MATERIAL SAFETY DATA SHEET KRAFT PAPER AND BOARD

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1. PRODUCT IDENTIFICATION

RODUCT
KRAFT PAPER AND BOARD

MANUFACTURING LOCATION NORTH CHARLESTON, S.C.

SYNONYMS: NONE.

2. HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

NAME PERCENT

AGENCY EXPOSURE LIMITS COMMENTS

PULP 93-97

(CELLULOSE)

CAS#

9004-34-6

OSHA PEL-TWA 15 MG/M3 TOTAL DUST

OSHA PEL-TWA 5 MG/M3 RESPIRABLE DUST

ACGIH TLV-TWA 10 MG/M3 TOTAL DUST

Water 3-7

3. HAZARD IDENTIFICATION

APPEARANCE AND ODOR:

THE PRODUCT IS AN ODORLESS BROWN ROLLED PAPER.

PRIMARY HEALTH HAZARDS:

THE PRIMARY HEALTH HAZARD POSED BY THIS PRODUCT IS THOUGHT TO BE DUE TO EXPOSURE TO DUST.

PRIMARY ROUTE(S) OF EXPOSURE:

- () INGESTION:
- () SKIN:
- (X) INHALATION: DUST

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: CELLULOSE DUST MAY AGGRAVATE PREEXISTING RESPIRATORY CONDITIONS OR ALLERGIES.

CHRONIC HEALTH HAZARDS:

PAPER (CELLULOSE) DUST IS A BIOLOGICALLY INERT DUST THAT HAS LITTLE OR NO EFFECT

ON THE LUNGS AND DOES NOT PRODUCE SIGNIFICANT ORGANIC DISEASE OR TOXIC EFFECT

WHEN ALLOWABLE EXPOSURE LIMITS ARE MET.

CARCINOGENICITY LISTING:

- () NTP: NOT LISTED
- () IARC MONOGRAPHS: NOT LISTED

() OSHA REGULATED: NOT LISTED

4. EMERGENCY AND FIRST-AID PROCEDURES

INGESTION:

NOT APPLICABLE 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.

MEDICAL HELP IF IRRITATION PERSISTS.

SKIN CONTACT:

NOT APPLICABLE FOR PRODUCT IN PURCHASED FORM.

SKIN ABSORPTION:

NOT APPLICABLE FOR PRODUCT IN PURCHASED FORM.

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.

5. FIRE AND EXPLOSION DATA

FLASH POINT (METHOD USED): NAP

FLAMMABLE LIMITS:

LEL: SEE BELOW UNDER "UNUSUAL FIRE AND EXPLOSION HAZARDS" UEL: NAP

EXTINGUISHING MEDIA:

WATER.

AUTOIGNITION TEMPERATURE:

450 DEG. F (232 DEG. C)

SPECIAL FIREFIGHTING PROCEDURES:

NONE.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

DEPENDING ON MOISTURE CONTENT, PARTICLE DIAMETER, AND RATE OF HEATING, CELLULOSE

DUST MAY EXPLODE IN THE PRESENCE OF AN IGNITION SOURCE. AN AIRBORNE CONCENTRATION OF 30,000 MG/M3 IS OFTEN USED AS THE LEL FOR CELLULOSE PULP. CLASSIFIED AS "SPECIAL HAZARD" IN THE FIRE CODES, BECAUSE OF HIGH FUEL VALUE, STORAGE IN STACKS AND EXFOLIATION TENDENCIES

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: NOT APPLICABLE FOR PRODUCT IN PURCHASED FORM. SWEEP OR VACUUM DUST FOR RECOVERY OR DISPOSAL.

MINIMIZE COMPRESSED AIR BLOWDOWN OR OTHER PRACTICES THAT GENERATE HIGH DUST

LEVELS.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: NO SPECIAL HANDLING PRECAUTIONS ARE REQUIRED. KEEP IN COOL, DRY PLACE AWAY FROM OPEN FLAME.

8. EXPOSURE CONTROL MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY PROTECTION -- NOT APPLICABLE FOR PRODUCT IN PURCHASED FORM. A NIOSH/MSHA-APPROVED DUST RESPIRATOR IS RECOMMENDED WHEN ALLOWABLE EXPOSURE

LIMITS MAY BE EXCEEDED.

PROTECTIVE GLOVES -- NOT APPLICABLE FOR PRODUCT IN PURCHASED FORM. HOWEVER,

CLOTH, CANVAS, OR LEATHER GLOVES ARE RECOMMENDED TO MINIMIZE POTENTIAL MECHANICAL IRRITATION OR CUTS FROM HANDLING UNWOUND OR SHEETED PRODUCT.

EYE PROTECTION -- NOT APPLICABLE FOR PRODUCT IN PURCHASED FORM. HOWEVER, GOGGLES OR SAFETY GLASSES ARE RECOMMENDED IF THE PRODUCT IS USED IN SUCH A WAY

AS TO GENERATE HIGH DUST LEVELS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT -- NOT APPLICABLE FOR PRODUCT IN PURCHASED FORM. OUTER GARMENTS MAY BE DESIRABLE IN EXTREMELY DUSTY AREAS.

WORK/HYGIENE PRACTICES -- NOT APPLICABLE FOR PRODUCT IN PURCHASED FORM.

VENTILATION:

LOCAL EXHAUST -- PROVIDE LOCAL EXHAUST AS NEEDED SO THAT EXPOSURE LIMITS ARE MET.

MECHANICAL (GENERAL) -- PROVIDE GENERAL VENTILATION IN PROCESSING AND STORAGE AREAS SO THAT EXPOSURE LIMITS ARE MET.

SPECIAL -- NONE.

OTHER -- NONE.

9. PHYSICAL/CHEMICAL PROPERTIES

BOILING POINT (@ 760 MM HG): NAP

VAPOR PRESSURE (MM HG): NAP

VAPOR DENSITY (AIR = 1; 1 ATM): NAP

SPECIFIC GRAVITY (H2O = 1): 0.6 - 0.8

MELTING POINT: NAP

EVAPORATION RATE (BUTYL ACETATE = 1): NAP

SOLUBILITY IN WATER (% BY WEIGHT): INSOLUBLE, 2% EXTRACTABLE

% VOLATILE BY VOLUME (@ 70 DEG. F (21 DEG. C)): NAP

PH: NAP

10. STABILITY AND REACTIVITY

STABILITY: () UNSTABLE (X) STABLE

CONDITIONS TO AVOID: NAP

INCOMPATIBILITY (MATERIALS TO AVOID): AVOID OPEN FLAME AND SPARKS.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: COMBUSTION PRODUCTS INCLUDE CARBON

MONOXIDE AND CARBON DIOXIDE.

HAZARDOUS POLYMERIZATION: () MAY OCCUR (X) WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

NONE AVAILABLE FOR PRODUCT IN PURCHASED FORM.

CELLULOSE LC50 (RATS, INHALATION) = 5,800 MG/M3/4 HOURS.

SOURCE: REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS), NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (PROVIDED BY CANADIAN CENTRE FOR

OCCUPATIONAL HEALTH AND SAFETY, CCINFO MAY 1995).

12. ECOLOGICAL INFORMATION

NO INFORMATION AVAILABLE AT THIS TIME.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: DEPOSIT IN A LANDFILL OR INCINERATE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

14. TRANSPORT INFORMATION

NOT REGULATED AS A HAZARDOUS MATERIAL BY THE U.S. DEPARTMENT OF TRANSPORTATION.

15. REGULATORY INFORMATION

PLEASE CONSULT FEDERAL, STATE, AND LOCAL REGULATORY REQUIREMENTS TO DETERMINE

WHAT REQUIRMENTS ARE APPLICABLE TO THE USAGE OF THIS PRODUCT.

16. ADDITIONAL INFORMATION

DATE PREPARED: 12/15/99 DATE REVISED: 03/14/02

PREPARED BY: N.G. VANDER LINDEN, PH.D.

USER'S RESPONSIBILITY:

THE INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET IS BASED ON

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 THIS INFORMATION IS SUITABLE FOR THEIR APPLICATIONS AND TO FOLLOW SAFETY PRECAUTIONS AS MAY BE NECESSARY. THE

THE RESPONSIBILITY TO MAKE SURE THAT THIS SHEET 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

EPA = U.S. ENVIRONMENTAL PROTECTION AGENCY

IARC = INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

LCLO = LOWEST CONCENTRATION IN AIR RESULTING IN DEATH

LC50 = CONCENTRATION IN AIR RESULTING IN DEATH TO 50% OF EXPERIMENTAL

LDLO = LOWEST DOSE RESULTING IN DEATH

LD50 = ADMINISTERED DOSE RESULTING IN DEATH TO 50% OF EXPERIMENTAL ANIMALS MSHA = MINING SAFETY AND HEALTH ADMINISTRATION

NAP = NOT APPLICABLE

NAV = NOT AVAILABLE

NIOSH = NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

NTP = NATIONAL TOXICOLOGY PROGRAM

OSHA = OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PEL = PERMISSIBLE EXPOSURE LIMIT

STEL = SHORT-TERM EXPOSURE LIMIT (15 MINUTES)

TCLO = LOWEST CONCENTRATION IN AIR RESULTING IN A TOXIC EFFECT

 $ext{TDLO} = ext{LOWEST DOSE RESULTING IN A TOXIC EFFECT}$

TLV = THRESHOLD LIMIT VALUE

TWA = TIME-WEIGHTED AVERAGE (8 HOURS)

WHMIS = WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

MEADWESTVACO CORPORATION MSDS MW03-02