Eucaply

CCX/CDX Structural Plywood

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Material Safety Data Sheet

1. Product Identification

Product	Manufacturing Location(s)
Eucaply Plywood Pine / Eucalyptus Plywood	Tacuarembo, Uruguay

Synonyms: Eucalyptus Plywood, Forrestar Plywood.

2. Hazardous Ingredients/Identity Information

Name	CAS#	Percent	Agency	Exposure Limits	Comments
Wood (Wood Dust)	None	85-99	OSHA OSHA ACGIH	PEL-TWA 15 mg/m^3 (see footnote [A] below) PEL-TWA 5 mg/m^3 (see footnote [A] below) TLV-TWA 1 mg/m^3	Total Dust Respirable dust fraction Inhalable fraction
Polymeric phenol-formaldehyde resin solids[B]	9003-35-4	1-15	OSHA OSHA ACGIH	PEL-TWA 0.75 ppm PEL-STEL 2 ppm TLV-Ceiling 0.3 ppm	Free gaseous formaldehyde

[A] In AFL-CIO v OSHA, 965 F. 2d 962 (11th Cir. 1992), the Court overturned OSHA's 1989 Air Contaminants Rule, including the specific PEL's for wood dust that OSHA had established at that time. The 1989 vacated PEL's were: 5 mg/m3 PEL-TWA and 10 mg/m3 STEL (15 min), all softwood and hardwood except Western Red Cedar. Wood dust is now regulated by OSHA as "Particulates Not Otherwise Regulated" (PNOR), which is also referred to as "nuisance dust". However, some states have incorporated the 1989 OSHA PEL's in their state plans. Additionally, OSHA indicated that it may cite employers under the OSH Act general duty clause in appropriate circumstances for noncompliance with the 1989 PEL's.

[B] These products may contain free formaldehyde (<0.1%, wt %), which may be released depending on concentration and environmental conditions. These panels contain no added urea-formaldehyde resins. Large scale chamber studies on similar materials conducted by the APA Engineered Wood Association have shown that the finished products off-gas levels below 0.1 ppm as well.

3. Hazard Identification

Warning: Eucaply dust may pose a combustible dust explosion hazard if dried and suspended in air in sufficient concentrations and in proximity to an ignition source. Users of this product should examine the potential to generate wood dust and resin solids during handling and processing and related combustibility hazards and controls. See additional comments in MSDS.

The primary health hazard posed by this product is thought to be due to exposure to airborne wood dust.

Appearance and Odor: Light to medium color panel with slight resinous odor dependent upon wood species, which may consist of Pine and Eucalyptus components.

Primary Route(s) of Exposure:

- ☐ Ingestion:
- ☒ Skin: Dust
- ☒ Inhalation: Dust
- ☒ Eye: Dust

Medical Conditions Generally Aggravated by Exposure: Wood dust may aggravate pre-existing respiratory conditions and allergies.

Signs and Symptoms of Exposure:

Acute Health Hazards: Wood dust can cause eye irritation. Certain species of wood dust can elicit allergic contact dermatitis in sensitized individuals. Wood dust may cause respiratory irritation, nasal dryness, coughing, sneezing and wheezing as a result of inhalation. Formaldehyde may cause temporary irritation of skin, eyes, or respiratory system. Formaldehyde may cause sensitization in susceptible individuals.

Chronic Health Hazards: Wood dust, depending on the species, may cause allergic contact dermatitis and respiratory sensitization with prolonged, repetitive contact or exposure to elevated dust levels. Prolonged exposure to wood dust has been reported by some observers to be associated with nasal cancer. Additional information related to carcinogenicity for wood dust and formaldehyde is listed below.

Carcinogenicity Listing:

- ☒ NTP: Wood dust, Known Human Carcinogen. Formaldehyde, Reasonably Anticipated to be a Human Carcinogen.
- ☒ IARC Monographs: Wood dust, Group 1 - carcinogenic to humans. Formaldehyde, Group 1-carcinogenic to humans.
- ☒ OSHA Regulated: Formaldehyde Gas

Wood Dust - NTP: According to its Report on Carcinogens, Eleventh Edition, NTP states, “Wood dust is known to be a human carcinogen based on sufficient evidence of carcinogenicity from studies in humans”. An association between wood dust exposure and cancer of the nasal cavity has been observed in many case reports, cohort studies, and case-control studies that specifically addressed nasal cancer. Strong and consistent associations with cancer of the nasal cavities and paranasal sinuses were observed both in studies of people whose occupations are associated with wood dust exposure and in studies that directly estimated wood dust exposure. This classification is based primarily on increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. The evaluation 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. There is inadequate evidence for the carcinogenicity of wood dust from studies in experimental animals according to NTP.

Wood Dust: IARC – Group 1: Carcinogenic to humans; sufficient evidence of carcinogenicity. This classification is primarily based on studies showing an association between occupational exposure to wood dust and adenocarcinoma to the nasal cavities and paranasal sinuses. IARC did not find sufficient evidence of an association between occupational exposure to wood dust and cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum.

Formaldehyde - NTP: According to its Report on Carcinogens, Eleventh Edition, NTP states, Formaldehyde (gas) is reasonably anticipated to be a human carcinogen based on limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

Formaldehyde: IARC - Group 1: Carcinogenic to humans, sufficient evidence of carcinogenicity. A working group of IARC has determined that there is sufficient evidence that formaldehyde causes nasopharyngeal cancer in humans, a rare cancer in developed countries and "strong but not sufficient evidence" for leukemia. However, numerous epidemiological studies have failed to demonstrate a relationship between formaldehyde exposure and nasal cancer or pulmonary diseases such as emphysema or lung cancer.

4. Emergency and First-Aid Procedures

Ingestion: Not applicable under normal use.
Eye Contact: Wood and resin dust may cause mechanical irritation. Treat dust in eye as foreign object. Flush with water to remove dust particles. Seek medical help if irritation persists.
Skin Contact: Wood dust of certain species can elicit allergic contact dermatitis in sensitized individuals, as well as mechanical irritation resulting in erythema and hives. Prolonged contact with wood dust may cause irritation **to** the skin. Seek medical help if rash, irritation or dermatitis persists. Resin dust may also cause skin reactions in susceptible individuals.
Skin Absorption: Not known to occur under normal use.
Inhalation: Wood and resin dust may cause unpleasant obstruction in the nasal passages, resulting in dryness of nose, dry cough, sneezing and headaches. Remove to fresh air. Seek medical help if persistent irritation, severe coughing or breathing difficulty occurs.
Note to Physician: None

5. Fire and Explosion Data

Flash Point (Method Used): NAP
Flammable Limits: **LFL =** See below under "Unusual Fire and Explosion Hazards" **UFL=** NAP
Extinguishing Media: Water, carbon dioxide, sand
Autoignition Temperature: Variable [typically 400°-500°F (204°-260°C)]
Special Firefighting Procedures: None
Unusual Fire and Explosion Hazards: Depending on moisture content, and more importantly, particle diameter and airborne concentration, wood dust in a contained area may explode in the presence of an ignition source. Wood dust may similarly deflagrate (combustion without detonation like an explosion) if ignited in an open or loosely contained area. 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. Reference NFPA Standards- 654 and 664 for guidance. Ventilation systems should be kept clean and precautions should be taken to prevent sparks or other ignition sources.

HMIS Rating (Scale 0-4):	Health = 2*	Fire = 1	Physical Hazard =	0
NFPA Rating (Scale 0-4):	Health = 1	Fire = 1	Reactivity =	0

6. Accidental Release Measures

Steps to be Taken In Case Material Is Released or Spilled: Sweep or vacuum up for recovery and disposal. Avoid creating dusty conditions whenever feasible. Maintain good housekeeping to avoid accumulation of dried wood and resin dust on exposed surfaces. Dried wood and resin dust may pose a combustible dust hazard. Place recovered wood dust in a container for proper disposal.

7. Handling and Storage

Precautions to be Taken In Handling and Storage: Dried wood and resin dust may pose a combustible dust hazard. Keep away from ignition sources. Avoid eye contact. Avoid prolonged or repeated contact with skin. Avoid prolonged or repeated breathing of wood dust. These products may release some formaldehyde in gaseous form. Specific handling and storage conditions should be assessed to determine potential formaldehyde concentrations. Store in well-ventilated, cool, dry place away from open flame.

8. Exposure Control Measures, Personal Protection

Personal Protective Equipment:

RESPIRATORY PROTECTION – Use NIOSH approved filtering face piece respirator ("dust mask") or higher levels of respiratory protection as indicated if there is a potential to exceed the exposure limits or for symptom relief or worker comfort. Use respiratory protection in accordance with regulatory requirements such as the OSHA respiratory protection standard 29 CFR 1910.134.

EYE PROTECTION – Approved goggles or tight fitting safety glasses are recommended when excessive exposures to dust may occur (e.g. during clean up) and when eye irritation may occur.

PROTECTIVE GLOVES – Cloth, canvas, or leather gloves are recommended to minimize potential slivers or mechanical irritation from handling product.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT – Outer garments which cover the arms may be desirable in extremely dusty areas.

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

Ventilation:

LOCAL EXHAUST – Provide local exhaust as needed so that exposure limits are met. Ventilation to control dust should be considered where potential explosive concentrations and ignition sources are present. The design and operation of any exhaust system should consider the possibility of explosive concentrations of wood dust within the system. See "SPECIAL" section below. Use of tool mounted exhaust systems should also be considered, especially when working in enclosed areas.

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

SPECIAL – Ensure that exhaust ventilation and material transport systems involved in handling this product contain explosion relief vents or suppression systems designed and operated in accordance with applicable standards if the operating conditions justify their use.

OTHER – Cutting & Machining of product should preferably be done outdoors or with adequate ventilation & containment.

9. Physical/Chemical Properties

Physical Description: Eucaply Plywood consists of light to medium color panels with slight resinous odor dependent upon wood species which may consist of Pine and Eucalyptus components.

Boiling Point (@ 760 mm Hg):	NAP
Evaporation Rate (Butyl Acetate = 1):	NAP
Freezing Point:	NAP
Melting Point:	NAP
Molecular Formula:	NAP
Molecular Weight:	NAP

Oil-water Distribution Coefficient:	NAP
Odor Threshold:	NAV
pH:	NAP
Solubility in Water (% by weight):	<0.1%
Specific Gravity (H2O = 1):	Variable; depends on wood species and moisture
Vapor Density (air = 1; 1 atm):	NAP
Vapor Pressure (mm Hg):	NAP
Viscosity:	NAP
% Volatile by Volume [@ 70oF (21oC)]:	0

10. Stability and Reactivity

Stability: ☐ Unstable ☒ Stable

Conditions to Avoid: Avoid open flame. Product may ignite at temperatures in excess of 400°F (204°C).

Incompatibility (Materials to Avoid): Avoid contact with oxidizing agents.

Hazardous Decomposition or By-Products: Thermal decomposition (i.e. smoldering, burning) products include carbon monoxide, oxides of nitrogen, carbon dioxide, aliphatic aldehydes including formaldehyde, resin acids, iodine vapors, terpenes and polycyclic aromatic hydrocarbons. Natural decomposition of organic materials such as wood may produce toxic gases and an oxygen deficient atmosphere in enclosed or poorly ventilated areas. Spontaneous and rapid hazardous decomposition will not occur.

Hazardous Polymerization: ☐ May occur ☒ Will not occur

Sensitivity to Mechanical Impact: NAP

Sensitivity to Static Discharge: NAP

11. Toxicological Information

Wood Dust Toxicity Data: No specific information available for product in purchased form. Individual component information is listed below.

Components:

Wood dust (softwood or hardwood)

Wood dust generated from sawing, sanding or machining the product – may cause nasal dryness, irritation, coughing and sinusitis. NTP and IARC classify wood dust as a human carcinogen (IARC Group 1). See Section 3 above.

Formaldehyde

Human inhalation TC_{Lo} of 17 mg/m^3 for 30 minutes produced eye and pulmonary results; human inhalation TC_{Lo} of 300 ug/m^3 produced nose and central nervous system results; LC_{50} (rat, inhalation) = 1,000 mg/m^3, 30 minutes; LC_{50} (mice, inhalation) = 400 mg/m^3, 2 hours. IARC classifies formaldehyde as a human carcinogen (IARC Group 1). NTP classifies formaldehyde as Reasonably Anticipated to be a Human Carcinogen. See Section 3 above.

Target Organs: Eyes, skin, respiratory system.

12. Ecological Information

Environmental Fate: The wood and resin portions of this product would be expected to be biodegradable.

Formaldehyde: Trace amounts of free formaldehyde may be released to the atmosphere and would be expected to be removed in the atmosphere by direct photolysis and oxidation by photochemically produced hydroxyl radicals (half-life of a few hours). In the aqueous phase formaldehyde biodegradation is expected to take place in a few days.

Environmental Toxicity: NAP for finished product.

Component: Formaldehyde

96 hr LC50 Fathead Minnow	24mg/L
96 hr LC50 Bluegill	0.10 mg/L
5 min EC50 Photobacterium phosphoreum	9mg/L
96 hr E50 Water flea	20 mg/L

13. Disposal Considerations

Waste Disposal Method: If disposed of or discarded in its purchased form, incineration is preferable, if allowed. 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.

14. Transport Information

Mode: (Air, Land, Water) Not regulated as a hazardous material by the U.S. Department of Transportation. Not listed as a hazardous material in Canadian Transportation of Dangerous Goods (TDG).

Proper Shipping Name:	NAP
Hazard Class:	NAP
UN/NA ID Number:	NAP
Packing Group:	NAP
Information Reported for Product/Size:	NAP

15. Regulatory Information

TSCA: Phenol- formaldehyde resin is on the TSCA inventory.

CERCLA: Formaldehyde (100lbs RQ) is on the CERCLA chemical substance inventory.

DSL: Phenol-formaldehyde resin is on the DSL.

OSHA: Wood products are not hazardous under the criteria of the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, wood dust generated by sawing, sanding or machining this product may be hazardous. Workplace exposure to formaldehyde is specifically regulated under 29 CFR 1910.1048.

STATE RIGHT-TO-KNOW:

California Prop 65 – This product contains formaldehyde, which depending on temperature and humidity, may be emitted from the product. Weyerhaeuser has evaluated formaldehyde emission rates from its products and have found these rates to be below the significant risk level. The user should determine whether formaldehyde emissions resulting from its site specific use, handling, ventilation design, capacity and final construction design for this product could exceed the safe harbor level.

Warning: Drilling, sawing, sanding or machining wood products generates wood dust, a substance known to the State of California to cause cancer.

Other State Information:

This product is known to contain substances listed on the following State Right to Know (RTK) or Hazardous Substance Lists.

New Jersey This product contains formaldehyde which, depending on temperature and humidity, may be emitted from the product. When cut or otherwise machined, the product may emit wood dust. Formaldehyde and wood dust each appear on New Jersey's Hazardous Substance List.

Pennsylvania This product contains formaldehyde which, depending on temperature and humidity, may be emitted from the product. When cut or otherwise machined, the product may emit wood dust. Formaldehyde and wood dust each appear on Pennsylvania's Appendix A Hazardous Substance List.

Minnesota – Minnesota Statutes, 1984, Sections 144.495 and 325F.181 do not apply to this product; these statues apply to plywood, particleboard and MDF and other products manufactured with urea-formaldehyde resins.

SARA 313 Information: To the best of our knowledge, this product contains formaldehyde at de minimis concentrations (<0.1%) and is not subjected to the SARA Title III Section 313 supplier notification requirements.

SARA 311/312 Hazard Category: This product has been reviewed according the EPA "Hazard Categories: promulgated under SARA Title III, Sections 311 and 312 and is considered, under applicable definitions, to meet the following categories:

An immediate (acute) health hazard	Yes
A delayed (chronic) health hazard	Yes
A fire hazard	No
A reactivity hazard	No
A sudden release hazard	No

FDA: Not intended for use as a food additive or indirect food contact item.

WHMIS Classification: Controlled Product: D2A - wood dust and formaldehyde: IARC Group 1

16. Additional Information

Date Prepared: 09/08/2010

Date Revised: 11/08/2010

Prepared By: Weyerhaeuser Company Environment, Health, Safety and Sustainability

Weyerhaeuser MSDS available on: http://www.weyerhaeuser.com/Sustainability/MSDS

User's Responsibility: The information contained in this Material Safety Data Sheet is based on the experience of occupational health and safety professionals and comes from sources believed to be accurate or otherwise technically correct. It is the user's responsibility to determine if the product is suitable for its proposed application(s) and to follow necessary safety precautions. The user has the responsibility to make sure that this MSDS is the most up-to-date issue.

Definition of Common Terms:

ACGIH	=	American Conference of Governmental Industrial Hygienists
C	=	Ceiling Limit
CAS#	=	Chemical Abstracts System Number
DOT	=	U. S. Department of Transportation
DSL	=	Domestic Substance List
EC50	=	Effective concentration that inhibits the endpoint to 50% of control population
EPA	=	U.S. Environmental Protection Agency
IARC	=	International Agency for Research on Cancer
IATA	=	International Air Transport Association
IMDG	=	International Maritime Dangerous Goods
LC50	=	Concentration in air resulting in death to 50% of experimental animals
LCLo	=	Lowest concentration in air resulting in death
LD50	=	Administered dose resulting in death to 50% of experimental animals
LDLo	=	Lowest dose resulting in death

LEL	=	Lower Explosive Limit
LFL	=	Lower Flammable Limit
MSHA	=	Mine Safety and Health Administration
NAP	=	Not Applicable
NAV	=	Not Available
NIOSH	=	National Institute for Occupational Safety and Health
NPRI	=	Canadian National Pollution Release Inventory
NTP	=	National Toxicology Program
OSHA	=	Occupational Safety and Health Administration
PEL	=	Permissible Exposure Limit
RCRA	=	Resource Conservation and Recovery Act
STEL	=	Short-Term Exposure Limit (15 minutes)
STP	=	Standard Temperature and Pressure
TCLo	=	Lowest concentration in air resulting in a toxic effect
TDG	=	Canadian Transportation of Dangerous Goods
TDLo	=	Lowest dose resulting in a toxic effect
TLV	=	Threshold Limit Value
TSCA	=	Toxic Substance Control Act
TWA	=	Time-Weighted Average (8 hours)
UFL	=	Upper Flammable Limit
WHMIS	=	Workplace Hazardous Materials Information System