for Nulco $1110 a barrel/drum

Ref Ernest Trident Hubbard Hall 0321070 401 333 6180 ext 641 0853. cell

Hubtron PB
Hubbard-Hall Incorporated
563 South Leonard Street
Waterbury, CT 06708 USA
Phone: 1-800-331-6871
Emergency: 1-800-424-9300

MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION

TRADE NAME: Hubtron PB
CHEMICAL NAME: n-Propyl Bromide
CHEMICAL FAMILY: Halides

- H M I S -

HEALTH	FIRE	REACTIVITY
1	0	0

SECTION II - HAZARDOUS INGREDIENTS

N-PROPYL BROMIDE, > 94%, CAS # 106-94-5, MASSACHUSETTS SUBSTANCE LIST
T-BUTANOL, <3%, CAS 75-65-0 ACGIH (TLV) THRESHOLD LIMIT VALUE CHEMICAL, NTP TESTING PROGRAM SUBSTANCES, CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS), INGREDIENT MUST BE DISCLOSED AT CONCENTRATION OF 1%. ACGIH: TWA IS 100 PPM OR 303 MG/M3. ACGIH: APPENDIX A – CARCINOGENICITY CATEGORY A4 – "NOT CLASSIFIABLE AS A HUMAN CARCINOGEN."
1,2 EPOXYBUTANE, <1%, CAS # 106-88-7, CLEAN AIR ACT SECTION 112 STATUTORY AIR POLLUTANTS (1990 AMENDMENTS), CERCLA HAZARDOUS SUBSTANCES, IARC HUMAN CARCINOGENS (GROUP 1,2A, OR 2B), NTP TESTING PROGRAM SUBSTANCES, DOT HAZARDOUS SUBSTANCES AND RADIONUCLIDES. EPA: CERCLA RQ IS 100LB. IARC: POSSIBLE HUMAN CARCINOGEN (GROUP 2B); HUMAN EVIDENCE IS INADEQUATE; ANIMAL EVIDENCE IS LIMITED. IARC: VOL.47 (1990). IARC: SUBSTANCE REEVALUATED BY IARC VOL.71 (1998).

SECTION III - PHYSICAL DATA

DENSITY: 1.35 gms/cc at 20 Deg C-
VAPOR PRESSURE: ~112 mm Hg at 20 Deg C
VAPOR DENSITY (AIR =1): ~ 4.3
BOILING POINT: 160 Deg F, 70 Deg C
MELTING POINT: -110 Deg C
VOLATILE (%): 100
FLASH POINT: None-Tag closed cup (ASTM D56), Cleveland Open Cup (ASTM D92), Penskey-Martens Closed Cup (ASTM D93)
PERCENTAGE OF VOLATILITY BY VOLUME: 100
SPECIFIC GRAVITY: 1.31-1.32
SOLUBILITY IN WATER: 0.25 G/100ML AT 20 Deg C
EVAPORATION RATE: 6.0nBuOAc=1.0
APPEARANCE AND ODOR: Clear colorless to light straw colored liquid sweet organic
pH: N/A

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT (F): None
AUTOIGNITION TEMPERATURE: 490 Deg C for N-propyl bromide.
FLAMMABLE LIMITS: LEL 4.0% UEL 8.0%
EXTINGUISHING MEDIA: Carbon dioxide, dry chemical powder, alcohol foam or polymer foam (class ABC, BC fire extinguisher). Water may not be effective unless under supervision of Fire Authority.
SPECIAL FIRE FIGHTING MEDIA: Wear self-contained breathing apparatus and protective gear to prevent eye and skin contact.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Containers may explode in fire. Toxic and corrosive fumes may be released.

SECTION V - HEALTH HAZARD DATA

ROUTES OF ENTRY:

EYES: May cause irritation.
SKIN: May cause skin irritation.
INGESTION: Low toxicity, not expected to be a hazard in normal use.
INHALATION: May irritate the nose, throat and lungs, exposure to high doses may cause central nervous system depression. Such doses may also cause adverse effect in liver, kidney and lung.

EMERGENCY FIRST AID PROCEDURES:

INHALATION: Remove patient from source of exposure, If patient is having breathing difficulties call for medical attention.
EYES: Irrigate with water for a minimum of 15 minutes Get prompt medical attention.
SKIN: Remove contaminated clothing immediately and drench skin with water until all signs of product are removed, or if persistent, Wash with soap and water. Contaminated clothing should be laundered before re-use If exposure is significant seek medical advice.
INGESTION: Rinse mouth with water, but avoid swallowing. Obtain medical attention if swallowing is suspected Do not induce vomiting.

SECTION VI – REACTIVITY DATA

INSTABILITY: Stable
INCOMPATIBILITY: Oxidizing agents, alkali metals and finely powdered Aluminum. Product is compatible with almost all metals except for Calcium.
DECOMPOSITION: All smoke from fires is potentially dangerous take precautions to keep personnel away from fumes. Decomposition products may include hydrogen halides and carbon monoxide. Fire-fighters should wear protective clothing.
POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Keep away from ignition sources.

SECTION VII - SPILL OR LEAK PROCEDURES

SPILL, LEAK OR RELEASE: Shut off all sources of ignition. Contain the spill and absorb with inert material. Place in a waste container. Wash spill site and ventilate the area.
WASTE DISPOSAL: Can be incinerated via authorized waste disposal contractors Can be recycled in many instances contact Hubbard-Hall for details. Can be land filled under local waste authority legislation.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Use approved respirators if vapor or misting occurred, or in insufficient ventilated area.
EXPOSURE LIMITS: Manufacturers recommend 100 ppm as an occupational exposure level, i.e., that level at which personnel can work for an 8 hr working day without incurring undue health and safety problems. There has been no regulatory limit set yet, but USA EPA/OSHA are expected to set a similar level by 2001. Air monitoring equipment is available.
VENTILATION: Provide good local ventilation where needed to keep emissions below the recommended exposure limits.
PROTECTIVE GLOVES: Neoprene or nitrile rubber.
EYE PROTECTION: Chemical safety goggles or face shield with safety glasses.

SECTION IX - SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Avoid inhalation of vapors. Wear protective clothing (See Section 8) Ensure adequate ventilation, Do not wear contaminated clothing. Avoid skin and eye contact, wear protection. Store in tightly closed labeled containers, at ambient temperatures. Store away from oxidizing materials, and ignition sources. Do not store in open sunshine and keep away from direct heat. Store away from foodstuff.

SECTION X - TRANSPORTATION REQUIREMENTS

PROPER SHIPPING NAME: NOT D.O.T. REGULATED
HAZARD CLASS: N/A **DOT GUIDE:** N/A
ID NUMBER: N/A **PKG. GROUP:** N/A

NOTICE

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