Material Safety Data Sheet

Boise Cascade

A. GENERAL INFORMATION

PRODUCT NAME	C.A.S . NO .
Urea-Formaldehyde Bonded Wood Product (Particleboard)	N.A..

TRADE NAME

Commercial Grade, Premium Industrial Particleboard, SUPER SHELF™, SUPER STEP™, BOISE SELECT™

DESCRIPTION

This panel product is manufactured from particles and fibers of wood bonded together with urea-formaldehyde resin.

MANUFACTURER/DISTRIBUTOR	PHONE NUMBER	SUPERSEDES DATE	REVISION DATE
Boise Cascade, LLC P.O. Box 62 Boise, ID 83707-0062	(208) 384-6611	03/09/09	03/29/10

B. FIRST-AID MEASURES

INHALATION	EYE CONTACT	SKIN CONTACT	INGESTION
Remove to fresh air. If persistent irritation, severe coughing or breathing difficulty occurs, get medical attention.	Remove contact lenses (if applicable). Flush eyes, including under eyelids, with large amounts of water. Remove to fresh air. If irritation persists, get medical attention.	Wash affected areas with soap and water. If rash or persistent irritation or dermatitis occurs, get medical attention.	Not applicable under normal conditions of use.

C. HAZARDOUS INGREDIENTS (Mixtures Only)

MATERIAL OR COMPONENT	C.A.S. #	PERCENT
Formaldehyde	50 0-0	0.1% by weight
Wood Dust (soft and most hardwood, except Western Red Cedar, Beech, and Oak)	N.A.	
Certain Hardwood (i.e., Beech and Oak)	N.A.	

D. PHYSICAL HAZARDS INFORMATION

FLASH POINT	AUTO IGNITION TEMPERATURE	FLAMMABLE LIMITS IN AIR (% BY VOL.)
N.A.	Dependent upon duration of exposure to heat source and other variables. 400° - 500°F(204° - 260°C)	An airborne concentration of 40 grams of dust per cubic meter of air is often used as the lowest explosion limit (LEL) for wood dust. Formaldehyde **LEL 7%** **UEL 73%**

SPECIAL FIREFIGHTING PROCEDURES	SPECIAL FIREFIGHTING PROCEDURES
FIRE AND EXPLOSION FLASH POINT Not applicable AUTO IGNITION TEMPERATURE Dependent upon duration of exposure to heat source and other variables. 400° - 500°F(204° - 260°C) FLAMMABLE LIMITS IN AIR (% BY VOLUME) An airborne concentration of 40 grams of dust per cubic meter of air is often used as the lowest explosion limit (LEL) for wood dust. Formaldehyde LEL 7% UEL 73% SPECIAL FIRE FIGHTING PROCEDURES Burns like other wood products, although it is dangerous and may burn hotter. Partially burned dust is especially hazardous if dispersed into the air. Remove burned or wet dust to an open area after fire is extinguished. EXTINGUISHING MEDIA Water, carbon dioxide, sand.	Water, carbon dioxide,

Reactivity

CONDITIONS CONTRIBUTING TO INSTABILITY

Stable under normal conditions. Wood dust generated from sawing, sanding, or machining the product is extremely combustible. Keep in cool dry place away from ignition sources.

INCOMPATIBILITY (Materials to avoid)

Avoid contact with oxidizing agents and drying oils. Avoid open flame.

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal-oxidation degradative or burning of wood can produce irritating and potentially toxic fumes and gases, including carbon monoxide, aldehydes and organic acids.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Will not occur.

E. HEALTH HAZARDS INFORMATION

Standards

COMPONENT	OSHA PEL[1]	ACGIH TLV
Formaldehyde (0.1% by Weight)	0.75 ppm TWA 2.0 ppm STEL 0.5 ppm Action Level	Formaldehyde - STEL 0.3 ppm Wood Dust: Nonallergenic and noncarcinogenic - 2 mg/m3 Other respiratory Allergenic wood dust - 1 mg/m3
Wood Dust (Particulates Not Otherwise Regulated)	5.0 mg/m^3 (Respirable Fraction) 15.0 mg/m^3 (Total)	

INHALATION	Gaseous formaldehyde may cause temporary irritation to the nose and throat. Wood dust may cause nasal dryness, irritation, coughing, and sinusitis. Repeated exposures (even below 5 mg/m^3) to certain wood dusts, such as Western Red Cedar, can produce allergic responses in some sensitive individuals.
SKIN CONTACT	Both formaldehyde and various species of wood dust may evoke allergic contact dermatitis in sensitized individuals.
SKIN ABSORPTION	N.A.
EYE CONTACT	Gaseous formaldehyde may cause temporary irritation or a burning sensation to the eyes. Wood dust can cause mechanical irritation.
INGESTION	Not applicable under normal conditions of use.

TOXICOLOGICAL INFORMATION

WOOD DUST: Wood dust may cause nasal dryness, irritation, and obstruction. Coughing, wheezing, and sneezing; sinusitis and prolonged colds have also been reported.

Depending on species, may cause respiratory sensitization and/or irritation. Wood dust is not considered a potential cancer hazard by OSHA. The National Toxicology Program (NTP) and the International Agency for Research on Cancer (IARC) classifies wood dust as a carcinogen to humans (Group 1). This classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to hardwood dust. IARC did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon, or rectum with exposure to wood dust.

[1]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 of: TWA - 15.0 mg/m^3 (total dust); 5.0 mg/m^3 (respirable fraction).

FORMALDEHYDE: May cause temporary irritation to eyes, nose and throat. Some reports suggest that formaldehyde may cause respiratory sensitization, such as asthma, and the preexisting respiratory disorders may be aggravated by exposure.

Formaldehyde is listed by IARC as a probable human carcinogen. The NTP includes formaldehyde in the Annual Report on Carcinogens. Formaldehyde is regulated by OSHA as a potential cancer agent.

In studies involving rats, formaldehyde has been shown to cause nasal cancer after long-term exposure to very high concentrations (14+ ppm), far above those normally found in the workplace using this product.

The National Cancer Institute (NCI) conducted an epidemiological study of industrial workers exposed to formaldehyde (published June 1986). The NCI concluded that the data provides little evidence that mortality from cancer is associated with formaldehyde exposure at the levels experienced by workers in the study.

F. PHYSICAL DATA

MATERIAL IS (AT NORMAL CONDITIONS) ¨ LIQUID ¨**X** SOLID ¨ Gas	**APPEARANCE AND ODOR**: Light to dark tan. Color and odor are dependent upon wood species.	
	PHYSICAL STATE: Solid **BOILING POINT**: N.A. **SPECIFIC GRAVITY (H_20=1)**: á1.0 **EVAPORATION RATE (Butyl Acetate=1)**:. N.A. **VAPOR DENSITY** N.A. **VOLATILES BY VOLUME**: N.A. **SOLUBILITY IN WATER**: á0.1% **VAPOR PRESSURE (mm Hg)**: N.A. **pH**: N.A. **MELTING POINT**: N.A.	
BOILING POINT N.A. MELTING POINT N.A.	**SPECIFIC GRAVITY (H20 = 1)** á1.0	**VAPOR DENSITY (AIR = 1)** N.A.
SOLUBILITY IN WATER (% by Weight) á0.1	**pH** N.A.	**VAPOR PRESSURE (mm Hg at 20°C)** N.A.
EVAPORATION RATE (Butyl Acetate = 1)	**% VOLATILES BY VOLUME (At 20°C)**	

G. SAFE HANDLING AND USE
Personal Protective Equipment

RESPIRATORY PROTECTION (TYPE)
Wear NIOSH/OSHA-approved respirator when the allowable OSHA exposure limits to wood dust and/or formaldehyde may be exceeded.

EYE PROTECTION
Recommend goggles or safety glasses as conditions indicate when sawing, sanding, or machining wood products

SKIN PROTECTION
Other protective equipment, such as gloves and outer garments, may be needed to reduce skin contact. Wash affected area of the body after contact with dust

OTHER CLOTHING AND EQUIPMENT
N.A.

Engineering Controls

VENTILATION REQUIREMENTS
Provide local exhaust, as necessary, to meet OSHA requirements for wood dust and formaldehyde exposure

OTHER TYPES OF ENGINEERING CONTROLS
Due to the explosive potential of wood dust when suspended in air, precautions should be taken during sanding, sawing, or machining of wood products to prevent sparks or other ignition sources in ventilation equipment.

Storage

STORAGE REQUIREMENTS AND PRECAUTIONS
Provide adequate ventilation to reduce the possible buildup of formaldehyde gas, particularly when high temperatures occur. Avoid dusty conditions and provide good ventilation. PF-bonded wood products should not be stored where exposure to water could occur. Wood products are combustible and, therefore, should not be subjected to temperatures exceeding the auto ignition temperature.

H. ENVIRONMENTAL

Disposal, Spill, or Leak Procedures

ACCIDENTAL RELEASE MEASURES
Not applicable for product in purchased form. Sweep or vacuum dust for recovery or disposal. Wood dust cleanup and disposal activities should be accomplished in a manner to minimize creation of airborne dust.

*Appropriate Regulatory Agencies should be notified in the event of an accident.

NEUTRALIZING CHEMICALS AND WASTE DISPOSAL METHODS
This product is not considered hazardous waste under Federal Hazardous Waste Regulations 40 CFR 261. State and local requirements for waste disposal may be different from federal regulations. Incinerate or landfill in accordance with local, state, and federal regulations.

HAZARDOUS WASTE DESIGNATION
N.A.

I. ADDITIONAL INFORMATION

CONSUMER PRODUCT LABEL
This fact sheet is for products that have not been finished (coated, laminated, or overlaid) or treated (for example, with preservative or fire retardant).