

Material Safety Data Sheet

Hardwood Pulp

Section 1 - Chemical Product and Company Identification

MSDS Name : Hardwood Pulp

Synonyms : Bleached Hardwood Pulp, Food Grade Cellulose Fiber

Company Identification : Tradeasia International Pte Limited

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Section 2 - Composition, Information on Ingredients

CAS#	Component	Percent
65996-61-4	Pulp Cellulose	86-90

Section 3 - Hazards Identification

Primary Safety/Health Hazards:

Warning: Processed (e.g. fiberized) cellulose pulp dusts may pose a combustible dust explosion hazard if dusts are suspended in air in sufficient concentrations, in a contained area and in proximity to an ignition source. Paperboard as supplied and shipped does not constitute a combustible dust explosion hazard. Users of this product should examine the potential to generate dusts during handling and processing and related combustibility hazards and controls. See additional comments in SDS. The primary health hazard posed by this product is thought to be due to exposure to cellulose dusts.

Primary Route(s) of Exposure: Inhalation, and/ or eye contact.

Medical Conditions Generally Aggravated by Exposure:

Cellulose pulp dust may aggravate pre-existing respiratory conditions or allergies.

Target organs: Eyes and respiratory system.

Signs and Symptoms of Exposure:

Acute Health Hazards:

Not applicable for product in purchased form. Pulp dust may be a mechanical irritant to the eyes.

Chronic Health Hazards:

Cellulose pulp dust has not been shown to produce significant disease or toxic effects when exposure limits are met. Cellulose is poorly soluble and has a low order of toxicity.

Carcinogen status:

Cellulose is not classified as a carcinogen by OSHA, NTP, or IARC in their reviews.

Section 4 - First Aid Measures

Ingestion: Not likely to occur for product in purchased form.

Eye Contact:

Dust may mechanically irritate the eyes, resulting in redness or watering. Treat dust in eye as foreign object. Flush with water to remove dust particles. Get medical help if irritation persists.

Skin Contact: Not anticipated for product in purchased form, wash with mild soap and water.

Skin Absorption: Product is not absorbed through the skin.

Inhalation:

Excessive dust concentrations may cause unpleasant obstruction in the nasal passages. Remove to fresh air. Get medical help if persistent irritation, severe coughing or breathing difficulty occurs.

Note to Physician: No special advice, treat symptomatically.

HMIS Rating (Scale 0-4): Health = 0 Fire = 1 Physical Hazard = 0

Section 5 - Fire Fighting Measures

Flash Point (Method Used): Not available for finished product.

Flammable Limits: LFL = NOTE: See below under "Unusual Fire and Explosion Hazards" UFL = Not available

Extinguishing Media:

Use water, dry chemical, carbon dioxide or foam as appropriate for surrounding fire.

Autoignition Temperature: 450 – 572 °F (232 – 300 °C)

Special Firefighting Procedures:

As in any fire wear NIOSH-approved self contained breathing apparatus and appropriate protective clothing.

Unusual Fire and Explosion Hazards:

Pulp processing (e.g. fiberization) may result in the release of cellulose fibers. Pulp as supplied and shipped is highly unlikely to release sufficient dust to constitute a combustible dust explosion hazard. Depending on airborne concentration, moisture content, particle diameter, surface area and exposure to an ignition source, airborne cellulose dust may ignite and burn with explosive force in a contained area. Product dust may similarly deflagrate (combustion without detonation like a supersonic explosion) if ignited in an open or loosely contained area. Cellulose dust explosibility should be evaluated based on the conditions at each location processing this material. Caution should be taken in the processing, shipping, handling and use of these materials, particularly if they are in a dry state and dust is produced.

NFPA Rating (Scale 0-4): Health = 0 Fire = 1 Reactivity = 0

Section 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 cellulose dust on exposed surfaces. Use NIOSH approved filtering face piece respirator ("dust mask") and goggles where ventilation is not possible and exposure limits may be exceeded or for additional worker comfort.

Other Precautions:

Minimize compressed air blow down or other practices that generate high dust levels.

Section 7 - Handling and Storage

Precautions to be Taken in Handling and Storage:

Minimize dust generation and accumulation. Keep in cool, dry place away from open flame and other sources of ignition. Maintain good housekeeping to avoid accumulation of cellulose dust on exposed surfaces. Cellulose dust may pose a combustible dust hazard. Because of the size of the rolls or bales, physical hazards are the predominant hazards. Safety shoes should be worn when moving rolls by hand or hand tools. Bales and rolls should be stored on flat, clean and even surfaces to prevent tipping over. All paper material should be stored away from open flames.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	CAS	Percent	Agency	Exposure Limits	Comments
Cellulose (C ₆ H ₁₀ O ₅) _n	65996-61-4	90-95	OSHA	PEL-TWA 15 mg/m ³ (PNOR) ¹	Total dust
			OSHA	PEL-TWA 5 mg/m ³ (PNOR) ¹	Respirable dust
			ACGIH	TLV-TWA 10mg/m ³ Cellulose	Total Dust

¹OSHA particulate not otherwise regulated (PNOR)

Personal Protective Equipment:

RESPIRATORY PROTECTION

Use NIOSH-approved filtering face piece respirator ("dust mask") and goggles where ventilation is not possible and exposure limits may be exceeded or for additional worker comfort or symptom relief when fiberization of the pulp occurs. Use respiratory protection in accordance with regulatory requirements such as the OSHA respiratory protection standard 29 CFR 1910.134.

PROTECTIVE GLOVES

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

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.

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 housekeeping practices. Clean up areas where cellulose 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. Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation, and process enclosure if necessary, to control airborne dust. 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 cellulose dust within the system. See "SPECIAL" section below.

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.

Section 9 - Physical and Chemical Properties

Physical Description	: Paper sheets, rolls, or bales. White in color.
Boiling Point (@ 760 mm Hg)	: Not applicable
Evaporation Rate (Butyl Acetate = 1)	: Not applicable
Freezing Point	: Not applicable
Melting Point	: Not applicable
Molecular Formula	: Not applicable
Molecular Weight	: Not applicable
Oil-water Distribution Coefficient	: Not applicable
Odor Threshold	: Not available
pH	: Not applicable
Solubility in Water (% by weight)	: Not applicable
Specific Gravity (H₂O = 1)	: 0.6 - 0.8

Vapor Density (air = 1; 1 atm)	: Not applicable
Vapor Pressure (mm Hg)	: Not applicable
Viscosity	: Not applicable
% Volatile by Volume [@ 70°F (21°C)]	: Not applicable

Section 10 - Stability and Reactivity

Chemical Stability: The product is stable.

Conditions to Avoid: Not applicable.

Incompatibilities with Other Materials: Avoid open flame, sparks and other sources of ignition.

Hazardous Decomposition Products:

Combustion products include carbon monoxide, carbon dioxide and fine particulate in the form of smoke.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

Toxicity Data: None available for product in purchased form.

Carcinogenicity:

IARC : Listed by IARC - No

NTP : Listed by NTP - No

OSHA : Listed by OSHA - No

Reproductive effects: Not available.

Teratogenic effects: Not available.

Mutagenic effects: Not available.

Target Organs: Respiratory system and eyes

Section 12 - Ecological Information

Environmental Fate:

Cellulose fiber slowly biodegrades in water (half life range 1mo –1 yr in freshwater and coastal seawater). Cellulose fiber persists in arid soil (landfills).

Environmental Toxicity: Not available.

Section 13 - Disposal Considerations

Waste Disposal Method:

Dispose of in accordance with federal, state, and local regulations. Cellulose is not listed under any sections of the Resource Conservation and Recovery Act (RCRA) or Canadian National Pollution Release Inventory (NPRI). Follow all applicable federal, state, provincial and local regulations. It is the user's responsibility to determine proper disposal methods.

Section 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) regulations. Not listed as a hazardous material for IATA, and IMDG. Not listed as dangerous goods by the European Agreement concerning the international carriage of dangerous goods by road (ADR).

Proper Shipping Name: Not applicable

Hazard Class: Not applicable

UN/NA ID Number: Not applicable

Packing Group: Not applicable

DOT labels required: Not applicable

Section 15 - Regulatory Information

TSCA:

All ingredients of this product are either listed on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

CERCLA:

This product does not contain ingredients which are subject to the reporting requirements of CERCLA.

DSL:

Cellulose is listed on the Canadian Domestic Substance List.

European REACH:

This product contain less than 0.1% of any Substance of Very High Concern (SVHC) listed in REACH. Therefore, none of the REACH pre-registration, registration, notification, and/or conditions of restrictions apply.

ENCS:

Cellulose is not listed or is exempt from the Japanese Existing and New Chemical Substances List (ENCS) as regulated by the Ministry of International Trade and Industry.

OSHA:

This product, as shipped, is not regulated as a OSHA hazardous chemical, however, cellulose dust is a regulated hazard under the OSHA Hazard Communication Standard [29 CFR 1910.1200] when it becomes mechanically processed and airborne.

SARA 313 Information:

This product does not contain any chemical ingredient (s) with known CAS numbers that exceed the *de minimis* reporting levels established by SARA Title III, section 313 and 40 CFR section 372.

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	No
A delayed (chronic) health hazard	No
A corrosive hazard	No
A fire hazard	No
A reactivity hazard	No
A sudden release hazard	No

WHMIS Classification: Not considered a controlled product.

Section 16: Other Information

References: Not available

Other Special Considerations: Not available.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Tradeasia International Pte. Ltd. Be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Tradeasia International Pte. Ltd. Has been advised of the possibility of such damages.