

Safety Data Sheet (SDS)



Coated Bleached Cellulose Paperboard, Extrusion Laminate

1. Identification

PRODUCT TRADE NAME(s): Printkote® EasySeal, Printkote® EasySeal Plus, Printkote® Endurance PT, PTHS, X, Natralock® SBS ETR, Natralock® SBS GTR, Natralock® SBS NTR, Natralock® SBS RTR

SYNONYMS: SBS, Solid Bleached Sulfate paperboard with Extrusion Coating

CHEMICAL NAME/CLASS: Cellulose Paperboard (Rolls or Sheets)

MANUFACTURER'S NAME: MWV

ADDRESS: 501 South 5th Street Richmond VA 23112-0501

EMERGENCY PHONE: (800) 424-9300 (CHEMTREC)

BUSINESS PHONE: (804) 444-1000 (8 am – 5 pm ET M-F)

2. Hazard(s) Identification

Signal Word(s): **WARNING**

NOTE: This product is not hazardous in the form in which it is shipped by the manufacturer but may become hazardous as the result of downstream activities (e.g. cutting, processing) that reduces its particle size resulting in potential hazards as described below.

Product Classification	Hazard Statement(s)	Pictogram
Combustible Dust (OSHA Defined Hazard)	If converted to small particles during further processing, handling, or by other means, may form combustible dust concentrations in air	None

Precautionary Statement(s):

Prevention Statements: 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. Keep away from sparks, flame or other heat sources and take precautionary measures against static discharge.

Response Statements: Not applicable.

Ingredients of Unknown Acute Toxicity (>1%): NA

3. Composition/Information on Ingredients

Component	CAS#	EC#	Wt %
Cellulose	65996-61-4	265-995-8	60 – 85
Kaolin clay	1332-58-7	310-194-1	1 – 6
Calcium carbonate	1317-65-3	215-279-6	1 – 6
Starch	9005-25-8	232-679-6	1 – 6
Synthetic latex binders	Various	Various	1 – 5
Low density polyethylene (LDPE)	9002-88-4	NA	Varies*
Polyester Terephthalate Film (PET)	24938-04-3	NA	Varies*
Hotmelt Adhesive	Proprietary		Varies
Polymer Extrusion Coated per customer or product use specifications (0.5 to 2.5 mils)*			

4. First Aid Measures

Ingestion: Not likely to occur for product during normal use.

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. If eye contact occurs during conveying processes that generate molten material, immediately cool with water. Do not attempt to remove adhesive. Get medical help.

Skin Contact: Not anticipated for product in purchased form, wash with mild soap and water. During conveying process heat sealing applications, contact with molten polymers may cause severe skin burns. Cool melted product on skin with plenty of water. Do not remove solidified product. No attempt should be made to remove material from skin or to remove contaminated clothing as damaged skin can be easily torn. Cover affected areas with clean sheeting or gauze and seek immediate medical attention.

Skin Absorption: Product is not absorbed through the skin.

Inhalation: Excessive dust concentrations may cause unpleasant obstruction in the nasal passages. Inhalation of dust or molten vapors that may be generated during conversion operations may cause irritation of respiratory track. Remove to fresh air. Get medical help if persistent irritation, severe coughing or breathing difficulty occurs.

Note to Physician: No special advice, treat symptomatically.

Acute Symptoms/Effects- Cellulose dust can cause eye irritation and obstruction in the nasal passages.

Delayed Symptoms/Effects – No delayed effects expected.

5. Fire-Fighting Measures

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

Specific Hazards, Anticipated Combustion Products: Combustion products include carbon monoxide, carbon dioxide and fine particulate in the form of smoke.

Autoignition Temperature: 450°F (233 °C).

Special Firefighting Procedures: As in any fire, wear NIOSH-approved self contained breathing apparatus and appropriate protective clothing.

Unusual Fire and Explosion Hazards: Paperboard processing (e.g., fiberization) may result in the release of cellulose fibers. Paperboard 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. Cellulose dust may

5. Fire-Fighting Measures (cont'd.)

similarly deflagrate (combustion without detonation like a supersonic explosion) if ignited in an open or loosely contained area. Cellulose dust explosibility: (K_{st} dry = >200 and < 300 bar m/s). 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. Reference NFPA standards 654, 69 and the NFPA *Fire Protection Handbook* for guidance.

* K_{st} the maximum rate of pressure rise is used to calculate the K_{st} value; an internationally recognized index used to classify dust explosibility.

NFPA Rating (Scale 0-4): Health = 0 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 cellulose dust on exposed surfaces. Use NIOSH approved filtering facepiece 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 blowdown or other practices that generate high dust levels.

7. Handling and Storage

Precautions to be Taken In Handling, Use 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.

Intended use of paperboard (with or without tear-resistant film) with heat sealant for use in manufacturing product packaging: Maintain heat sealing process equipment temperatures at or below 375°F (190°C) and a contact time of 3-5 seconds maximum to reach target adhesive activation temperature (160 to 180°F). Avoid excessive temperatures and prolonged contact times to prevent thermal decomposition or degradation. Heating product above recommended processing temperatures may release decomposition products that can irritate eyes, nose, throat and respiratory tract. If generation of dust is unavoidable, prevent eye or inhalation exposure by wearing appropriate personal protective equipment. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

Because of the size of the rolls, physical hazards are the predominant hazards. Safety shoes should be worn when moving rolls by hand or hand tools. Rolls should be stored on flat, clean and even surfaces to prevent tipping over.

Store in clean and dry location. Store at ambient conditions, away from heat source to avoid adhesive blocking, keep dry. Do not store in direct sunlight. All product material should be stored away from open flames.

8. Exposure Control Measures/Personal Protection

Exposure Limits/Guidelines:

Name	CAS#	Percent	Agency	Exposure Limits	Comments
Cellulose	65996-61-4	65 - 85	OSHA OSHA ACGIH	PEL-TWA 15 mg/m ³ (PNOR) ¹ PEL-TWA 5 mg/m ³ (PNOR) ¹ TLV [®] -TWA 10 mg/m ³ Cellulose	Total dust Respirable dust Total dust
Kaolin Clays	1332-58-7	1 – 6	OSHA OSHA ACGIH	PEL-TWA 15 mg/m ³ PEL-TWA 5 mg/m ³ TLV [®] -TWA 2mg/m ³	Total dust Respirable fraction Respirable fraction
Calcium carbonate	1317-65-3	1 – 6	OSHA OSHA ACGIH ACGIH	PEL-TWA 15 mg/m ³ (PNOR) ¹ PEL-TWA 5 mg/m ³ (PNOR) ¹ TLV [®] -TWA 10 mg/ m ³ (PNOS) ² TLV [®] -TWA 3 mg/ m ³ (PNOS) ²	Total dust Respirable dust Inhalable part. Respirable part.
Synthetic latex binders	Various	1 – 5	OSHA OSHA ACGIH ACGIH	PEL-TWA 15 mg/m ³ (PNOR) ¹ PEL-TWA 5 mg/m ³ (PNOR) ¹ PEL-TWA 10 mg/m ³ (PNOS) ² PEL-TWA 3 mg/m ³ (PNOS) ²	Total dust Respirable dust Inhalable particles Respirable fraction
Starch	9005-25-8	1 – 5	OSHA OSHA ACGIH	PEL-TWA 15 mg/m ³ PEL-TWA 5 mg/m ³ TLV [®] -TWA 10 mg/m ³	Total dust Respirable fract. Total dust

¹OSHA particulate not otherwise regulated (PNOR)

²ACGIH particulate not otherwise specified (PNOS)

NOTE: Clays and calcium carbonate are tightly bound within the coating. Respirable or inhalable size particulates are not anticipated to be released from this product under normal conditions of use. It is possible that minute amounts may be generated subjected to severe aggressive mechanical abrading or cutting processes, atypical for packaging printing or carton converting processes. In such cases, where aggressive mechanical processing will occur, exposures to dust should be assessed to determine the applicability of the Hazard Communication requirements to those operations.

Personal Protective Equipment:

RESPIRATORY PROTECTION – Wear NIOSH/MSHA approved respirator when workplace conditions warrant use. Use filtering face piece respirator (“dust mask” and/or organic vapor respirator) tested and approved under appropriate government standards such as NIOSH (US), where ventilation is not possible and exposure limits may be exceeded or for additional worker comfort. Use respiratory protection in accordance with jurisdictional regulatory requirements similar to the OSHA respiratory protection standard 29CFR 1910.134 following a determination of risk from potential exposures.

PROTECTIVE GLOVES – Not required. However, cloth, canvas, or leather gloves are recommended to minimize potential mechanical irritation or cuts from handling product. Wear heat resistant gloves when handing heated material during converting processes.

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.

8. Exposure Control Measures/Personal Protection (cont'd.)

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 (see section 8). 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.

9. Physical/Chemical Properties

Physical Appearance:	White paperboard with extrusion coatings, (rolls or sheets)
Boiling Point (@ 760 mm Hg):	Not applicable
Evaporation Rate (Butyl Acetate = 1):	Not applicable
Freezing:	Not applicable
Melting Point:	Not applicable
Flash Point:	Not available
Flammability:	Not available
Auto-ignition Temperature:	450°F (233 °C)
Lower / Upper Explosive Limits:	See section 5 above
Decomposition Temperature:	Not available
Solubility in Water (% by weight):	Not available
Odor Threshold:	Not available
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
Oil-Water Distribution Coefficient:	Not applicable
pH:	Not applicable

10. Stability and Reactivity

Stability: Unstable Stable

Conditions to Avoid: Avoid open flame, sparks and other sources of ignition.

Incompatibility (Materials to Avoid): Not applicable.

Hazardous Decomposition or By-Products: Combustion products include carbon monoxide, carbon dioxide and fine particulate in the form of smoke.

Hazardous Polymerization: May occur Will not occur

Sensitivity to Mechanical Impact: Not applicable

Sensitivity to Static Discharge: Not applicable

11. Toxicological Information

Likely Route(s) of Exposure:

Inhalation and eyes.

Signs and Symptoms of Exposure:

Acute Health Hazards: Not applicable for product in purchased form. Dust may be a mechanical irritant to the eyes and cause obstruction in the nasal passages.

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.

Carcinogenicity Listing(s) (NTP, IARC, OSHA): None

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

Components:

Cellulose: LC₅₀ (rats, inhalation) = 5,800 mg/m³/4 hours

Skin Corrosion/Irritation: Data are not available.

Serious Eye Damage/Irritation: Data are not available.

Respiratory or Skin Sensitization: Data are not available.

Aspiration Hazard: Not applicable.

Reproductive effects: Data are not available.

Teratogenic effects: Data are not available.

Mutagenic effects: Data are not available.

Target Organs: Eyes and respiratory system.

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.

13. Disposal Considerations

Waste Disposal Method: Recycling centers are available in nearly every major and most small cities within the US and Canada that can take waste at no charge. If not recycled, and disposed of or discarded in its purchased form, incineration or dry land disposal is acceptable in most jurisdictions. Follow all applicable federal, state, provincial and local regulations. It is the user's responsibility to determine proper disposal methods.

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.

Proper Shipping Name:	Not applicable
Hazard Class:	Not applicable
UN/NA ID Number:	Not applicable
Packing Group:	Not applicable
DOT labels required:	Not applicable

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.

OSHA: This product, as shipped, is not regulated as a OSHA hazardous chemical, however, cellulose dust is a regulated combustible 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 ingredients that exceed the threshold 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

CALIFORNIA P65: This product does not require a warning under California Proposition 65.

16. Other Information

Date Prepared: 05/30/2015

Date Revised: Not applicable

Prepared By: MWV Product Stewardship Group.

MWV SDS available on: www.mwv.com

Disclaimer:The information and data herein are believed to be accurate and have been compiled by MWV Product Stewardship professionals from external sources believed to be reliable. MWV provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose and use in compliance with all applicable laws and standards. MWV will not be liable for claims relating to any party's use of or reliance on information and data contained herein.

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
EINECS	=	Identifying Number Assigned to Chemicals Contained in the European Inventory of Existing Chemical Substances (EINECS)
EC50	=	Effective Concentration That Inhibits the Endpoint to 50% of Control Population
EC#	=	European Commission Number
EPA	=	U.S. Environmental Protection Agency
HMIS	=	Canada-Hazardous Materials Identification System
IARC	=	International Agency for Research on Cancer
IATA	=	International Air Transport Association

16. Other Information (cont'd.)

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
TCLo	=	Lowest Concentration in Air Resulting in a Toxic Effect
TDG	=	Canada-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	=	Canada-Workplace Hazardous Materials Information System



Coated Bleached Cellulose Paperboard, Extrusion Laminate

Per 29 CFR § 1910.1200(f)(4)

Warning

May Form Combustible Dust Concentrations in Air

**If small particles are generated during further
processing, handling of these materials**

Keep away from all ignition sources including
heat, sparks and flame

Prevent dust accumulations to minimize explosion hazard

Note: OSHA has not established a pictogram
for combustible dust.

MANUFACTURER'S NAME: MWV

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PHONE: 1-804-444-1000

IN CASE OF EMERGENCY: (800) 424-9300 (USA) CHEMTREC