

HAMBRO FOREST PRODUCTS, INC.

MATERIAL SAFETY DATA SHEET

September 22, 2000

1 Product Identification

Manufacture Name and Address:

Hambro Forest Products, Inc.
P.O. Box 129/445 Elk Valley Road
Crescent City, CA 95531
Emergency Phone (707)464-6131
Product Name: Particleboard
Synonyms (s): CRESDEK; CRESLAY; CRESFLAKE

2 Hazardous Ingredient & Identity Information

<u>Name/CAS#</u>	<u>PERCENT</u>	<u>EXPOSURE LIMITS*</u>
Wood	85-94	OSHA PEL-TWA 5 mg/m ³ (a)
CAS# - None		OSHA PEL-STEL 15 mg/m ³ (b)
Urea formaldehyde resin solids	6-8	OSHA PEL-TWA 0.75 mg/m ³ (c)
CAS# 9011-05-6		OSHA PEL-STEL 2 ppm (c)
Paraffin wax	0-1	ACGIH TLV-STEL C .3 ppm (c)
CAS# 800-74-2		OSHA PEL-TWA 2 mg/m ³ (d)
		ACGIH TLV-TWA 2 mg/m ³ (d)

(a) respirable dust.

(b) softwood total dust.

(c) free gaseous formaldehyde.

(d) paraffin wax fumes.

* Based on 1989 OSHA Permissible Exposure Limits (PEL)

Appearance and odor:

A matrix of light brown or buff-colored interlocking particles having a slightly aromatic odor. The wood component of this products consist of firs and redwood. formaldehyde.

3 Physical/Chemical Characteristics

BOILING POINT (1atm):	N/A
VAPOR PRESSURE (mm Hg):	N/A
VAPOR DENSITY (Air=1; 1atm)	NA
SPECIFIC GRAVITY (H ² O = 1)	0.40-0.90
MELTING POINT:	N/A
EVAPORATION:	N/A
SOLUBILITY IN WATER % by weight	<0.1
%VOLATILE BY VOLUME:	0

4 Fire and Explosion Hazard Data

Flash Point (F or C)	N/A
Flammable Limits:	
LEL:	See below under Unusual fire and Explosion Hazards
UAL:	N/A
Extinguishing Media:	Water, carbon dioxide, sand, or dry chemical.
Autoignition Temperature:	400 ⁰ F - 500 ⁰ F (204 ⁰ C-260 ⁰ 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 air borne concentration of 40 grams (40,000 mg) of dust per cubic meter of air is often used as the LEL for Wood dust.

5 Reactivity Data

Stability:

Stable

Conditions to Avoid:

N/A

Incompatibility (Material to avoid): Avoid contact with oxidizing agents. Avoid open flames. This products may ignite at temperatures in excess of 400⁰ F (204⁰ C).

Hazardous decomposition or by-product: Thermal decomposition products include carbon monoxide, carbon dioxide, aldehydes, terpenes, and polycyclic aromatic hydrocarbons.

Hazardous Polymerization

Will not occur

6 Precautions for Safe Handling and Use

Steps to be Taken in Case of 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 NOSH/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 precaution are required. Keep in a cool dry place away from open flames. This product may release small quantities of gaseous formaldehyde. Store in ventilated areas.

Other Precautions:

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 have a combination formaldehyde and dust cartridge.

7 Health Hazard Data

Primary Health Hazard:

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

Primary Route(s) of Exposure:

Skin: Dust
Inhalation: Dust or gas

Acute Health Hazards B 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 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 dry 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 of persistent irritation, severe coughing, or breathing difficulty occurs.

Medical Conditions Generally Aggravated by Exposure:

Gaseous formaldehyde or wood dust may aggravate preexisting respiratory conditions or allergies.

Chronic Health Hazards:

Wood dust (s), depending on the species may cause allergic contact dermatitis with prolonged, repetitive contact, and respiratory sensitization after prolonged exposure to elevated dust levels.

Carcinogenicity listing:

NTP: Formaldehyde
IARC: Formaldehyde
OSHA Regulated: Formaldehyde

Gaseous formaldehyde has been shown to cause cancer in certain laboratory animals after long term exposure to very high concentrations (14+ppm), far above those normally found in the workplace with this product. Wood dust has been alleged to cause nasal/paranasal sinus cancer (certain European hardwoods: oak and beech).

8 Control Measures

Personal Protective Equipment:

Respiratory Protection B Not applicable for Product in purchase form. A NOISH/MSHA approved respirator is recommended when allowable exposure limits may be exceeded.

Protective Gloves B not required. However, cloth, canvas or leather gloves are recommended when machining this product.

Eye Protection B Not applicable for product in purchased form. Goggles or safety glasses are recommended when machining this product.

Other Protective Clothing or Equipment B Not applicable for product in purchased form. Outer garments may be desirable in extremely dusty areas.

Work/Hygiene Practices B Following good hygienic and housekeeping practices. Clean up area were dust settles to avoid excessive accumulation of this combustible material. Minimize blow down or other practices that generate high airborne dust concentration.

Ventilation:

Local Exhaust-- Provide local exhaust as needed so that exposure limits are met.

Mechanical (General) B Provide good ventilation in processing and storage areas as needed so that exposure limits are met.

Special B Self contained breathing apparatus (SCBA) recommended when fire fighting.

Other B N/A

9 Transportation Data

DOT proper shipping name: Not Regulated

Hazard class/Division Number:

ID Number:

Packing Group:

Label/Placard Required:

DOT hazardous Substance:

10 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 users 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.

11 Additional Information

Definition Of Common Terms:

ACGIH = 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 Administration

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