Safety Data Sheet

Specialty Papers

1. Identification

TRADE NAME or GRADES:	Kraft Paper, Sack Kraft, Natural Kraft Building Board, Natural Kraft Saturating, Natural Kraft Converting, Natural Kraft Grocery Bag, Natural Kraft Grease Resistant, Bleached Shipping Sack, Bleached Grocery Bag, Bleached Butcher Wrap, Red Butcher Wrap, Bleached Converting, Bleached Saturating, Bleached Merchandising.
SYNONYMS:	None.
CHEMICAL NAME/CLASS:	Paper Sheet.
MANUFACTURER'S NAME:	WestRock
ADDRESS:	504 Thrasher Street Norcross, GA 30071
EMERGENCY PHONE:	(800) 424-9300 (CHEMTREC)
BUSINESS PHONE:	770-448-2193

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.

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

***** EU/GHS Hazard- Not classified as hazardous.

Precautionary Statement(s):

Prevention Statements: P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Response Statements: Not applicable.

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

3. Composition and Composition and Information on Ingredients

Component	CAS#	EC#	Wt %
Cellulose $(C_6H_{10}O_5)_n$	65996-61-4	265-995-8	85 - 95
Calcium carbonate $(CaCo_3)$	471-34-1	207-439-9	0 – 13
Starch $(C_6H_{10}O_5)_n$	9005-25-8	232-679-6	0 – 4
Titanium Dioxide (TiO_2) See section 8	13463-67-7	236-675-5	0-3

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.
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.
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 and Restrictions: Water or other extinguishing agents appropriate for fighting surrounding fires.
Specific Hazards, Anticipated Combustion Products: Combustion products include carbon monoxide, carbon dioxide and fine particulate in the form of smoke.
Autoignition Temperature: 450°F (232°C).
Special Firefighting Equipment/Procedures: As in any fire wear 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. Bulk pulp as supplied and shipped is highly unlikely to release sufficient cellulose 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 similarly deflagrate (combustion without detonation like a supersonic explosion) if ignited in an open or loosely contained area. Pulp cellulose, a specific form of cellulose, is reported by NFPA as having a *Kst value of 62 bar.m/s. According to guidance in the OSHA combustible dust publication "OSHA 3371-08 2009" pulp cellulose dust would be classified as a Class ST1 combustible dust: (*K_{st} dry = > 0 and < 200 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 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 product material should be stored away from open flames.

8. Exposure Control Measures/Personal Protection

Exposure Limits/Guidelines:

Name	CAS#	Agency	Exposure Limits	Comments
Cellulose $(C_6H_{10}O_5)_n$	65996-61-4	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
Calcium carbonate $(CaCo_3)$	471-34-1	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 fraction Inhalable particulate Respirable particulate
Starch $(C_6H_{10}O_5)_n$	9005-25-8	OSHA OSHA ACGIH	PEL-TWA 15 mg/m^3 PEL-TWA 5 mg/m^3 TLV®-TWA 10 mg/m^3	Total dust Respirable dust fraction Total dust
Titanium Dioxide $(TiO_2)^A$	13463-67-7	OSHA ACGIH	PEL-TWA 15 mg/m^3 TLV-TWA 10 mg/m^3	Total dust Total dust

[1]OSHA particulate not otherwise regulated (PNOR)

[2]ACGIH particulate not otherwise specified (PNOS)
[A] Bleached Shipping Sack is the only grade which contains titanium dioxide.

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

Personal Protective Equipment:

RESPIRATORY PROTECTION – Use filtering face piece respirator ("dust mask") tested and approved under appropriate government standards such as NIOSH (US), CSA (Canada), CEN (EU), or JIS (Japan) 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 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.

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 (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: Sheets, rolls, or bales. Brown in color or white if bleached.

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:	450ºF (233 ºC)
Lower / Upper Explosive Limits:	Not available
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

Partition Coefficient (n-octonal/water): 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:
IARC: Listed by IARC - Titanium Dioxide (airborne, unbound particles of respirable size): Group 2B, Possibly Carcinogenic to Humans.
NTP: Listed by NTP - No
OSHA: Listed by OSHA – No
Toxicity Data: No specific information available for product in purchased form. Individual component information is listed below.
Components:
Cellulose: LC_{50} (rats, inhalation) = 5,800 mg/m^3/4 hours
Skin Corrosion/Irritation: Data is not available.
Serious Eye Damage/Irritation: Data is not available.
Respiratory or Skin Sensitization: Data is not available.
Aspiration Hazard: Not applicable.
Reproductive effects: Data is not available.
Teratogenic effects: Data is not available.
Mutagenic effects: Data is not available.
Target Organs: Eyes and respiratory system.

12. Ecological Information

Ecotoxicity: All components of this product are considered to be practically non toxic to the aquatic environment.
Biopersistance and Degradability: Cellulose fiber slowly biodegrades in water (half life range 1 month – 1 year in freshwater and coastal seawater). Cellulose fiber persists in arid soil (landfills).
Bioaccumulation: Not expected to bioaccumulate.
Soil Mobility: No information available.
Other Adverse Effects: N/A

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.

13. Disposal Considerations (cont'd.)

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. 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

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: Cellulose is exempted from registration due to being listed in Annex IV of the REACH Regulations.

ENCS: Cellulose is not listed or is exempt from the Japanese Existing and New Chemical Substances List 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.

STATE RIGHT-TO-KNOW:

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 sudden release hazard	No

16. Other Information

Date Prepared: 08/22/2015
Date Revised: Not applicable
Prepared By: WestRock Safety and Health Department.
WestRock SDS available on: www.WestRock.com
Disclaimer:
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Definition of Common Terms:

ACGIH	=	American Conference of Governmental Industrial Hygienists
C	=	Ceiling Limit
CAS#	=	Chemical Abstracts System Number
CERCLA	=	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	=	U. S. Department of Transportation
DSL	=	Canada-Domestic Substance List
EC50	=	Effective concentration that inhibits the endpoint to 50% of control population
EC#	=	European Commission Number
ENCS	=	Japanese Existing and New Chemical Substances List
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
N/A	=	Not Applicable
NIOSH	=	National Institute for Occupational Safety and Health
NFPA	=	National Fire Protection Association
NPRI	=	Canada- National Pollution Release Inventory
NTP	=	National Toxicology Program
OSHA	=	Occupational Safety and Health Administration
PEL	=	Permissible Exposure Limit
PNOR	=	Particulate Not Otherwise Regulated
PNOS	=	Particulate Not Otherwise Stated
RCRA	=	Resource Conservation and Recovery Act
REACH	=	Registration, Evaluation, Authorisation and Restriction of Chemicals
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	=	Canada-Workplace Hazardous Materials Information System

Specialty Papers

TRADE NAME or GRADES: **Kraft Paper, Sack Kraft, Natural Kraft Building Board, Natural Kraft Saturating, Natural Kraft Converting, Natural Kraft Grocery Bag, Natural Kraft Grease Resistant, Bleached Shipping Sack, Bleached Grocery Bag, Bleached Butcher Wrap, Red Butcher Wrap, Bleached Converting, Bleached Saturating, Bleached Merchandising.**

WARNING

May Form Combustible Dust Concentrations in Air if Small Particles Are Formed During Processing or Handling

Keep dust away from all ignition sources including heat, sparks and flames.

Prevent dust accumulations to minimize explosion hazard.

WestRock
504 Thrasher Street Norcross, GA 30071

Emergency Phone: (800) 424-9300 (CHEMTREC)

Business Phone: 770-448-2193