

**MATERIAL SAFETY DATA SHEET**  
**Particleboard**
**1 Product Identification**

Manufacturer Name and Address:

**Collins Products LLC**

 P.O. Box 16 • 6410 Highway 66  
 Klamath Falls, OR 97601  
 Emergency Phone: 541.885.4826  
 Phone for Additional Information: 541.885.3309

 Product Name: Particleboard  
 Synonyms(s): None  
 Prepared By: Environmental, Safety & Health Services  
 Date Prepared: 9/1/96  
 Date Revised: 4/13/05  
 MSDS#: CPKF-0002

**2 Hazardous Ingredient & Identify Information**

	<b>Wt %</b>	<b>CAS Registry #</b>
Ligno-cellulosic Materials	90 - 93	None
Polymerized Urea		
Formaldehyde Resin	6 - 9	9011-05-6

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

<b>Name / CAS #</b>	<b>Exposure Limits</b>		
Wood Dust/ Ligno-cellulosic fiber CAS # - None	OSHA PEL-TWA	5 mg/m <sup>3</sup>	(a)
	OSHA PEL-TWA	15 mg/m <sup>3</sup>	(b)
	ACGIH TLV-TWA	1 mg/m <sup>3</sup>	(a)
	ACGIH TLV-STEL	10 mg/m <sup>3</sup>	(c)
	ACGIH TLV-TWA	1 mg/m <sup>3</sup>	(d)
	OSHA PEL-TWA	2.5 mg/m <sup>3</sup>	(e)
Formaldehyde CAS# - 50-00-0	OSHA PEL-TWA	.75 ppm	(f)
	OSHA PEL-STEL	2 ppm	(f)
	ACGIH TLV-STEL C	0.3 ppm	(f)

- (a) respirable dust
- (b) softwood or hardwood total dust
- (c) softwood total dust
- (d) selected hardwood total dust (beech, oak, others)
- (e) Western red cedar total dust
- (f) free gaseous formaldehyde
- (g) paraffin wax fumes

**3 Physical/Chemical Characteristics**

BOILING POINT (1 atm):	N/A
VAPOR PRESSURE (mm Hg):	N/A
VAPOR DENSITY (Air = 1; 1 atm):	N/A
SPECIFIC GRAVITY (H <sub>2</sub> O = 1):	0.40-0.90
MELTING POINT:	N/A
EVAPORATION RATE (Butyl Acetate = 1):	N/A
SOLUBILITY IN WATER (% by Weight):	Insoluble
% VOLATILE BY VOLUME:	0

**Appearance and Odor:**

A matrix of light brown or buff-colored interlocking particles having a slightly aromatic odor. The wood components of this product may consist of pine, fir, hemlock, cedar and spruce.

**4 Fire and Explosion Hazard Data**

FLASH POINT (°F or °C)	N/A
FLAMMABLE LIMITS:	
LEL:	See below under "Unusual Fire and Explosion Hazards"
UEL:	N/A
EXTINGUISHING MEDIA:	Water, carbon dioxide, sand or dry chemical.
AUTOIGNITION TEMPERATURE:	400°F-500°F (204°C-260°C).
SPECIAL FIRE FIGHTING PROCEDURES:	None
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Depending on moisture content, and more importantly, particle diameter, wood dust may explode in the presence of an ignition source. An airborne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for wood dusts.
NFPA Ratings: Health 1 • Fire 0 • Reactivity 0	

**5 Reactivity Data**

Stability:	( ) Unstable	(x) Stable
Conditions to Avoid:	N/A	
Incompatibility (Material to avoid):	Avoid contact with oxidizing agents. Avoid open flames. This product may ignite at temperatures in excess of 400°F (204°C).	
Hazardous decomposition or by-products:	Thermal decomposition products include carbon monoxide, carbon dioxide, aliphatic aldehydes, rosin acids, terpenes and polycyclic aromatic hydrocarbons.	
Hazardous Polymerization:	( ) May occur	(x) Will Not Occur

## 6 Precautions for Safe Handling and Use

### Steps to be Taken in Case Material is Released or Spilled:

Not applicable for product in purchased form. Wood dust generated from sawing, sanding, drilling, or routing of this product may be vacuumed or shoveled for recovery or disposal. Avoid dusty conditions and provide good ventilation. Use NIOSH/MSHA approved respirator and goggles where ventilation is not possible.

### Waste Disposal Method:

If disposed of or discarded in its purchased form, incineration is preferable. Dry land disposal is acceptable in most states. It is, however, the user's responsibility to determine at the time of disposal whether your product meets RCRA criteria for hazardous waste. Follow applicable federal, state and local regulations.

### Precautions to be Taken in Handling and Storage:

No special handling precautions are required. Keep in a cool dry place away from open flames. This product may release small quantities of gaseous formaldehyde. Store in well ventilated areas.

A NIOSH/OSHA approved full-face respirator or half-face respirator with chemical goggles must be worn when the formaldehyde and/or wood dust exposure limits are exceeded. It is recommended that a full-face respirator and half-face respirator have a combination formaldehyde and dust cartridge.

## 7 Health Hazard Data

### Primary Health Hazard:

The primary health hazards posed by this product are thought to be due to exposure to wood dust or free gaseous formaldehyde.

Primary Route(s) of Exposure:

- ( ) Ingestion
- (x) Skin: Dust
- (x) Inhalation: Dust or gas

### Acute Health Hazards – Signs and Symptoms of Exposure/Emergency and First Aid Procedures:

INGESTION: Not applicable with normal use.

EYE CONTACT: Gaseous formaldehyde may cause temporary irritation or a temporary burning sensation. Wood dust may cause mechanical irritation. Treat dust in eye as foreign object. Flush with water to remove dust particle. Get medical help if irritation persists.

SKIN CONTACT: High concentrations of gaseous formaldehyde may cause allergic contact dermatitis in sensitized individuals resulting in redness, itching and occasionally hives. Wood dust of certain species may elicit allergic contact dermatitis in sensitized individuals, as well as mechanical irritation. This product may be irritable to the skin from drying or mechanical abrasion experienced during frequent handling. Get medical help if rash, irritation or dermatitis persists.

SKIN ABSORPTION: Not known to occur with normal use.

INHALATION: Gaseous formaldehyde may cause temporary irritation to the nose or throat. Wood dust may cause unpleasant deposit/obstruction in the nasal passages, resulting in dryness of nose, dry cough and headaches. Remove to fresh air. Get medical help if persistent irritation, severe coughing or breathing difficulty occurs.

### Medical Conditions Generally Aggravated by Exposure:

Gaseous formaldehyde or wood dust may aggravate pre-existing respiratory conditions or allergies.

### Chronic Health Hazards:

International Agency for Research on Cancer (IARC) has listed formaldehyde as a group 1 carcinogen. The IARC determination is based on a working group's conclusion that sufficient evidence exists that formaldehyde causes nasopharyngeal cancer in humans, a rare form of cancer in developed countries. The National Toxicology Program (NTP) includes formaldehyde in its Annual Report on carcinogens. OSHA regulates formaldehyde 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.

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.

Wood dust (and/or ligno-cellulosic fibers), depending on species, may cause respiratory sensitization and/or irritation. IARC classifies wood dust as a group 1 carcinogen to humans. 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 wood dust. IARC did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum with occupational exposure to wood dust. The NTP includes wood dust as a known human carcinogen in its Tenth report on Carcinogens dated November 2002.

### Carcinogenicity Listing:

- (x) NTP: Formaldehyde, Wood Dust
- (x) IARC: Formaldehyde, Wood Dust
- (x) OSHA Regulated: Formaldehyde

## 8 Control Measures

### Personal Protective Equipment:

RESPIRATORY PROTECTION – Not applicable for product in purchased form. A NIOSH/MSHA approved respirator is recommended when allowable exposure limits may be exceeded.

PROTECTIVE GLOVES – Not required. However, cloth, canvas or leather gloves are recommended to minimize mechanical irritation from handling product.

EYE PROTECTION – Not applicable for product in purchased form. Goggles or safety glasses are recommended when machining this product.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT – Not applicable for product in purchased form. Outer garments may be desirable in extremely dusty areas.

WORK/HYGIENE PRACTICES – Follow good hygienic and house-keeping practices. Clean up areas where dust settles to avoid excessive accumulation of this combustible material. Minimize blowdown or other practices that generate high airborne dust concentrations.

# MSDS: Particleboard

## Ventilation:

LOCAL EXHAUST – Provide local exhaust as needed so that exposure limits are met.

MECHANICAL (GENERAL) – Provide good ventilation in processing and storage areas as needed so that exposure limits are met.

OTHER – N/A

## 9 Transportation Data

Department of Transportation (DOT):  
This product is not a DOT hazardous material.

## 10 Regulatory Information

TSCA: This product complies with TSCA inventory requirements.

SARA/CERCLA: This product does not contain chemicals in concentrations that should require reporting under SARA 313

DSL: N/A

FDA: N/A

HUD: Particleboard certified as meeting the Department of Housing and Urban Development (HUD) Manufacturing Home Construction and Safety Standards, 24 CFR Part 3280, does not emit in excess of 0.3 ppm free formaldehyde vapor when tested in accordance with ASTM E 1333, Large Scale Test Method for Determining Formaldehyde Emissions From Wood Products.

OSHA: Wood products are not hazardous under the criteria of the federal OSI-IA Hazard Communication Standard 29 CFR 191.0.1200. However, formaldehyde emissions from this product and wood dust generated by sawing, sanding or machining this product may be hazardous.

### STATE RIGHT-TO-KNOW:

California: California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Initiative Measure, Proposition 65): Title 22 California Code of Regulations requires that a clear and reasonable warning be given before exposure to chemicals listed by the State as causing cancer or reproductive toxicity. Formaldehyde is on California's list of chemicals known to the State to cause cancer.

Minnesota: Minnesota Statutes, 1984, Section 144.495 and 325F.181 require that all particleboard and medium-density fiberboard used in newly constructed housing units or sold to the public as building materials in Minnesota meet the HUD Formaldehyde Emission Standard, 24 CFR Sections 3280.308 and 3280.406. Furniture and furnishings not normally permanently affixed to a housing unit are not considered "building materials" and are excluded.

New Jersey: Under certain conditions, this product may release free formaldehyde vapor at concentrations at or above 0.1 parts per million (ppm) but less than 0.5 ppm. Formaldehyde is a substance which appears on New Jersey's Environmental Hazardous Substance List.

Pennsylvania: Under certain conditions, this product may release free formaldehyde vapor at concentrations at or above 0.1 parts per million (ppm) but less than 0.5 ppm. Wood dust may be generated by sawing, sanding or machining this product. Formaldehyde and wood dust are substances which appear on Pennsylvania's Appendix A – Hazardous Substance Lists.

WHMIS Classification: This product is not considered a controlled product

## 11 User's Responsibility

The information contained in this Material Safety Data Sheet is based on the experience of the Environmental, Safety & Health professionals and comes from sources believed to be accurate or otherwise technically correct. It is the user's responsibility to determine if this information is suitable for their applications and to follow safety precautions as may be necessary. The user has the responsibility to make sure that this sheet is the most up-to-date issue.

## 12 Additional Information

### Definition of Common Terms:

AGCIH = American Conference of Government Industrial Hygienists

C = Ceiling Limit

CAS # = Chemical Abstract System Number

IARC = International Agency for Research on Cancer

MSHA = Mine Safety and Health Administration

N/A = Not Applicable

NIOSH = National Institute of Occupational Safety and Health

NTP = National Toxicology Program

OSHA = Occupational Safety and Health Administration

PEL = Permissible Exposure Limit

STEL = Short Term Exposure Limit

LTV = Threshold Limit Value

TWA = Time Weighted Average

Manufactured by  
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