

MATERIAL SAFETY DATA SHEET DRICORE SMARTWALL®

AGT Products Inc.
2311 Royal Windsor Dr., Unit 2
Mississauga, ON L5J 1K5
Canada

Fax: 1-888-783-0344
Phone: 1-866-767-6374

Version Date: 05/29/2013

Safety Data Sheet

NEOPOR® 2300

Revision date : 2013/04/25

Version: 2.1

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(30069230/SDS_GEN_CA/EN)

1. Product and Company Identification

Company

BASF Canada Inc.
100 Milverton Drive
Mississauga, ON L5R 4H1, CANADA

24 Hour Emergency Response Information

CANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE: (800) 454-COPE (2673)

Synonyms:

Expandable Polystyrene

2. Hazards Identification

Emergency overview

NO PARTICULAR HAZARDS KNOWN.

State of matter: solid
Colour: black
Odour: faint specific odour

Potential health effects**Acute toxicity:**

Contact with heated product can cause thermal burns.

Irritation / corrosion:

No irritation is expected under intended use and appropriate handling.

Sensitization:

There is no evidence of a skin-sensitizing potential.

Chronic toxicity:**Carcinogenicity:** Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.**Reproductive toxicity:** Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.**Genotoxicity:** Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.**Signs and symptoms of overexposure:**

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No hazards anticipated.

Potential environmental effects

Aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. No toxic effects occur within the range of solubility.

Degradation / environmental fate:

In accordance with the required stability the product is not readily biodegradable. The product has not been tested. The statement has been derived from the structure of the product. The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants.

On the basis of the data available concerning eliminability/degradation and bioaccumulation potential, longer-term harm to the environment is improbable. No data available concerning biodegradation and elimination.

3. Composition / Information on Ingredients

Not WHMIS controlled.

4. First-Aid Measures

If on skin:

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. If irritation develops, seek medical attention.

If swallowed:

No hazards anticipated. Rinse mouth and then drink plenty of water. If difficulties occur: Obtain medical attention.

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Flash point:

Vapours are flammable.

Information on: Pentane

Flash point: -56 °C

Autoignition: 285 °C

(DIN 51794)

Lower explosion limit:

Product not examined: Value is calculated from the data of the components.

Information on: Pentane

Lower explosion limit:

For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.

Upper explosion limit:

Product not examined: Value is calculated from the data of the components.

Information on: Pentane

Upper explosion limit:

For liquids not relevant for classification and labelling.

Flammability: not highly flammable

(UN Test N.1 (ready combustible solids))

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Self-ignition temperature: not self-igniting

Suitable extinguishing media:

water spray, foam, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:

water jet

Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

6. Accidental release measures

Personal precautions:

Sources of ignition should be kept well clear. Ensure adequate ventilation. Note that this gas is heavier than air and can spread along the ground in the direction of the wind. Beware of pits and confined spaces. Use antistatic tools. Vapours are heavy and collect in low areas. Avoid all sources of ignition: heat, sparks, open flame.

Environmental precautions:

Do not allow to enter drains or waterways. Discharge into the environment must be avoided.

Cleanup:

Ensure adequate ventilation. Dispose of absorbed material in accordance with regulations. Avoid raising dust.

For small amounts: Sweep/shovel up. Pack in tightly closed containers for disposal.

For large amounts: Pick up with vacuum equipment approved for use in hazardous locations. Pack in tightly closed containers for disposal.

Further information:

High risk of slipping due to leakage/spillage of product. Shut off or stop source of leak. Substance/product can form explosive mixture with air.

7. Handling and Storage

Handling

General advice:

Handle in accordance with good industrial hygiene and safety practice. Upon delivery, trailer and/or container should be opened and allowed to vent for a minimum of one (1) hour before unloading. The substance/product in bead or expanded form generates static charges during handling which are difficult to dissipate due to the insulating properties. Take precautionary measures against static discharges. Use antistatic tools. Provide good room ventilation even at ground level (vapours are heavier than air). Containers should be opened carefully in well-ventilated areas to avoid static discharge. Maintain air circulation and ventilation at a minimum rate of six air changes per hour to prevent the formation of flammable concentrations. Ensure adequate ventilation. The substance/ product may be handled only by appropriately trained personnel.

Protection against fire and explosion:

Vapours may form ignitable mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Keep away from heat. Avoid all sources of ignition: heat, sparks, open flame. Containers should be earthed during decanting operations. It is recommended that all conductive parts of the machinery are grounded. The product is combustible. Avoid flammable gas mixtures. Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition. Because of danger of explosion, avoid vapours reaching the cellar, sewage water and pits. The conveying velocity of the product should not exceed 8 m/second. Empty containers may contain flammable residue. All parts of the plant and equipment should be electrically bonded together and grounded. Electrical continuity should be checked at regular intervals.

Storage

General advice:

Protect against heat. Keep away from sources of ignition - No smoking. Keep only in the original container.

Keep container tightly sealed. Protect against moisture. Avoid direct sunlight. Protect containers from physical

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damage. The authority permits and storage regulations must be observed. Store protected against freezing. Ventilate freight container with open door for one hour before unloading. Keep tanks under inert gas. Air monitoring should be used to alert any build up of explosive mixtures. Equipment to be installed in an environment with potentially explosive atmospheres should conform to the requirements of ATEX Directive 94/9/EC.

Storage incompatibility:

General advice: Segregate from strong oxidizing agents.

Storage stability:

Keep container tightly closed and dry. Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame.

8. Exposure Controls and Personal Protection

Components with occupational exposure limits

Pentane	OSHA	PEL 1,000 ppm 2,950 mg/m ³ ;
	ACGIH	TWA value 600 ppm ;
styrene	OSHA	TWA value 100 ppm ; CLV 200 ppm ; max. conc. 600 ppm ;
	ACGIH	TWA value 20 ppm ; STEL value 40 ppm ;
isopentane	ACGIH	TWA value 600 ppm ;

Advice on system design:

Provide local exhaust ventilation to control vapours/mists.

Personal protective equipment

Hand protection:

Chemical resistant protective gloves, non-static gloves (e.g. of leather)

Eye protection:

Tightly fitting safety goggles (chemical goggles).

Body protection:

Anti-static protective clothing, Antistatic safety shoes

General safety and hygiene measures:

Avoid inhalation of dusts/mists/vapours. No special precautions necessary. When using do not eat or drink. When using do not smoke.

9. Physical and Chemical Properties

Form:	beads	
Odour:	faint specific odour	
Odour threshold:	No data available.	
Colour:	black	
pH value:		not soluble
softening temperature:	approx. 70 °C	
Boiling point:		not applicable
Sublimation point:		not applicable
Vapour pressure:		not applicable
Density:	approx. 1.02 - 1.05 g/cm ³	(20 °C)
Bulk density:	approx. 600 kg/m ³	(20 °C)
Vapour density:	2.5	Heavier than air.
Partitioning coefficient n-octanol/water (log Pow):		not applicable
		not applicable

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Solubility (qualitative): soluble
solvent(s): aromatic hydrocarbons, ketones, organic solvents,

10. Stability and Reactivity

Substances to avoid:

explosive substances according UN transport regulations class 1, Propellant release will be boosted with increasing temperature.

Hazardous reactions:

Formation of explosive gas/air mixtures.

Decomposition products:

Possible thermal decomposition products: Pentane, styrene monomers, Heated product evolves combustible vapours.

Thermal decomposition:

approx. 220 °C
No decomposition if used as directed.

Oxidizing properties:

not fire-propagating

11. Toxicological information

Acute toxicity

Oral:

Type of value: LD50
Value: > 2,000 mg/kg

Inhalation:

Type of value: LC50
Value: > 5 mg/l

Dermal:

Type of value: LD50
Value: > 2,000 mg/kg

Irritation / corrosion

Information on: isopentane
Assessment of irritating effects:
Skin contact may cause irritation and dermatitis.

Information on: Pentane
Assessment of irritating effects:
Not irritating to the skin. Not irritating to the eyes.

Skin:

Result: non-irritant

Eye:

Result: non-irritant

Sensitization

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Information on: Pentane
Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies.

Result: Non-sensitizing.

Other Information:

No reports of ill effects provided product was correctly handled and processed.

12. Ecological Information

Aquatic invertebrates

Acute:
OECD Guideline 202, part 1 static
Daphnia magna/EC50 (48 h): > 100 mg/l
Nominal concentration. The product has low solubility in the test medium. An eluate has been tested. No toxic effects occur within the range of solubility. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic plants

Toxicity to aquatic plants:
OECD Guideline 201 static
green algae/EC50 (72 h): > 100 mg/l
Nominal concentration. The product has low solubility in the test medium. An eluate has been tested. No toxic effects occur within the range of solubility. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Degradability / Persistence Biological / Abiological Degradation

Evaluation: Non-biodegradable.

Bioaccumulation

The product will not be readily bioavailable due to its consistency and insolubility in water. Because of the product's consistency and low water solubility, bioavailability is improbable.

Other adverse effects:

At the present state of knowledge, no negative ecological effects are expected. No toxic effects occur within the range of solubility.
The product contains substances classified as dangerous for the environment. Studies conducted with the preparation revealed no effects on aquatic organisms. The classification is based on the studies with the preparation.

Information on: Pentane
The substance has a very low Global Warming Potential and no Ozone Depleting Potential.

13. Disposal considerations

Waste disposal of substance:
Dispose of in a licensed facility. Observe all local regulations.

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Container disposal:

Completely emptied packagings can be given for recycling. Contact manufacturer regarding recycling.

14. Transport Information

Land transport

TDG

Hazard class: 9
Packing group: III
ID number: UN 2211
Hazard label: 9
Proper shipping name: POLYMERIC BEADS, EXPANDABLE (contains PENTANE)

Sea transport

IMDG

Hazard class: 9
Packing group: III
ID number: UN 2211
Hazard label: 9
Marine pollutant: NO
Proper shipping name: POLYMERIC BEADS, EXPANDABLE (contains PENTANE)

Air transport

IATA/ICAO

Hazard class: 9
Packing group: III
ID number: UN 2211
Hazard label: 9
Proper shipping name: POLYMERIC BEADS, EXPANDABLE (contains PENTANE)

15. Regulatory Information

Federal Regulations

Registration status:

Chemical DSL, CA released / listed

Not WHMIS controlled.

THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

16. Other Information

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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SDS Prepared by:

BASF NA Product Regulations

msds@basf.com

BASF HOTLINE (800) 454 – COPE (2673)

SDS Prepared on: 2013/04/25

NEOPOR is a registered trademark of BASF Canada or BASF SE
END OF DATA SHEET

SECTION 1 CHEMICAL PRODUCT AND IDENTIFICATION

CGC Inc.
350 Burnhamthorpe Rd. W.,
Mississauga, Ontario L5B 3J1
(905) fax 803-5600 (905) 803-5688

Product Safety: 1 (800) 507-8899
www.usg.com
Version Date: January 1, 2011
Version: 2

PRODUCT(S) SHEETROCK® Brand UltraLight Panels

**CHEMICAL FAMILY /
GENERAL CATEGORY** Wallboard

SYNONYMS Gypsum Panels, Drywall

SECTION 2 HAZARD IDENTIFICATION

**EMERGENCY OVERVIEW:
ΔWARNING!**

This product is not expected to produce any unusual hazards during normal use. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract. This product does not present an inhalation, ingestion, or contact health hazard unless subjected to operations such as sawing, sanding or machining which result in the generation of airborne particulate. This product contains quartz (crystalline silica) as a naturally occurring contaminant.

POTENTIAL HEALTH EFFECTS (See Section 11 for more information)

ACUTE :

Inhalation	Exposure to dust generated during the handling or use of the product may cause temporary irritation to eyes, skin, nose, throat, and upper respiratory tract. Persons subjected to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation. Labored breathing may occur after excessive inhalation. If respiratory symptoms persist, consult physician.
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Eyes	Dust can cause temporary mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult physician.
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Skin	None known.
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Ingestion	None known.
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CHRONIC:

Inhalation	The concentration of respirable crystalline silica measured in bulk samples of USG gypsum was less than 0.1 Wt.%. Panels do not release respirable dust in their installed state and therefore do not present any known health hazards when installed and properly maintained. Exposures to respirable crystalline silica are not expected during the normal use of this product; however, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. The risk of developing silicosis is dependent upon the exposure intensity and duration.
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Eyes	None known.
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Skin	None known.
Ingestion	None known.

TARGET ORGANS: Eyes, skin and respiratory system.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.

CARCINOGENICITY CLASSIFICATION OF INGREDIENT(S) All substances listed are associated with the nature of the raw materials used in the manufacture of this product and are not independent components of the product formulation. All substances, if present, are at levels well below regulatory limits. See Section 11: Toxicology Information for detailed information.

MATERIAL	IARC	NTP	ACGIH	CAL- 65
Crystalline silica	1	1	A2	Listed

IARC - International Agency for Research on Cancer: 1- Carcinogenic to humans; 2A – Probably carcinogenic to humans; 2B – Possibly carcinogenic to humans; 3 - Not classifiable as a carcinogen; 4 – Probably not a carcinogen

NTP – National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS): 1- Known to be carcinogen; 2- Anticipated to be carcinogens

ACGIH – American Conference of Governmental Industrial Hygienists: A1 – Confirmed human carcinogen; A2 – Suspected human carcinogen; A3 – Animal carcinogen; A4 - Not classifiable as a carcinogen; A5 – Not suspected as a human carcinogen

CAL-65 – California Proposition 65 “Chemicals known to the State of California to Cause Cancer”

Respirable crystalline silica: IARC: Group 1 carcinogen, NTP: Known human carcinogen. The weight percent of crystalline silica given represents total quartz and not the respirable fraction. The weight percent of respirable silica has not been measured in this product.

POTENTIAL ENVIRONMENTAL EFFECTS: Toxicity studies of gypsum performed with fish, aquatic invertebrates and aquatic plants showed no toxic effect. (See Section 12 for more information.)

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

MATERIAL	WT%	CAS #
Gypsum or Calcium Sulfate Dihydrate (CaSO ₄ •2H ₂ O)	>85	13397-24-5/10101-41-4
Cellulose	<10	9004-34-6
Starch	<5	9005-25-8
Crystalline Silica	<5	14808-60-7^

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory and the Canadian Domestic Substances List (DSL).

^The weight percent for silica represents total quartz and not the respirable fraction.

SECTION 4 FIRST AID MEASURES

FIRST AID PROCEDURES

Inhalation	Remove to fresh air. Leave the area of exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, contact physician.
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Eyes	In case of contact, do not rub or scratch your eyes. To prevent mechanical irritation, flush thoroughly with water for 15 minutes. If irritation persists, consult physician.
Skin	Wash with mild soap and water. If irritation persists, consult physician.
Ingestion	This product is not intended to be ingested or eaten. If gastric disturbance occurs, call physician.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma. Pre-existing skin diseases such as, but not limited to, rashes and dermatitis.

NOTES TO PHYSICIAN: Treatment should be directed at the control of symptoms and the clinical condition.

**SECTION 5
FIRE FIGHTING MEASURES**

General Fire Hazards	None known		
Extinguishing Media	Water or use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures	Wear appropriate personal protective equipment. See section 8.		
Unusual Fire/ Explosion Hazards	None known		
Hazardous Combustion Products	None known		
Flash Point	Not Determined	Auto Ignition	Not Applicable
Method Used	Not Applicable	Flammability Classification	Not Applicable
Upper Flammable Limit (UFL)	Not Determined		
Lower Flammable Limit (LFL)	Not Determined	Rate of Burning	Not Applicable

**SECTION 6
ACCIDENTAL RELEASE MEASURES**

CONTAINMENT: Collect panels from spillage and if not damaged or contaminated by foreign material, panels may be reclaimed.

CLEAN-UP: Use normal clean up procedures. No special precautions.

DISPOSAL: Follow all local, state, provincial and federal regulations. Never discharge large releases directly into sewers or surface waters.

**SECTION 7
HANDLING AND STORAGE**

HANDLING: Avoid dust contact with eyes and skin. Wear the appropriate eye and skin protection against dust (See Section 8). Minimize dust generation and accumulation. Avoid breathing dust. Wear the appropriate respiratory protection against dust in poorly ventilated areas and if TLV is exceeded (see Sections 2 and 8). Use good safety and industrial hygiene practices. When moving board with a forklift or similar equipment, it is essential that the equipment be rated capable of handling the loads. The forks should always be long enough to extend completely through the width of the load. Fork spacing between supports should be one half the length of the panels or base being handled so that a maximum of 4' extends beyond the supports on either end. Follow traditional building practices; such as management of water away from the interior of the structure to avoid the growth of mold, mildew and fungus. Remove any building products suspected of being exposed to sustained moisture and considered conducive to mold growth from the jobsite. Gypsum panels are very heavy awkward loads posing the risk of severe back injury. Use proper lifting techniques.

STORAGE: Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities (see Section 10). Protect product from physical damage. Protect from weather and prevent exposure to sustained moisture. Gypsum Association literature recommends storing board flat to avoid damaging edges, warping the board and the potential safety hazards of the board falling over. However, in other situations, storing the board flat may cause a tripping hazard or exceed floor limit loads. If stacking board vertically, leave at least 4 inches from the wall to decrease the risk of falling board and no more than 6 inches to avoid too much lateral weight against the wall.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

MATERIAL	WT%	TLV (mg/m ³)	PEL(mg/m ³)
Gypsum or Calcium Sulfate Dihydrate (CaSO ₄ •2H ₂ O)	>85	10	15 (T) / 5 (R)
Cellulose	<10	10	15 (T) / 5 (R)
Starch	<5	10	15 (T) / 5 (R)
Crystalline Silica	<5	0.025 (R)	0.1 (R)

(T)—Total; (R)—Respirable; (NE)—Not Established; (C)—Ceiling; (STEL)—Short-term exposure limit

(F)—Fume; (Du)—Dust; (M)—Mist

ppm—part per million; f/cc—fiber per cubic centimeter; mppcf—million particles per cubic foot

ENGINEERING CONTROLS: Provide ventilation sufficient to control airborne dust levels. If user operations generate airborne dust, use ventilation to keep dust concentrations below permissible exposure limits. Where general ventilation is inadequate, use process enclosures, local exhaust ventilation, or other engineering controls to control dust levels below permissible exposure limits.

RESPIRATORY PROTECTION: Wear a NIOSH/MSHA-approved respirator equipped with particulate cartridges when dusty in poorly ventilated areas, and if TLV is exceeded. A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. If engineering controls are not possible, wear a properly fitted NIOSH/MSHA-approved particulate respirator.

OTHER PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face	Wear eye protection, safety glasses or goggles, to avoid possible eye contact.
Skin	Wear gloves and protective clothing to prevent repeated or prolonged skin contact.
General	Selection of Personal Protective Equipment will depend on environmental working conditions and operations.

**SECTION 9
PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	Paper with gray to off white core	Vapor Density (Air = 1)	Not Applicable
Odor	Low to no odor	Specific Gravity (H₂O = 1)	2.32 – 2.96
Odor Threshold	Not Determined	Solubility in water (g/100g)	0.26/100g
Physical State	Solid	Partition Coefficient	Not Applicable
pH @ 25 ° C	~ 7	Auto-ignition Temp	Not Determined
Melting Point	Not Applicable	Decomposition Temp	2650°F/1450°C
Freezing Point	Not Applicable	Viscosity	Not Applicable
Boiling Point	Not Applicable	Particle Size	Varies
Flash Point	Not Determined	Bulk Density	~ 30 lb/ft ³
Evaporation Rate (BuAc = 1)	Not Applicable	Molecular Weight	~ 172
Upper Flammable Limit (UFL)	Not Determined	VOC Content	Zero g/L
Lower Flammable Limit (LFL)	Not Determined	Percent Volatile	Zero
Vapor Pressure (mm Hg)	Not Applicable		

**SECTION 10
CHEMICAL STABILITY AND REACTIVITY**

STABILITY	Stable.
CONDITIONS TO AVOID	Contact with incompatibles (see below).
INCOMPATIBILITY	None known.
HAZARDOUS POLYMERIZATION	None known.
HAZARDOUS DECOMPOSITION	None known.

**SECTION 11
TOXICOLOGICAL INFORMATION**

ACUTE EFFECTS: The acute oral toxicity study [OECD TG 420] of calcium sulfate dihydrate showed that this chemical did not cause any changes even at 2,000 mg/kg b.w. Therefore, the oral LD50 value was more than 2,000-mg/kg b.w. for female rats. Gypsum paste applied experimentally to the eyes of rabbits was not an irritant. Gypsum dust particulate has shown an irritant action on mucous membranes of the respiratory tract and eyes. The sulfate ion has caused gastro-intestinal disturbance in humans following large oral doses. Limited studies involving the repeated inhalation of an (unspecified) calcium sulfate failed to identify any particular target organs in monkeys, rats and hamsters. No evidence of mutagenicity was found in Ames bacterial tests.

CHRONIC EFFECTS / CARCINOGENICITY: Panels do not release respirable dust in their installed state and therefore do not present any known health hazards when installed and properly maintained.
Crystalline Silica: Exposures to respirable crystalline silica are not expected during the normal use of this product;

however, actual levels must be determined by workplace hygiene testing. The weight percent of respirable crystalline silica may not have been measured in this product. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer. The development of silicosis may increase the risks of additional health effects. Smoking in combination with silica exposures increases the risk of cancer. The risk of developing silicosis is dependent upon the exposure intensity and duration.

In June, 1997, IARC classified crystalline silica (quartz and cristobalite) as a human carcinogen. In making the overall evaluation, the IARC Working Group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

IARC states that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).

SECTION 12
ECOLOGICAL INFORMATION

ENVIRONMENTAL TOXICITY: This product has no known adverse effect on ecology. Toxicity studies of gypsum performed with fish, aquatic invertebrates and aquatic plants showed no toxic effect.

Ecotoxicity value	Not determined.
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SECTION 13
DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of material in accordance with federal, state, and local regulations. Never discharge directly into sewers or surface waters. Consult with environmental regulatory agencies for guidance on acceptable disposal practices.

SECTION 14
TRANSPORT INFORMATION

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

Shipping Name	Same as product name.
Hazard Class	Not classified.
UN/NA #	None. Not classified.
Packing Group	None.
Label (s) Required	Not applicable.
GGVSec/MDG-Code	Not classified.
ICAO/IATA-DGR	Not applicable.
RID/ADR	None.
ADNR	None.

**SECTION 15
 REGULATORY INFORMATION**

UNITED STATES REGULATIONS

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

MATERIAL	WT%	3 0 2	3 0 4	3 1 3	CERCLA	CAA Sec. 112	RCRA Code
Gypsum or Calcium Sulfate Dihydrate (CaSO ₄ •2H ₂ O)	>85	NL	NL	NL	NL	NL	NL
Cellulose	<10	NL	NL	NL	NL	NL	NL
Starch	<5	NL	NL	NL	NL	NL	NL
Crystalline Silica	<5	NL	NL	NL	NL	NL	NL

Key : NL = Not Listed

SARA Title III Section 302 (EPCRA) Extremely Hazardous Substances: Threshold Planning Quantity (TPQ)

SARA Title III Section 304 (EPCRA) Extremely Hazardous Substances: Reportable Quantity (RQ)

SARA Title III Section 313 (EPCRA) Toxic Chemicals: X= Subject to reporting under section 313

CERCLA Hazardous Substances: Reportable Quantity (RQ)

CAA Section 112 (r) Regulated Chemicals for Accidental Release Prevention: Threshold Quantities(TQ)

RCRA Hazardous Waste: RCRA hazardous waste code

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of Controlled Product regulations and the MSDS contains all the information required by the Controlled Products Regulations. All ingredients of this product are included in the Canadian Domestic Substances List (DSL).

MATERIAL	WT%	IDL Item #	WHMIS Classification
Gypsum or Calcium Sulfate Dihydrate (CaSO ₄ •2H ₂ O)	>85	Not Listed	Not Listed
Cellulose	<10	Not Listed	Not Listed
Starch	<5	Not Listed	Not Listed
Crystalline Silica	<5	1406	D2A

IDL Item#: Canadian Hazardous Products Act – Ingredient Disclosure List Item #

WHMIS Classification: Workplace Hazardous Material Information System

Risk and Safety Phrases defined by European Union Directive 67/548/EEC (Annex III and IV)

R-Phrase(s): R36/37/38

S-Phrase(s): S51 S38 S39

**SECTION 16
 OTHER INFORMATION**

Label Information

Δ WARNING!

Dust can cause irritation to eyes, skin and respiratory tract. Wear eye, skin and respiratory protection as necessary per working conditions. If eye contact occurs flush with water for 15 minutes. Do not ingest. If ingested, call physician. If cutting board with a power tool, use a wet or vacuum saw to reduce the amount of dust generated. Panels are heavy and can fall over, causing serious injury or death. Avoid creating a tripping hazard and do not exceed floor limit loads. Product safety information: 800-507-8899 or usg.com. Customer Service: 800 USG-4-YOU (800 874-4968). KEEP OUT OF REACH OF CHILDREN.

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings:			HMIS Ratings:		<table border="1"> <tr> <td>HEALTH</td> <td>*</td> <td>1</td> </tr> <tr> <td>FLAMMABILITY</td> <td></td> <td>0</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td></td> <td>0</td> </tr> <tr> <td>PERSONAL PROTECTION</td> <td></td> <td>E</td> </tr> </table>	HEALTH	*	1	FLAMMABILITY		0	PHYSICAL HAZARD		0	PERSONAL PROTECTION		E	0 = Minimal Hazard
HEALTH	*		1															
FLAMMABILITY			0															
PHYSICAL HAZARD			0															
PERSONAL PROTECTION		E																
Health:	1	Health:	1	1 = Slight Hazard														
Fire:	0	Fire:	0	2 = Moderate Hazard														
Reactivity:	0	Reactivity:	0	3 = Serious Hazard														
					4 = Severe Hazard													

E – Safety glasses, gloves and dust respirator; * - Contains silica

Key/Legend

ANSI	American National Standards Institute
ACGIH	American Conference of Governmental Industrial Hygienists
CAA	Clean Air Act
CAS	Chemical Abstracts Service (Registry Number)
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
DOT	United States Department of Transportation
DSL	Canadian Domestic Substances List
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning & Community Right-to-know Act
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
MSHA	Mine Safety and Health Administration
NDSL	Canadian Non-Domestic Substances List
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Health and Safety Administration
PEL	Permissible Exposure Limit
PPE	Personal Protection Equipment
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act of 1986
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
UN/NA#	United Nations/North America number
WHMIS	Workplace Hazardous Material Information System



MATERIAL SAFETY DATA SHEET

SHEETROCK® Brand UltraLight Panels

MSDS #54-100-002
Page 9 of 9

Prepared by:
Product Safety
USG Corporation
550 West Adams Street
Chicago, IL 60661-3637

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his/her own particular use.

END

MATERIAL SAFETY DATA SHEET

REVISION DATE: 02-28-2013

SUPERSEDES: 07-30-2010

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**COMPANY INFORMATION**

H.B. Fuller Company
1200 Willow Lake Boulevard
Vadnais Heights, MN 55110
Phone: 888-423-8553

Medical Emergency Phone Number (24 Hours): 1-888-853-1758
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

PRODUCT INFORMATION

PRODUCT NUMBER: RHM1002
PRODUCT DESCRIPTION: Hot melt moisture cure adhesive
PRODUCT IDENTIFIER: 828624PM

SECTION 2: HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

PHYSICAL STATE: Solid
COLOR: Amber
ODOR: Characteristic

Moderate eye irritant.

Can cause skin irritation. Contact with molten product will cause thermal burns. May cause allergic skin reaction.

Vapors/fumes may be irritating at application temperatures. May cause an allergic respiratory reaction.

Harmful if swallowed.

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY

EYE: Can cause moderate irritation, tearing and reddening, but not likely to permanently injure eye tissue.

Exposure to hot material may cause thermal burns.

SKIN: Can cause skin irritation. Contact with product at elevated temperatures can result in thermal burns.
May cause sensitization.

INHALATION: Can cause minor respiratory irritation. Vapors may have an offensive odor that may cause headaches, nausea, and vomiting.

Other possible symptoms include; wheezing and coughing due to pulmonary edema (fluid build-up in lungs).
May cause allergic respiratory reaction.

At room temperature, MDI vapors are minimal due to low vapor pressure. If product is heated or if an aerosol/mist is generated, airborne concentrations may be reached that cause irritation or other adverse effects.

INGESTION: Ingestion is not an anticipated route of exposure. Harmful if swallowed. Irritating to mouth, throat, and stomach.

LONG-TERM (CHRONIC) HEALTH EFFECTS

CHRONIC: May cause tumors based on tests with laboratory animals.

TARGET ORGAN(S): Lungs Skin

REGULATED CARCINOGEN STATUS:

Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: Skin disease including eczema and sensitization; Lung disease; Persons with existing asthmatic conditions may experience difficulty breathing. Persons who have been sensitized to isocyanates may experience symptoms at very low exposure levels.

MATERIAL SAFETY DATA SHEET**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS #	PERCENT
Methylene bisphenyl diisocyanate (MDI)	101-68-8	5 - 10
Diphenylmethane-2,4-diisocyanate	5873-54-1	0.1 - 1

Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for exposure limit guidelines.

SECTION 4: FIRST AID MEASURES

IF IN EYES: Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention. For hot product, immediately flush eyes with plenty of water for at least 20 minutes. Get immediate medical attention.

IF ON SKIN: Wash with soap and water. Get medical attention if irritation develops or persists. For hot material, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean gauze and do not attempt to remove the material yourself. Get prompt medical attention. Medical personnel: coat with mineral oil to soften material for removal.

IF VAPORS INHALED: Remove to fresh air. Call a physician if symptoms persist. If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.

IF SWALLOWED: Do not induce vomiting. Seek medical attention immediately. Drink two glasses of water or milk to dilute. Do not give anything by mouth to an unconscious person.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT:	> 204 C (400 F) Cleveland Closed Cup
AUTOIGNITION TEMPERATURE:	Not established
LOWER EXPLOSIVE LIMIT (% in air):	Not established
UPPER EXPLOSIVE LIMIT (% in air):	Not established
EXTINGUISHING MEDIA:	A solid stream of water may scatter molten product. Use water spray, foam, dry chemical or carbon dioxide.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Material will burn in a fire.
SPECIAL FIRE FIGHTING INSTRUCTIONS:	Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.
HAZARDOUS COMBUSTION PRODUCTS:	Carbon dioxide, Carbon monoxide Nitrogen containing gases Hydrogen cyanide

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION:	Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this MSDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred.
CLEAN-UP:	Allow molten material to solidify before disposal.

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

SECTION 7: HANDLING AND STORAGE

Handling:	Harmful or irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. Avoid breathing vapors/fumes of heated product. Prevent contact with molten product.
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MATERIAL SAFETY DATA SHEET

Local exhaust ventilation and air-supplied respiratory protection should be used when changing product containers at application temperature.
 Isocyanate levels should be monitored in application areas during use.

Storage: Store in a cool, dry place.
 Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Wear safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Have an eye wash station available.

SKIN PROTECTION: Avoid skin contact by wearing chemically resistant gloves. When material is heated, wear thermally insulating gloves to protect against thermal burns.

GLOVES: Nitrile

RESPIRATORY PROTECTION: Respiratory protection may be required to avoid overexposure when handling this product. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Use supplied-air respiratory equipment as required. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).

VENTILATION: Use local exhaust ventilation or other engineering controls to minimize exposures. At the application temperature, use of local exhaust over the premelting reservoir is encouraged.

EXPOSURE LIMITS:

Chemical Name	ACGIH EXPOSURE LIMITS	OSHA PEL
Methylene bisphenyl diisocyanate (MDI)	0.005 ppm TWA	0.02 ppm Ceiling; 0.2 mg/m ³ Ceiling
Diphenylmethane-2,4-diisocyanate	0.005 ppm TWA	0.02 ppm Ceiling; 0.2 mg/m ³ Ceiling

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Solid
COLOR:	Amber
ODOR:	Characteristic
ODOR THRESHOLD:	Not established
WEIGHT PER GALLON (lbs.):	8.43
SPECIFIC GRAVITY:	1.010
SOLIDS (% by weight):	Not applicable
pH:	Not established
FLASH POINT:	> 204 C (400 F) Cleveland Closed Cup
BOILING POINT (deg. C):	Not established
FREEZING/MELTING POINT (deg. C):	Not established
VAPOR PRESSURE (mm Hg):	Not established
VAPOR DENSITY:	Not established
EVAPORATION RATE:	Not established
OCTANOL/WATER COEFFICIENT:	Not established

MATERIAL SAFETY DATA SHEET

VOC, weight percent

Not determined

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.
CHEMICAL INCOMPATIBILITY: Water Alcohols Amines Strong acids Strong alkalies
HAZARDOUS POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen cyanide Nitrogen containing gases Carbon monoxide, carbon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION

COMPONENT	LD50/LC50
Methylene bisphenyl diisocyanate (MDI)	Oral LD50 Rat 9,200 mg/kg Inhalation LC50 Rat 178.00 mg/cu m (no duration specified)
Diphenylmethane-2,4-diisocyanate	Not established

TOXICOLOGY SUMMARY: No additional health information available.

SECTION 12: ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available

SECTION 13: DISPOSAL CONSIDERATIONS

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. Disposal via incineration at an approved facility is recommended. Consult state, local or provincial authorities for more restrictive requirements.

SECTION 14: TRANSPORTATION INFORMATION

Consult Bill of Lading for transportation information.

DOT: NOT REGULATED

IATA: NOT REGULATED

SECTION 15: REGULATORY INFORMATION**INVENTORY STATUS**

U.S. EPA TSCA: This product is in compliance with the Toxic Substances Control Act's Inventory requirements.

CANADIAN CEPA DSL: This product contains a component that is not on the DSL. If you are the importer of this product into Canada, contact H.B. Fuller for chemical tracking and notification information.

EUROPEAN EINECS: As a result of the introduction of REACH into Europe, this product cannot be imported into Europe unless the REACH requirements are met.

If you need more information about the inventory status of this product call 651-236-5858.

This product may contain chemical substances that are regulated for export by various government agencies (such as the Environmental Protection Agency, the Bureau of Industry and Security, or the Drug Enforcement Administration, among others). Before exporting this product from the USA or Canada, we recommend you contact us at 651-236-5858 (USA) or 450-655-1306 x227 (Canada) to request an export review.

FEDERAL REPORTING

EPA SARA Title III Section 313

Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name	CAS#	%
Methylenebis(phenylisocyanate)	101-68-8	5 - 10

MATERIAL SAFETY DATA SHEET

WHMIS STATUS: Unless listed below, this product is not controlled under the Canadian Workplace Hazardous Materials Information System.

D2A D2B

STATE REPORTING

Proposition 65, The Safe Drinking Water and Toxic Enforcement Act of 1986:

Unless listed below, this product does not contain known levels of any chemical known to the State of California to cause cancer or reproductive harm.

Chemical Name/List	CAS	Percent
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SECTION 16: ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

HMIS RATING: HEALTH -- 2 FLAMMABILITY -- 1 REACTIVITY -- 0

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

Prepared by: The Global Regulatory Department

Phone: 651-236-5842

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to the H.B. Fuller Company from its suppliers, and because the H.B. Fuller Company has no control over the conditions of handling and use, the H.B. Fuller Company makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and the H.B. Fuller Company assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B. Fuller Company products to comply with all applicable federal, state and local laws and regulations.

Section 1. Chemical Product and Company Identification	
Common Name NORBORD ORIENTED STRAND BOARD (OSB)	Chemical Name Not Applicable
Supplier/ Manufacturer Norbord Inc. 1 Toronto Street, Suite 600 Toronto, Ontario M5C 2W4	Chemical Formula Not Applicable
Synonym Not available	CAS # Mixture
Trade Name Norbord Oriented Strand Board (OSB), Norbord TallWall, Norbord Windstorm, Norbord Stabledge, Norbord Solarbord, Norbord TruFlor, Norbord Pinnacle, Norbord Trubord and Norbord Rimboard Plus.	Validation Date 07/26/2010
Product Description These panel products contain hardwood and/or softwood strands bonded with phenol formaldehyde copolymer adhesive resin and wax. Polymeric Diphenylmethane Diisocyanate (PMDI) adhesive may also be used. Solarbord includes a heat-reflecting aluminum foil laminated onto one side of the panel.	Print Date 07/26/2010
Material Uses For industrial and commercial use.	Responsible Name Norbord Inc.
	In Case of Emergency (416) 365-0705

Section 2. Composition and Information on Ingredients					
Name	CAS #	% by Weight	LD50	LC50	Exposure Limits
Hardwood (e.g., Aspen, Sweet Gum, etc.) and/or Softwood (Southern Yellow Pine)	Not Applicable	94-98	Not available	Not available	ACGIH (2010) 1 mg/m ³ TWA A4 Inhalable Dust OSHA PEL 15 mg/m ³ TWA Total Dust 5 mg/m ³ Respirable Dust Québec (OEL S-2.1, r.15 - 2010) (Except Red Cedar) 5 mg/m ³ TWA Total Dust Ontario OEL-reg 833 (2005) (Certain Hardwoods) 1 mg/m ³ TWAEV Total Dust (Softwood) 5 mg/m ³ TWAEV Total Dust 10 mg/m ³ STEV Total Dust
Phenol Formaldehyde Adhesive Resin Solid. (less than 0.01% of free formaldehyde)	Not Available	1-8	Not available	Not available	No Exposure Limit Value
Free Formaldehyde	50-00-0	<0.01	100 mg/kg (Oral, Rat)	203 mg/m ³ (Inhalation, Rat)	ACGIH (2010) 0.3 ppm TWA/Ceiling OSHA PEL 0.75 ppm TWA 2 ppm STEL

Section 2. Composition and Information on Ingredients

<p>¹Polymeric Diphenylmethane Diisocyanate (PMDI) Adhesive</p> <p>(Once pressed these wood panels do not contain free or unreacted PMDI)</p>	<p>9016-87-9</p>	<p>0-5</p>	<p>>15800 mg/kg (Oral Rat) >7900 mg/kg (Dermal Rabbit)</p>	<p>490 mg/m³ (Inhalation, Rat 4-h)</p>	<p>Ontario OEL-reg 833 (2005) 1 ppm STEV 1.5 ppm Ceiling Québec (OEL S-2.1, r.15 - 2010) 2 ppm Ceiling</p> <p>No Exposure Limit Value</p>
<p>Paraffin Wax Emulsion</p>	<p>8002-74-2</p>	<p>0.1 - 3.0</p>	<p>Not available</p>	<p>Not available</p>	<p>ACGIH (2010) 2 mg/m³ TWA Ontario OEL-reg 833 (2005) 2 mg/m³ TWAEV Total Québec (OEL S-2.1, r.15 - 2010) 2 mg/m³ TWA</p>
<p>Aluminum Foil (Solarbord Only)</p>	<p>7429-90-5</p>	<p><1</p>	<p>>5,000 mg/kg (Oral, Rat)</p>		<p>ACGIH (2010) 1 mg/m³ TWA Respirable OSHA PEL 15 mg/m³ TWA Total 5 mg/m³ Respirable Ontario OEL-reg 833 (2005) 10 mg/m³ TWAEV Total Québec (OEL S-2.1, r.15 - 2010) 10 mg/m³ TWA Total</p>

¹ PMDI adhesive is not used in all Norbord wood panel products.

Section 3. Hazards Identification

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

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 Point	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 such as heat or flame.
Explosion Hazards in Presence of Various Substances	Dust explosion is strongly possible if dust concentrations rise to critical levels (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 oxidizers.
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 a source of fire and explosion. Wash thoroughly after handling. Wash clothing before reuse. AVOID DUST CONTACT WITH EYES AND SKIN. AVOID BREATHING DUST.
Storage	Store away from incompatibles. Keep 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, 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 the product is not transformed or modified. AVOID CONTACT WITH EYES. Use safety glasses with side shields or dust resistant safety goggles if manual or mechanical cutting or abrasive processes are used to transform the product.
	Body Not required if the product is not transformed or modified. AVOID CONTACT WITH SKIN. Coveralls are recommended if manual or mechanical cutting or abrasive processes are used to transform the product. Remove and wash dust contaminated clothing before reuse.
	Respiratory Not required if the product is not transformed or modified. AVOID BREATHING DUST. When engineering controls and work practices are not effective in controlling exposure to recommended exposure limits, wear suitable respiratory protection. If a respirator is 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.
	Feet Not applicable As determined by normal job requirements.

Consult Section 2 for acceptable exposure limits.

Section 9. Fire Fighting Measures

Physical State and Appearance	Solid	Odor	Dependent on wood species and time since panel was produced.
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. coefficient.	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	These products are stable.
Conditions of Instability	Not available
Incompatibility with Various Substances	Wood dust can ignite if it comes into contact with strong oxidizing agents such as: perchloric acid and nitric acids, strong acids such as sulfuric acid, or 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.
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	MAY CAUSE 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 as the exposure to formaldehyde and/or pMDI during cutting or sanding operations of this product. 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 pMDI during cutting and sanding operations is considered to be very low.
Skin Absorption	No test data exists on the actual mixture.
Eye Contact	MAY CAUSE EYE IRRITATION. Conjunctivitis has been reported in humans, nature of the wood and origin of the dust has to be taken into consideration.
Inhalation	MAY CAUSE IRRITATION AND SENSITIZATION. No test data available on the 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 membranes, sneezing, irritating cough and expectoration. May cause some difficulty in breathing such as: bronchitis, nasal discharge and respiratory tract obstruction. 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 and pMDI 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 pMDI during cutting and sanding operations is considered to be 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 the actual mixture.
Carcinogenic Effects	No test data available on the actual mixture. Data available on: Formaldehyde IARC (Group 1) Carcinogenic to Humans ACGIH (A2) Suspected Human Carcinogen BC (K2) Suspected Human Carcinogen Wood Dust IARC (Group 1) Carcinogenic to Humans ACGIH (A1) Certain hard woods - Confirmed Human Carcinogen BC (K1)- Confirmed Human Carcinogen 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.

Section 11. Toxicological Information

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 exists on the actual mixture.

Section 12. Ecological Information

Ecotoxicity	Not available
BOD₅ and COD	Depending on the wood species.
Products of Biodegradation	Depending on the wood species. 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. Ecological Information

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	None

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 applicable

Section 16. Other Information**Glossary of Terms**

ACGIH	American Conference of Governmental Industrial Hygienists
BC	British Columbia
CSA #	Chemical Abstracts System Number
CFR	Code of Federal Regulation
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
OEL	Occupational Exposure Limit

Continued on Next Page

Section 16. Other Information**Glossary of Terms**

OSHA	Occupational Safety and Health Administration Chemical Abstracts System Number
PEL	Permissible Exposure Limit
ppm	Parts per million
STEL	Short –Term Exposure Limit (United States)
STEV	Short-Term Exposure Value (Ontario)
TWA	Time Weighted Average (United States)
TWAEV	Time Weighted Average Exposure 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 MSDS complies or exceeds the Canadian WHMIS criteria and the OSHA hazard communication standard 29 CFR 1910.1200.
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Validated by Norbord Inc. on 07/26/2010

Printed: 07/26/2010

Notice to Reader

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.

MATERIAL SAFETY DATA SHEET

REVISION DATE: 07-23-2012

SUPERSEDES: None

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**COMPANY INFORMATION**

H.B. Fuller Company
1200 Willow Lake Boulevard
Vadnais Heights, MN 55110
Phone: 888-423-8553

Medical Emergency Phone Number (24 Hours): 1-888-853-1758
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

PRODUCT INFORMATION

PRODUCT NUMBER: SWIFT@TAK 49380
PRODUCT DESCRIPTION: Synthetic resin
PRODUCT IDENTIFIER: 831526PM

SECTION 2: HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

PHYSICAL STATE: Liquid
COLOR: White
ODOR: Characteristic

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY

EYE: No irritation hazard in normal industrial use.

SKIN: No irritation hazard in normal industrial use.

INHALATION: No irritation hazard in normal industrial use.

INGESTION: Ingestion is not an anticipated route of exposure. No hazard in normal industrial use.

LONG-TERM (CHRONIC) HEALTH EFFECTS

TARGET ORGAN(S): No organs known to be damaged from exposure to this product.

REGULATED CARCINOGEN STATUS:

Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: No medical conditions affected by exposure.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	PERCENT
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Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for exposure limit guidelines.

SECTION 4: FIRST AID MEASURES

IF IN EYES: None expected to be needed, however, use an eye wash to remove a chemical from your eye regardless of the level of hazard.

IF ON SKIN: Wash with soap and water.

IF VAPORS INHALED: Remove individual to fresh air after an airborne exposure if any symptoms develop, as a precautionary measure.

MATERIAL SAFETY DATA SHEET

IF SWALLOWED: Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS. Induced vomiting may lead to aspiration of the material into the lungs potentially causing chemical pneumonitis that may be fatal.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT:	Non flammable
AUTOIGNITION TEMPERATURE:	Not established
LOWER EXPLOSIVE LIMIT (% in air):	Not established
UPPER EXPLOSIVE LIMIT (% in air):	Not established
EXTINGUISHING MEDIA:	Use water spray, foam, dry chemical or carbon dioxide.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	There is a possibility of pressure buildup in closed containers when heated. Water spray may be used to cool the containers.
SPECIAL FIRE FIGHTING INSTRUCTIONS:	Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.
HAZARDOUS COMBUSTION PRODUCTS:	Carbon dioxide, Carbon monoxide

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION:	No adverse health effects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this MSDS.
CLEAN-UP:	Dike if necessary, contain spill with inert absorbent and transfer to containers for disposal. Keep spilled product out of sewers, watersheds, or water systems.

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

SECTION 7: HANDLING AND STORAGE

Handling:	No special handling instructions due to toxicity. This product contains limited amounts of residual monomer. Under normal handling and use conditions the residual monomer should not present a hazard. In storage the monomer will migrate from the emulsion and establish an equilibrium between the headspace in the storage container and the liquid emulsion. Levels in excess of acceptable exposures can accumulate in non-vented headspaces above the emulsion. All procedures appropriate for a confined space entry should be completed prior to performing any work in a bulk storage tank.
Storage:	Store in a cool, dry place. Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION:	Wear safety glasses when handling this product.
SKIN PROTECTION:	Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
GLOVES:	Not normally required. Use nitrile gloves if conditions warrant.
RESPIRATORY PROTECTION:	No respiratory protection required under normal conditions of use. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).
VENTILATION:	No exposure limits exist for the constituents of this product. No engineering controls are likely to be required to maintain operator comfort under normal conditions of use.

MATERIAL SAFETY DATA SHEET**EXPOSURE LIMITS:**

Chemical Name	ACGIH EXPOSURE LIMITS	OSHA PEL
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid
COLOR:	White
ODOR:	Characteristic
ODOR THRESHOLD:	Not established
WEIGHT PER GALLON (lbs.):	9.10
SPECIFIC GRAVITY:	1.050
SOLIDS (% by weight):	55.0
pH:	4.8
FLASH POINT:	Non flammable
BOILING POINT (deg. C):	Not established
FREEZING/MELTING POINT (deg. C):	Not established
VAPOR PRESSURE (mm Hg):	Not established
VAPOR DENSITY:	Not established
EVAPORATION RATE:	Not established
OCTANOL/WATER COEFFICIENT:	Not established
VOC, weight percent	Not determined

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Stable under normal conditions.
CHEMICAL INCOMPATIBILITY:	Not established
HAZARDOUS POLYMERIZATION:	Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide, carbon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION

COMPONENT	LD50/LC50
TOXICOLOGY SUMMARY:	No additional health information available.

SECTION 12: ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available

SECTION 13: DISPOSAL CONSIDERATIONS

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.

SECTION 14: TRANSPORTATION INFORMATION

Consult Bill of Lading for transportation information.

DOT: NOT REGULATED
IATA: NOT REGULATED

SECTION 15: REGULATORY INFORMATION**INVENTORY STATUS**

U.S. EPA TSCA: This product is in compliance with the Toxic Substances Control Act's Inventory requirements.
CANADIAN CEPA DSL: The components of this product are included on the DSL or are exempt from DSL requirements.
EUROPEAN EINECS: As a result of the introduction of REACH into Europe, this product cannot be

MATERIAL SAFETY DATA SHEET

imported into Europe unless the REACH requirements are met.
If you need more information about the inventory status of this product call 651-236-5858.

This product may contain chemical substances that are regulated for export by various government agencies (such as the Environmental Protection Agency, the Bureau of Industry and Security, or the Drug Enforcement Administration, among others). Before exporting this product from the USA or Canada, we recommend you contact us at 651-236-5858 (USA) or 450-655-1306 x227 (Canada) to request an export review.

FEDERAL REPORTING

EPA SARA Title III Section 313

Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name	CAS#	%
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WHMIS STATUS: Unless listed below, this product is not controlled under the Canadian Workplace Hazardous Materials Information System.

STATE REPORTING

Proposition 65, The Safe Drinking Water and Toxic Enforcement Act of 1986:

Unless listed below, this product does not contain known levels of any chemical known to the State of California to cause cancer or reproductive harm.

Chemical Name/List	CAS	Percent
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SECTION 16: ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

HMIS RATING: HEALTH -- 0 FLAMMABILITY -- 0 REACTIVITY -- 0

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

Prepared by: The Global Regulatory Department

Phone: 651-236-5842

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to the H.B. Fuller Company from its suppliers, and because the H.B. Fuller Company has no control over the conditions of handling and use, the H.B. Fuller Company makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and the H.B. Fuller Company assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B. Fuller Company products to comply with all applicable federal, state and local laws and regulations.