as asthma, and pre-existing respiratory sensitization may be aggravated by exposure. However, considering the small quantity of the resins contained in these products and the polymerization of these resins during the press cycle, the risk of exposure to formaldehyde and/or MDI during cutting and sanding operations must be considered of very low.				
Potential Health Effects	No test data available on the product itself. Data available on identified ingredients are listed below.				
Inhalation	Data on wood dust suggests that exposure to wood dust may cause cellular changes in the nasal epithelium.				
Skin	No test data available on the product itself. Data available on identified ingredients are listed below.				
Eyes	IARC (Group 1) Human carcinogen				
Ingestion	ACGIH (Group A2) Suspected human carcinogen				
	NTP Known to be a human carcinogen				
	IARC (Group 1) Human carcinogen				
	ACGIH (Group A1) Oak and beech – Confirmed human carcinogen				
	ACGIH (Group A2) Birch, mahogany, teak, walnut - Suspected human carcinogen				
	ACGIH (Group A4) All other wood dusts - Not classifiable as a human carcinogen				
	NTP Known to be a human carcinogen				
	Not available.				
	Not available.				
	Wood dust May cause irritation to the upper respiratory system.				
	Wood dust may cause irritation to the skin.				
	Wood dust may cause chemical and/or mechanical irritation to the eye.				
	Not likely to occur.				
SECTION 12.ECOLOGICAL INFORMATION					
Ecotoxicity	Not available. The product has not been tested.				
Persistence and degradability	The product has not been tested.				
	Depending on the kind of wood				
	Possibly hazardous short term degradation products are unlikely.				
	Long term degradation products may arise due to formaldehyde.				

Bioaccumulation potential	Not available. The product has not been tested.
Mobility in soil	Not available. The product has not been tested.
Results of PBT and vPvB assessment	Not available. The product has not been tested.
Other adverse effects	
PMDI	PMDI represent low to very low environmental hazard. A pond study showed gross contamination caused no significant toxic effects on a wide variety of flora and in all trophic levels (including fish), no detectable diaminodiphenylmethane (MDA) and no evidence of bioaccumulation of MDI or MDA. (see Heimbach F. et al. 1996)

Category	Species	Test	Result	Reference
Algae	Scenedesmus subspicatus	72 h NOEC 1640 following OECD Guideline 201	No effects were noted	Blom et Oldersma (1994)
Invertebrates	Daphnia magna	Static test following OECD Guideline 202/1	24 h EC50 = \geq 500 - 1000mg/l	Rhône – Poulenc (1977) Caspers et al. (1986)
	Limnea stagnalis		24 h EC50 = \geq 1000 mg/l	Caspers et al. (1986)
Fish (Fresh water)	Branchydanio rerio (Zebrafish)	Static test following OECD Guideline 203	96h LC0 = \geq 1000 mg/l	Rhône – Poulenc (1977) Caspers et al. (1986)
		Static test similar to OECD Guideline 203	24h LC0 = \geq 500 mg/l	Rhône – Poulenc (1977)
	Oryzias latipes (medaka)	Static test similar to Semi-static test. Japanese standard test	96h LC0 = \geq 3000 mg/l	Nakata (1983)

Formaldehyde **Formaldehyde is acutely toxic for aquatic organisms**

Category	Species	Test	Result	GHS Acute Hazard Category
Algae (Fresh water)	Scenedesmus quadricauda	Not specified	24 h EC50 = 14.7 mg/l	3
Invertebrates (Fresh water)	Daphnia magna	DIN 38412 Part 11	24 h EC50 = 42 mg/l	3
		OECD Guideline 203	48 h EC50 = 29 mg/l	3
Fish (Fresh water)	Morone Saxatilis	Not Specified	96 h LC50 = 6.7 mg/l	2
	Fathead minnow	Flow-through	96 h L50 = 24.1 mg/l	3
	Micropterus Dolomieu	Not Specified	96 h LC50 = 54.4 mg/l	3

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Information

Canadian Environmental Protection Act: Not a hazardous waste as sold. Comply with all provincial and local regulations. Incineration or dry-land disposal is acceptable in most jurisdictions.

Resource Conservation and Recovery Act (RCRA): Not a United States Environmental Protection Agency (EPA) hazardous waste as sold. Comply with all state and local regulations. It is the user's responsibility to determine at the time of disposal if their waste product meets RCRA, Title 40 CFR 261 criteria for hazardous wastes. Incineration or dry-land disposal is acceptable in most jurisdictions.

SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	Proper Shipping Name	Classes	Packing Group	Label	Other Information
Canada - TDG Classification	Not regulated	Not regulated	Not Regulated	Not regulated	Not regulated	None
US - DOT Classification	Not regulated	Not regulated	Not Regulated	Not regulated	Not regulated	None
ICAO/IATA	Not regulated	Not regulated	Not Regulated	Not regulated	Not regulated	None
Marine pollutant	No component of this product is listed as a marine pollutant by the DOT (49 CFR 172.101, Appendix B.)					

SECTION 15.REGULATORY INFORMATION

U.S. Federal Regulations The product in purchase form is not controlled under the US Hazard Communication Rule (29 CFR 1900.1200).

TSCA All listed ingredients appear on the TSCA inventory and/or are exempted.

CERCLA Formaldehyde (100 lbs reportable quantity) is on the CERCLA chemical substance inventory.
Chemical substances generated by mechanical activities performed on this product are regulated under this standard. Workplace exposure to formaldehyde is specifically regulated.

OSHA Wood products are not hazardous under the criteria of the federal OSHA Hazard Communication Standard 29 CFR 1910.1200 (Hazcom 2012).). However, wood dust and other chemical substances generated by mechanical activities performed on this product are regulated under this standard. Workplace exposure to formaldehyde is specifically regulated under 29 CFR 1910.1048.

SARA Title III Section 311/312 Hazard Category:

Hazard classification under 40 CFR 370 Hazard Classes:

An immediate acute health hazard	Yes	A delayed chronic health hazard	Yes	A fire Hazard	Yes
A corrosive hazard	No	A reactive hazard	No	A sudden release Hazard	No

SARA Section 313 Reporting:

This product does not contain any chemical substance(s) listed under 40 CFR 372.65 and in concentrations that should required reporting under SARA 313.

State Right-to-Know

While freshly pressed and/or depending of the environmental conditions (temperature and relative humidity) a very small level of formaldehyde may be released from the panels.

Chamber tests performed on OSB panels and conducted by the APA Engineered Association have demonstrated that the formaldehyde level from the off-gas of these type of panels were negligible (below 0.1 ppm).

However, the user should ensure that its specific mechanical process, handling, storage, and ventilation conditions will not contribute to formaldehyde emission exceeding the safe threshold level.

California Proposition 65

Warning

Warning:

Drilling, sawing, sanding or machining wood products generates wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards to avoid inhaling wood dust (California Health and Safety Code Section 25249.6).

The paint applied on the edges of this product may contain titanium dioxide which is a substance "as airborne, unbound particles of respirable size" qualified accordingly to the California Sate to cause cancer.

In purchase form the titanium dioxide contained in the paint will remain fixed in the paint applied on the edges of the panel. If the panel is machined (cut, sanded, drilled...) a small quantity of titanium dioxide dust may be released. However, considering the very small quantity of paint (<0.2 %) applied on the edges of this product and the small quantity of titanium dioxide contained in the paint, it is not believe that the titanium dioxide exposure will present a health risk.

California's listing was based on the IARC TIO2 classification as Group 2B Possibly carcinogenic to humans based on studies that showed evidence of carcinogenicity in rats exposed to very high concentrations. (IARC Monographs, Volume 93 Summary). An elevated lung cancer risk associated to titanium dioxide exposure couldn't have been demonstrated in two major epidemiology studies(European and US) among titanium dioxide workers.

Boffetta P, Soutar A, Cherrie JW et al. (2004) Mortality among workers employed in the titanium dioxide production industry in Europe. Cancer Causes Control; 15: 697-706.

Fryzek JP, Chadda B, Marano D et al. (2003) A cohort mortality study among titanium dioxide manufacturing workers in the United States. J Occup Environ Med; 45: 400-9.

New Jersey Machined processes performed on these wood panels may generate wood dust and titanium dioxide dust. Very small quantity of formaldehyde and wax fume may be released from hot panel. All these substances are on the New Jersey's Hazardous Substance Lists.

Pennsylvania Machined processes performed on these wood panels may generate wood dust and titanium dioxide. Very small quantity of formaldehyde and wax fume may be released from hot panel. All these substances are on the Pennsylvania's Appendix A, Hazardous Substance Lists.

Minnesota This product is not regulated by the Minnesota 2012 sections 144.495 and 325F.181 in regard to the HUD Formaldehyde Emission Standard, 24 CFR Sections 3280.308 and 3280.406. This product does not contain urea-formaldehyde resin and does not correspond to a plywood, MDF or particleboard product.

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 SDS contains all the information required by the CPR.

DSL Excepted wood, all listed ingredients appear on the DSL (Domestic Substance List) list

International Regulations

Europe Inventory	(CLP)	All components are listed or exempted and the product is exempted
Australian inventory	(AICS)	All components are listed or exempted and the product is exempted
China inventory	(IECSC)	All components are listed or exempted and the product is exempted
Japan inventory	(ENCS)	All components are listed or exempted and the product is exempted
Japan inventory	(ISHL)	All components are listed or exempted and the product is exempted
Korea inventory	(KECI)	Not determined.
New Zealand Inventory	(NZIoC)	All components are listed or exempted and the product is exempted
Philippines inventory	(PICCS)	All components are listed or exempted and the product is exempted

SECTION 16. OTHER INFORMATION

HMIS Rating

1	Health
1	Flammability
0	Reactivity
E	Protective Equipment

NFPA Rating



Glossary Terms

ACGIH	American Conference of Governmental Industrial Hygienists
CSA	Chemical Abstracts System Number
CFR	Code of Federal Regulation
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
LC50	Concentration L50 (the concentration in air of a chemical which kills 50% of a experimental animal population)
LD50	Lethal Dose 50 (the administered dose of a chemical which kills 50% of a experimental animals population)
LEL	Lower Explosion Limit
MDI	4'4'-Diphenylmethane Diisocyanate
mg/kg	Milligram per kilogram
mg/m³	Milligram per cubic meter
MSHA	Mining Safety and Health Administration
NIOSH	National Institute of Occupational Safety and Health
NFPA	National Fire Protection Association
NTP	National Toxicology Program
OECD	Organization for Economic Co-operation and Development
OEL	Occupational Exposure Limit

OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPM	Parts per million
RCRA	Resource Conservation and Recovery Act
STEL	Short –Term Exposure Limit (United States)
STEV	Short-Term Exposure Value (Ontario)
TWA	Time Weighted Average (United States)
TWAEV	Time Weighted Average Value (Ontario)
VEMP	Valeur d'exposition moyenne pondérée (Québec) = TWAEV = TWA
VECD	Valeur d'exposition de courte durée (Québec) = STEV = STEL
WHISM	Workplace Hazardous Materials Information System
Other Special Considerations	This 16 heading format SDS complies or exceeds the Canadian WHMIS criteria and the OSHA hazard communication standard 29 CFR 1910.1200. (Hazcom 2012).
Preparation Date: 03/31/2015	
Revision Date: 04/01/2015	
Version:1.1	
Notice to Reader	
<i>The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. Buyer assumes all risk of use, storage and handling of the product in compliance with applicable Federal, State and Local laws and regulations. Norbord makes no warranty of any kind, express or implied, concerning the accuracy or completeness of the information and data herein. Norbord 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.</i>	

SAFETY DATA SHEET

1. Identification

Product identifier

WOOD AND WOOD PRODUCTS

Product list

Engineered Lumber

Lumber Products

Plywood

Oriented Strand Board (OSB)

Engineered Boards

GP-31A

Building Materials - Structural, Industrial or Decorative

None known.

Other means of identification

SDS number

Recommended use

Recommended restrictions

This product is not hazardous in the form in which it is shipped by the manufacturer but may become hazardous by downstream activities (e.g., grinding, sanding, cutting, pulverizing) that reduce its particle size. Those hazards are described below.

2. Hazard(s) identification

Emergency overview

Not classified.

Physical hazards

Health hazards

Eye irritation

Category 2B

Sensitization, respiratory

Category 1

Sensitization, skin

Category 1

Carcinogenicity

Category 1A

Specific target organ toxicity, single exposure

Category 3 respiratory tract irritation

Environmental hazards

Not classified.

OSHA defined hazards

Combustible dust

Label elements



Signal word

Danger

Hazard statement	Causes eye irritation. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause cancer. If small particles of wood dust are generated during further processing, handling or by other means, may form combustible dust concentrations in air.
Precautionary statement	
Prevention	Do not handle until all safety precautions have been read and understood. Wear protective gloves. In case of inadequate ventilation wear respiratory protection. Avoid breathing dust. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Prevent dust accumulation and airborne dispersion of dust to minimize flash fire and explosion hazard.
Response	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a doctor or other qualified medical professional. In case of fire: Use appropriate media to extinguish.
Storage	Store away from strong acids, alkalies, oxidizing agents and drying oils.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
WOOD/WOOD DUST		Not Assigned	60 - 100
Other components below reportable levels			15 - 40

The specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Composition comments Some lumber products may be sprayed with sap stain control coatings. The lumber is air or kiln dried. No chemical residue is left on the surface of the board. Wood products are bonded with phenol, phenol resorcinol, melamine formaldehyde-based, or polyvinyl acetate resin. Some wood products may be coated with finishes, sealants and or overlays.

4. First-aid measures

Inhalation	Remove from area of exposure. If the affected person is not breathing, apply artificial respiration. If persistent irritation, severe coughing or breathing difficulty occurs, seek medical attention.
Skin contact	If irritation develops, wash with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	If wood or wood dust is swallowed, get immediate medical attention or advice -- Do not induce vomiting.
Most important symptoms/effects, acute and delayed	Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. May cause an allergic skin reaction. Dermatitis. Rash. May cause respiratory irritation. Difficulty in breathing.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂). Apply extinguishing media carefully to avoid creating airborne dust.
Unsuitable extinguishing media	Heavy water (or jet) stream may cause dust to become airborne and create a flash fire hazard or an explosive atmosphere.
Specific hazards arising from the chemical	Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Specific methods

To avoid dust clouds, responders should use the extinguisher from as far away as possible and apply the extinguishing agent as gently as possible. The main considerations with hose stream operation are to avoid creating combustible dust clouds or introducing more air. In particular, the use of solid streams and direct dust pile hits can disperse dust into the air creating a potential flash fire hazard. The best way to apply water is in a medium to wide-pattern, as gently as possible. Responders should use a low nozzle pressure and loft the stream onto the burning material from as far away as the stream will reach. The use of wide-pattern (or "fog") streams at pressures typically used.

General fire hazards

May form combustible dust concentrations in air.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use only non-sparking tools. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Vacuum dust with dust ignition proof vacuum or wet sweep small wood pieces and dust; place in appropriate container for disposal. Gather larger pieces by an appropriate method. Reduce airborne dust by use of wet methods (e.g. water mist) and prevent scattering by moistening with water. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Dust can form an explosive mixture in air. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Minimize dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. If flash fire or explosion hazard is present, wear flame resistant clothing and face/head protection. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Use personal protective equipment as required. Ensure dust collection systems used for conveying combustible wood dusts are protected with and equipped with fire and explosion prevention and protection equipment. See NFPA 664 and NFPA 69 for further requirements, information and guidance.

Conditions for safe storage, including any incompatibilities

Store flat, supported and protected from direct contact with the ground. Store away from incompatible materials (see Section 10 of the SDS). Store in a cool dry place.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
WOOD/WOOD DUST	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

ACGIH

Components	Type	Value	Form
WOOD/WOOD DUST	TWA	1 mg/m3	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
WOOD/WOOD DUST	TWA	1 mg/m3	Dust.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines	Wood Products LLC voluntarily elects to adhere to exposure limits contained in OSHA's 1989 Air Contaminants Standard although certain limits were vacated in 1992. The present OSHA exposure limits governing wood dust is 15 mg/m ³ (Total Dust) and 5 mg/m ³ (Respirable Fraction).
Appropriate engineering controls	Due to the fire and explosive potential of dust when suspended in air, precautions should be taken when material is used in any operation which may generate dust. Local exhaust, general dilution ventilation in enclosed areas, and explosion proof equipment is recommended. Use wet methods, if appropriate, to reduce airborne dust concentrations.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Safety glasses or goggles are recommended when using this product. Ensure compliance with OSHA's PPE standard (29 CFR 1910.132 and .133) for eye and face protection.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Impervious protective clothing and gloves recommended to prevent drying or irritation of skin. Ensure compliance with OSHA's PPE standards (29 CFR 1910.132 (general) and 138 (hand protection)). Safety shower/eye wash fountain is recommended in the workplace area (29 CFR 1910.151 (c)).
Respiratory protection	A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).
Thermal hazards	Wear appropriate thermal protective clothing (i.e. flame resistant clothing and head/face protection), when potential flash fire or explosion hazards are present.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance	Rigid boards or panels
Physical state	Solid.
Form	Solid wood
Color	Various
Odor	Not available.
Odor threshold	Not available.
pH	Not applicable
Melting point/freezing point	Not applicable
Initial boiling point and boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	> 40 g/m ³ for wood dust. Note: The LEL is equivalent to the Minimum Explosive Concentration (MEC) for the combustible dust. The MEC will vary with particle size of the wood dust. Recommend MEC testing for specific wood dust particle sizes generated or handled.
Flammability limit - upper (%)	Not available
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density	Variable
Solubility(ies)	
Solubility (water)	Insoluble

Partition coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature	399.92 - 500 °F (204.4 - 260 °C) for wood
Decomposition temperature	Not available
Viscosity	Not available.
Other information	
Bulk density	Not applicable
Flash point class	Combustible

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Dust accumulation, dispersion of dust in air, high temperatures, open flame, sparks, or other sources of ignition.
Incompatible materials	Strong acids, alkalis, oxidizing agents and drying oils.
Hazardous decomposition products	Thermal decomposition may emit irritating fumes or gases of carbon monoxide, carbon dioxide, aldehydes, or organic acids.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Inhalation of dusts may cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if dust inhaled. Prolonged inhalation may be harmful.
Skin contact	May cause an allergic skin reaction.
Eye contact	Causes eye irritation.
Ingestion	Not applicable under normal conditions of use. May result in obstruction or temporary irritation of the digestive tract.

Symptoms related to the physical, chemical and toxicological characteristics	Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. May cause an allergic skin reaction. Dermatitis. Rash. May cause respiratory irritation. Difficulty in breathing.
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Information on toxicological effects

Acute toxicity	May cause an allergic skin reaction. May cause respiratory irritation.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Causes eye irritation.

Respiratory or skin sensitization

Respiratory sensitization	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization	May cause an allergic skin reaction.

Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
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Carcinogenicity	Wood dust generated from sawing, sanding or machining this product may cause nasal dryness, irritation, coughing and sinusitis. The International Agency for Research on Cancer (IARC), and National Toxicology Program (NTP) classifies wood dust as a carcinogen. This classification is based on the increased occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. The evaluation noted insufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon, or rectum with exposure to wood dust.
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IARC Monographs. Overall Evaluation of Carcinogenicity

WOOD/WOOD DUST (CAS Not Assigned) 1 Carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

WOOD/WOOD DUST (CAS Not Assigned) Known To Be Human Carcinogen.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
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Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Empty packaging/container can be disposed in accordance with all applicable regulations.

14. Transport information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)	Not listed.
SARA 304 Emergency release notification	Not regulated.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not regulated.
Superfund Amendments and Reauthorization Act of 1986 (SARA)	
Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Hazardous substance

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)
Not listed.

US. Massachusetts RTK - Substance List
Not regulated.

US. New Jersey Worker and Community Right-to-Know Act
WOOD/WOOD DUST (CAS Not Assigned)

US. Pennsylvania Worker and Community Right-to-Know Law
WOOD/WOOD DUST (CAS Not Assigned)

US. Rhode Island RTK
Not regulated.

US. California Proposition 65

California Proposition 65. WARNING: This product contains chemicals known to the state of California to cause cancer. Drilling, sawing, sanding or machining wood products generates wood dust and titanium dioxide particles, both chemicals are known to the state of California to cause cancer. Avoid inhaling such dust and particles; use a dust mask or other safeguards for personal protection.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

WOOD/WOOD DUST (CAS Not Assigned) Listed: December 18, 2009

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date May-21-2015
Revision date March-31-2016
Version # 04
Further information ® is a Registered Trademark of Georgia-Pacific Wood Products LLC

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Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

HMIS® ratings
Health: 2*
Flammability: 1
Physical hazard: 0

NFPA ratings
Health: 2
Flammability: 1
Instability: 0

Disclaimer

This SDS is intended to quickly provide useful information to the user(s) of this material or product. It is not intended to serve as a comprehensive discussion of all possible risks or hazards, and it assumes a reasonable use of the product. The information contained in this SDS is believed to be accurate as of the date of preparation of this SDS and has been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. The user or handler (or their employer) should consider the specific conditions in which this material will be used, handled, or stored and determine what specific safety or other precautions are required. Employers should ensure that their employees, agents, contractors, and customers who will use the product receive adequate warnings and safe handling procedures, including a current SDS. Product users or handlers (or their employer) who are unsure of what specific precautions are required should consult their employer, product supplier, or safety or health professionals before handling or working with this product. Please notify us immediately if you believe this SDS or other safety and health information about this product is inaccurate or incomplete.

Revision information

Product and Company Identification: Product Codes

WOOD AND WOOD PRODUCTS

Hazard Statement

Causes eye irritation. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause cancer. If small particles of wood dust are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

P Precautionary statement

P Prevention

Do not handle until all safety precautions have been read and understood. Wear protective gloves. In case of inadequate ventilation wear respiratory protection. Avoid breathing dust. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Prevent dust accumulation and airborne dispersion of dust to minimize flash fire and explosion hazard.

Response

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a doctor or other qualified medical professional. In case of fire: Use appropriate media to extinguish.

St Storage

Store away from strong acids, alkalis, oxidizing agents and drying oils.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.



Danger

Product list:

**Engineered Lumber (I-joists, Laminated Veneer Lumber (LVL),
Rim board)
Lumber Products
Plywood
Oriented Strand Board (OSB)
Engineered Boards**

SAFETY DATA SHEET

Issue Date: 11/07/2016

Print Date: 11/08/2016

We encourage and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: Edge Extruded Foam Exterior Sheathing Insulation CDN

Recommended use of the chemical and restrictions on use

Identified uses: Thermal insulation.

Customer Information Number:

800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 1-888-226-8832

Local Emergency Contact: 613-996-6666

2. HAZARDS IDENTIFICATION

Hazard classification

This product is not hazardous under the criteria of the Hazardous Products Regulation (HPR) as implemented under the Workplace Hazardous Materials Information System (WHMIS 2015).

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is an article.

Component	CASRN	Concentration
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2-Propenenitrile, polymer with ethenylbenzene	9003-54-7	> 60.0 - < 100.0 %
Styrene, polymers	9003-53-6	<= 10.0 %
1,1,1,2-Tetrafluoroethane	811-97-2	>= 5.0 - <= 10.0 %

Note

Extruded styrenic polymer foam containing a halogenated flame retardant system.

4. FIRST AID MEASURES

Description of first aid measures

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Wash off with plenty of water.

Eye contact: May cause injury due to mechanical action. If irritation occurs, Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam.

Unsuitable extinguishing media: No data available

Special hazards arising from the substance or mixture

Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. In smoldering or flaming conditions, carbon monoxide, carbon dioxide and carbon are generated. Combustion products may include and are not limited to: Hydrogen halides. Based on combustion toxicity testing,

the effects of combustion from this foam are not more acutely toxic than the effects of combustion from common building materials such as wood.

Unusual Fire and Explosion Hazards: Mechanical cutting, grinding or sawing can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate. This product contains a flame retardant to inhibit accidental ignition from small fire sources. This plastic foam product is combustible and should be protected from flames and other high heat sources. For more information, contact Dow. Dense smoke is produced when product burns.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. If material is molten, do not apply direct waterstream. Use fine water spray or foam. Cool surroundings with water to localize fire zone.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Fabrication methods which involve cutting into this product may release the blowing agent(s) remaining in the cells. Use ventilation adequate to keep exposures below recommended exposure limits. See the safety datasheet. Do not enter confined spaces unless adequately ventilated. Mechanical cutting, grinding or sawing can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate. This product is combustible and may constitute a fire hazard if improperly used or installed. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: When large quantities of this product are stored or fabricated, blowing agents may be released. Released blowing agents may thermally decompose to form gases which may accelerate corrosion or rust formation of heaters, boilers, gas fired recirculating air furnaces or heaters, or gas water heaters.

Storage stability

Shelf life: Use within 360 Month

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
1,1,1,2-Tetrafluoroethane	US WEEL	TWA	1,000 ppm

Consult local authorities for recommended exposure limits.

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Eye protection should not be necessary. For fabrication operations safety glasses (with side shields) are recommended. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Skin protection

Hand protection: Use gloves to protect from mechanical injury. Selection of gloves will depend on the task.

Other protection: No precautions other than clean body-covering clothing should be needed.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. When respiratory protection is required for certain operations, including but not limited to saw, router or hot-wire cutting, use an approved air-purifying respirator. In dusty or misty atmospheres, use an approved particulate respirator.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Board
Color	Blue
Odor	Odorless
Odor Threshold	No test data available
pH	Not applicable
Melting point/range	90 - 130 °C <i>Estimated.</i>
Freezing point	Not applicable
Boiling point (760 mmHg)	Not applicable
Flash point	closed cup Not applicable
Evaporation Rate (Butyl Acetate = 1)	No test data available

Flammability (solid, gas)	Not expected to form explosive dust-air mixtures.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	Not applicable
Relative Density (water = 1)	0.027 - 0.064 Estimated.
Water solubility	insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	354 °C <i>ASTM D1929</i>
Decomposition temperature	No test data available
Kinematic Viscosity	Not applicable
Explosive properties	No
Oxidizing properties	No
Molecular weight	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: Thermally stable at typical use temperatures.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Avoid temperatures above 300°C (572°F) Exposure to elevated temperatures can cause product to decompose. Avoid direct sunlight.

Inhibitor: Cristobalite

Incompatible materials: Avoid contact with oxidizing materials. Avoid contact with: Aldehydes. Amines. Esters. Liquid fuels. Organic solvents.

Hazardous decomposition products: Does not normally decompose. Evolution of small amounts of hydrogen halides occur when heated over 250°C (482°F). Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aromatic compounds. Aldehydes. Ethylbenzene. Hydrogen halides. Polymer fragments. Styrene. Under high heat, non-flaming conditions, small amounts of aromatic hydrocarbons such as styrene and ethylbenzene are generated.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity

Swallowing is unlikely because of the physical state. Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Acute dermal toxicity

Skin absorption is unlikely due to physical properties.

As product: The dermal LD50 has not been determined.

Acute inhalation toxicity

Dust may cause irritation to upper respiratory tract (nose and throat). Fumes/vapors released during thermal operations such as hot wire cutting may cause respiratory irritation.

Concentrations of the blowing agents anticipated incidental to proper handling are expected to be well below those which cause acute inhalation effects and below exposure guidelines.

As product: The LC50 has not been determined.

Skin corrosion/irritation

Essentially nonirritating to skin.

Mechanical injury only.

Serious eye damage/eye irritation

Solid or dust may cause irritation due to mechanical action.

Fumes/vapor released during thermal operations such as hot-wire cutting may cause eye irritation.

Sensitization

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Available data are inadequate to determine single exposure specific target organ toxicity.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Additives are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

Carcinogenicity

Contains component(s) which did not cause cancer in laboratory animals.

Teratogenicity

Contains component(s) which did not cause birth defects in animals; other fetal effects occurred only at doses toxic to the mother. The component(s) is/are: 1,1,1,2-Tetrafluoroethane. Testing has indicated that normal handling and cutting are unlikely to result in exposure levels sufficient to cause the listed effects. Contains component(s) which did not cause birth defects or any other fetal effects in lab animals. Contains an additional component(s) that is/are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

Reproductive toxicity

Contains component(s) which did not interfere with reproduction in animal studies. Contains an additional component(s) that is/are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

Mutagenicity

Genetic toxicity studies on tested components were predominantly negative. Animal genetic toxicity studies were predominantly negative.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

2-Propenenitrile, polymer with ethenylbenzene

Acute oral toxicity

LD50, Rat, > 5,000 mg/kg Estimated.

Acute dermal toxicity

For similar material(s): LD50, Rabbit, > 2,000 mg/kg Estimated.

Acute inhalation toxicity

The LC50 has not been determined.

Styrene, polymers

Acute oral toxicity

Single dose oral LD50 has not been determined.

Acute dermal toxicity

The dermal LD50 has not been determined.

Acute inhalation toxicity

Dust may cause irritation to upper respiratory tract (nose and throat). Vapors released during thermal processing may cause respiratory irritation.

The LC50 has not been determined.

1,1,1,2-Tetrafluoroethane

Acute oral toxicity

Single dose oral LD50 has not been determined.

Acute dermal toxicity

The dermal LD50 has not been determined.

Acute inhalation toxicity

LC50, Rat, 4 Hour, vapour, > 1,500 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Acute toxicity to fish

Not expected to be acutely toxic to aquatic organisms.

Persistence and degradability

Biodegradability: Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

Bioaccumulative potential

Bioaccumulation: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

Mobility in soil

In the terrestrial environment, material is expected to remain in the soil.
In the aquatic environment, material is expected to float.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Landfill. Incinerator or other thermal destruction device.

14. TRANSPORT INFORMATION

TDG

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

**Transport in bulk
according to Annex I or II
of MARPOL 73/78 and the
IBC or IGC Code**

Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Canadian Domestic Substances List (DSL) (DSL)

The product meets the definition of an article and is exempt from inventory requirements.

16. OTHER INFORMATION

Revision

Identification Number: 101195592 / A208 / Issue Date: 11/07/2016 / Version: 9.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

TWA	8-hr Time Weighted Average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

We urge each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

SAFETY DATA SHEET

Version 1.1

Revision Date 01/30/2018

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

Recommended use of the chemical and restrictions on use

Recommended use : Hot melt adhesive

Restrictions on use : For industrial use only.

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Solid form
Color	Light Amber
Odor	Neutral

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Potential Health Effects

Inhalation : Vapors/fumes may be irritating at application temperatures.

Skin : Contact with hot product will cause thermal burns.

Aggravated Medical Condition : None known.

Carcinogenicity:

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or

SAFETY DATA SHEET

Version 1.1

Revision Date 01/30/2018

NTP

equal to 0.1% is on OSHA's list of regulated carcinogens. No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

No hazardous ingredients

SECTION 4. FIRST AID MEASURES

- General advice : Show this material safety data sheet to the doctor in attendance.
- If inhaled : Move to fresh air.
If symptoms persist, call a physician.
- In case of skin contact : Wash off with soap and water.
Cool melted product on skin with plenty of water. Do not remove solidified product.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- If swallowed : Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this SDS.
- Notes to physician : Use mineral oil to soften and loosen product for removal.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Unsuitable extinguishing media : Do NOT use water jet.
- Specific hazards during fire fighting : Burning produces irritant fumes.
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, : Refer to protective measures listed in sections 7 and 8.

SAFETY DATA SHEET

Version 1.1

Revision Date 01/30/2018

protective equipment and
emergency procedures
Methods and materials for
containment and cleaning up : Allow to solidify.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Avoid breathing vapors/fumes of heated product. Prevent contact with molten product.

Conditions for safe storage : Keep in a dry, cool place.

Materials to avoid : No special restrictions on storage with other products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : At the application temperature, use of local exhaust over the premelting reservoir is encouraged.

Personal protective equipment

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Filter type : Particulates type

Hand protection

Material : Protective gloves

Remarks : When handling hot material, use heat resistant gloves.

Eye protection : Safety glasses

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Solid form

Color : Light Amber

Odor : Neutral

Odor Threshold : No data available

Boiling point/boiling range : not determined

Evaporation rate : not determined

Flammability (solid, gas) : Not classified as a flammability hazard

Upper explosion limit : Upper flammability limit
not determined

SAFETY DATA SHEET

Version 1.1

Revision Date 01/30/2018

Lower explosion limit	: Lower flammability limit not determined
Relative vapor density	: not determined
Density	: 0.960 g/cm ³
Solubility(ies)	
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: not determined
Thermal decomposition	: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
Viscosity	
Viscosity, kinematic	: Not applicable
Solid Content, % by weight:	: 100
VOC, % by weight	: 0

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	: The product is chemically stable.
Possibility of hazardous reactions	: Hazardous polymerization does not occur.
Hazardous decomposition products	: Stable under normal conditions. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

SAFETY DATA SHEET

Version 1.1

Revision Date 01/30/2018

Reproductive toxicity

No data available

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Aspiration toxicity

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues

: To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Solidify and dispose of in an approved landfill. Consult state, local or provincial authorities for more restrictive requirements.
The hazard and precautionary statements displayed on the label also apply to any residues left in the container.

SECTION 14. TRANSPORT INFORMATION

Special precautions for user

Not applicable

Domestic regulation

49 CFR

SAFETY DATA SHEET

Version 1.1

Revision Date 01/30/2018

Not regulated as a dangerous good

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

US State Regulations

California Prop 65 This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

TSCA	On TSCA Inventory
DSL	All components of this product are on the Canadian DSL
REACH	Not in compliance with the inventory
AICS	On the inventory, or in compliance with the inventory
NZIoC	Not in compliance with the inventory
ENCS	On the inventory, or in compliance with the inventory
KECI	On the inventory, or in compliance with the inventory
PICCS	On the inventory, or in compliance with the inventory
IECSC	On the inventory, or in compliance with the inventory
TWINV	Not in compliance with the inventory

SAFETY DATA SHEET

Version 1.1

Revision Date 01/30/2018

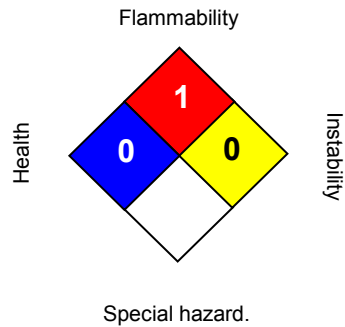
Inventories Legend TSCA (USA), DSL (Canada), REACH(Europe), AICS (Australia), NZIoC (New Zealand), ENCS (Japan), KECI (Korea), PICCS (Philippines), IECSC (China), TWINV (Taiwan)

SECTION 16. OTHER INFORMATION

Prepared by: Global Regulatory Department

Further information

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic