Material Safety Data Sheet
Attached
N-PROPYL BROMIDE, STABILIZED
MATERIAL SAFETY DATA SHEET

SECTION 1  CHEMICAL IDENTIFICATION

Revision date:  02-17-2009  Revision: 10
Distributed by: Storchem Inc. 3425 Harvester Rd. Unit 213 Burlington, ON L7N 3N1
Product name: N-PROPYL BROMIDE, Stabilized (NPB 4)

SECTION 2  COMPOSITION

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS#</th>
<th>WT.%</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Propyl Bromide</td>
<td>106-94-5</td>
<td>94 min</td>
</tr>
<tr>
<td>t-Butanol</td>
<td>75-65-0</td>
<td>1 max</td>
</tr>
<tr>
<td>1, 2 Butylene Oxide</td>
<td>106-88-7</td>
<td>1 max</td>
</tr>
<tr>
<td>N-Propanol</td>
<td>71-23-8</td>
<td>4 max</td>
</tr>
</tbody>
</table>

SECTION 3  HAZARDS IDENTIFICATION

HMIS Ratings: Health: 1  Flammability: 0  Reactivity: 0
Harmful by inhalation R20
Non Flammable (see section 16)
Carcinogenicity NTP: No  IARC: No  OSHA: No  ACGIH: No
Is not an HAP (hazardous air Product)
Has an extremely low GWP (global warming potential)

SECTION 4  FIRST-AID MEASURES

a. Inhalation  Remove patient from source of exposure,
If patient is having breathing difficulties call for medical attention.

b. Eyes  Irrigate with water for a minimum of 15 minutes
Get prompt medical attention

c. Skin  Remove contaminated clothing immediately and drench skin with
water until all signs of product are removed, or if persistent,
Wash w with soap and water.
Contaminated clothing should be laundered before re-use If
exposure is significant seek medical advice.

e. Ingestion  Rinse mouth with water, but avoid swallowing. Obtain
medical attention if swallowing is suspected Do not
induce vomiting

SECTION 5  FIRE FIGHTING MEASURES

a. Suitable extinguishers  Carbon Dioxide (CO2)
(S43)  Foam
Dry Powder

b. Unsuitable extinguishers

Water unless under supervision of Fire Authority

c. 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.

d. Special Procedures

In case of fire use approved self-contained breathing equipment.
Wear fire-retardant clothing,
Wear eye protection.
Portable containers should be moved to a safe location if at all possible, without involving undue risk.

6. SECTION

ACCIDENTAL RELEASE MEASURES

a. Exposure controls

Use barriers to prevent accidental entry into contaminated areas.
Do not allow spillage to enter watercourses or drains
Mark contaminated area and warn all personnel
If ground water is contaminated inform the water or appropriate authority.

c. Personal protection

(S36, 37, 39)

Wear suitable respiratory equipment.
Use eye protection, such as goggles to BS2092 grade. If skin contamination is likely wear impervious clothing when dealing with the spill.
Wear PVC gloves.

e. Disposal considerations

Absorb spill in inert material such as sand or proprietary absorber
Dispose of contaminated material according to local authority. Spillage is regarded as classified waste.
Consider authorized incineration as most suitable disposal method.

SECTION 7

HANDLING AND STORAGE

a. Handling

Avoid inhalation of vapors (S23)
Wear protective clothing (see section 8)
Ensure adequate ventilation,
Do not wear contaminated clothing
Avoid skin and eye contact, wear protection. (S24, S25) Store in tightly closed labeled containers, at ambient temperatures
STORE AWAY FROM OXIDIZING MATERIALS, AND ILLNITATION SOURCES. DO NOT STORE IN OPEN SUNSHINE AND KEEP AWAY FROM DIRECT HEAT. (S15)
STORE AWAY FROM FOODSTUFF.

SECTION 8  EXPOSURE CONTROLS/PERSONAL PROTECTION

a. Personal Protection
Ensure workplace has sufficient ventilation,
Do not use in confined spaces without suitable ventilation.
Use protective clothing, including goggles.
Always use glove best are neoprene or nitrile rubber

b. Exposure Limits
Manufacturers recommend 100ppm 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 2008. Air monitoring equipment is available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance clear colorless to light straw colored liquid
Odor sweet organic
pH Not applicable (organic liquid)
Boiling Point 68 Deg C.
Melting Point -110 Deg C.
Flash Point NONE: Tag closed cup (ASTM D56), Clevland Open Cup (ASTM D92), Penskey-Martens Closed Cup (ASTM D93)
Auto-ignition temp. 409 Deg C Thermal Decomposition 204 Deg C.
Density 1.35 gms/cc at 20 Deg C-
Solubility in water 2.4gm/litre
Flammability limits LEL 4.0% UEL 7.8%
Vapor density 43
Vapor pressure 111 mm Hg at 20 Deg C

SECTION 10  STABILITY AND REACTIVITY
Product is stable if stored in the correct manner (see section 7.)
Product only normally decomposes in the case of a fire.
Product is incompatible with oxidizing agents, alkali metals and finely powdered Aluminum.
Product is compatible with almost all metals except for Calcium

SECTION 11  TOXICOLOGICAL INFORMATION
Harmful by inhalation. (R20)
Vapors or Aerosols may cause irritation of the eyes, nose, and respiratory tract.

LD50 rats  4260 mg/kg (oral)
LC50 rats  253.000mg/m3/halfhour (inhalation)
LD50 rabbit  540mg/kg (oral)
Ames Test  Negative

A full toxicological review is available if required.

SECTION 12  ECOLOGICAL INFORMATION

Product sinks in water
GWP (global warming potential 100 year horizon) 0.31
ODP (Ozone depleting potential) 0.002-0.03
Atmospheric lifetime 11 days

SECTION 13  DISPOSAL CONSIDERATIONS

Can be incinerated via authorized waste disposal contractors
Can be recycled in many instances contact Storchem for details.
Can be land filled under local waste authority legislation.

SECTION 14.  TRANSPORT INFORMATION

UNDER US REGULATIONS THIS PRODUCT IS CLASSIFIED AS NON-HAZARDOUS

SECTION 15  REGULATORY INFORMATION

(see section 14) WHMIS Classification - D2B - Toxic Material Causing Other Toxic Effects

SECTION 16  OTHER INFORMATION

Some references give various flash points for N-Propyl Bromide indicating that it is flammable. The current CHIP regulation shows that it DOES NOT have a flash point.

***In December 2004, the American Conference of Governmental Industrial Hygienists (ACGIH) established a Threshold Limit Value™ (TLV) of 10 ppm for nPB as an 8-hour time-weighted average of exposure. If EPA were to rely on this TLV of 10 ppm, the Agency would likely propose the same acceptability decisions described here.

EPA is considering the following ranges of exposures on an eight-hour time-weighted basis to be potentially protective of human health:
- 17 to 22 parts per million (ppm), to protect the female reproductive system
- 18 to 30 ppm, to protect the male reproductive system
- 20 ppm, to ensure reproductive success.
What are the health effects of overexposure to nPB?
The following effects have been reported among workers with high exposures to nPB:

- Leg weakness and pain leading to a difficulty with standing and walking (stumbling)
- Numbness, tingling, and prickling in legs
- Headache, dizziness, nausea, memory and concentration difficulties

Studies on animals indicate a range of effects on the liver, nervous system, and the male and female reproductive systems.

How can I prevent overexposure to nPB?
If you are working with nPB:

- Move away from the source of nPB when you are not directly using it.
- Use personal protective equipment, such as flexible laminate gloves, aprons, and goggles.
- If you are using nPB in solvent cleaning equipment, avoid drafts over the equipment, remove parts no faster than 10 feet per minute, and tilt parts so that solvent will drain out instead of collecting on the parts.
- Until the proposed rule is finalized, if you use nPB in aerosols or adhesives, install and use local exhaust ventilation designed to attain a face velocity of 100 to 150 feet per minute.

Companies using nPB should take advantage of the manufacturers' exposure monitoring programs or set up an exposure monitoring program of their own.

The information in this MSDS is based on Storchem Inc. current knowledge it is believed to be accurate and is given in good faith. The physical and chemical properties are typical values and do not constitute and are not part of the product specification. It is for the customers to satisfy themselves that the product is suitable for the intended purposes.