1. Product and Company Identification

a) Product Identifier

Product Name: Solvon® PB
Synonyms: Stabilized nPB

b) Recommended use and restrictions

Recommended use: Specialized vapor degreaser solvent. See TDS for further information.
Restrictions: For industrial use only. Do not handle until all safety precautions have been read and understood.

c) Supplier’s Details

Manufacturer: The Solvents Company
Address: P.O. Box 1015, Great Neck NY, 11023
Tel: (631) 595-9300 Fax: (631) 595-9302
Web/E-mail: www.solvents.co tech@solvents.co

d) Emergency Phone:

1-800-424-9300

2. Hazards Identification

a) Classification

Physical Hazards: NA
Health Hazards: Acute Toxicity, oral 4
Skin corrosion/irritation 2
Serious eye damage/eye irritation 2
Carcinogenicity 2
Reproductive toxicity 1B
Target organ toxicity, single 3
Target organ toxicity, repeated 2

Environmental Hazards: Acute hazards to the aquatic environment 3

OSHA defined Hazards: Not Classified

b) Label Elements

Signal Word: Danger

Pictograms:

Hazard Statements: May be Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May cause cancer. May damage fertility or the unborn child. May cause damage to organs (liver, kidneys, nervous system) through prolonged or repeated exposure. Harmful to aquatic life.

Precautionary Statements: Prevention

Do not handle until all safety precautions have been read and understood. Do not breathe vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only in a well-ventilated area or outdoors. If you experience any symptoms listed on this label, increase ventilation or leave the area. Wear protective gloves and eye protection. Avoid release to the environment.
Response
If exposed or concerned: Get medical attention. If eye or skin irritation occurs: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if feeling unwell. IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do- continue rinsing.

Storage
Store locked up in a well-ventilated place. Keep container tightly closed. Protect from sunlight.

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

c) Hazards not otherwise classified
None known

d) Other information
Keep away from extreme heat.

3. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>Common Name</th>
<th>CAS No.</th>
<th>Wt %</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Propyl bromide</td>
<td>nPB</td>
<td>106-94-5</td>
<td>&gt; 94</td>
</tr>
<tr>
<td>1,2 epoxybutane</td>
<td>Butylene Oxide</td>
<td>106-88-7</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>t-Butanol</td>
<td>tert-Butanol</td>
<td>75-65-0</td>
<td>&lt; 3</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

a) Description of necessary measures

General Information: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the medical personnel.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin: Wash off with soap and water. Get medical attention if irritation develops and persists.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.

Ingestion: Rinse mouth. Never give anything by mouth to an unconscious person. Only induce vomiting at the instruction of medical personnel. If vomiting occurs, keep head low so that stomach content doesn’t get into the lungs. Get medical attention.

b) Most important symptoms and effects, acute and delayed

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin irritation. Defatting of the skin. May cause redness and pain. Prolonged exposure may cause chronic effects.

c) Indication of any immediate medical attention or special treatment needed, if necessary

Provide general supportive measures and treat symptomatically. Symptoms may be delayed.

5. Fire-Fighting Measures

a) Suitable extinguishing media:
Carbon dioxide, dry chemical powder, alcohol resistant foam or polymer foam (class ABC, BC fire extinguisher). Water may not be effective.

b) Specific hazards arising from the chemical:
Containers may explode in fire. Toxic and corrosive fumes may be released if the material is exposed to high temperatures.

c) Special protective equipment and precautions for firefighters:
Wear self-contained breathing apparatus and full protective gear to prevent eye and skin contact.

d) Additional firefighting instructions:
In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. ALWAYS stay away from tanks engulfed in flame.

6. Accidental Release Measures

a) Personal precautions, protective equipment and emergency procedures:
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe the mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
b) Environmental precautions: Avoid discharge into drains, water courses or onto the ground. Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Inform appropriate managerial or supervisory personnel of all environmental releases.

c) Methods and materials for containment and cleaning up: Eliminate all ignition sources. Stop leak if you can do so without risk. Wipe up and absorb with inert material. Place in a waste container. Wash spill site and ventilate the area. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the SDS.

7. Handling and Storage

a) Precautions for safe handling: Obtain specific instructions before use. Do not handle until all safety precautions have been read and understood. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not re-use empty containers. Do not breathe gas. Avoid contact with eyes, skin, and clothing. Avoid contact during pregnancy/while nursing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Use only in well-ventilated areas. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

b) Conditions for safe storage, including any incompatibilities

Do not handle or store near an open flame, heat or other sources of ignition. Store in original tightly closed container. Store locked up in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children.

8. Exposure Controls/Personal Protection

a) Control Parameters

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>OSHA</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Propyl bromide</td>
<td>Not Established</td>
<td>EPA Recommendation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA- 25ppm</td>
</tr>
<tr>
<td>1,2 epoxybutane</td>
<td>Not Established</td>
<td>AIHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA- 2ppm</td>
</tr>
<tr>
<td>t-Butanol</td>
<td>TWA- 100ppm</td>
<td>NIOSH</td>
</tr>
<tr>
<td></td>
<td>15min STEL-150ppm</td>
<td>TWA- 100ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15min STEL-150ppm</td>
</tr>
</tbody>
</table>

Biological Limit Values: No biological exposure limits noted for the ingredient(s)

b) Engineering Controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

c) Individual protection measures, such as personal protective equipment

| Eyes: | Wear safety glasses with side shields (or goggles). |
| Skin: | Viton gloves are recommended. Suitable gloves can be recommended by the glove supplier. Wear suitable chemical resistant protective clothing. |
| Respiratory: | Under normal conditions, not required. If misting occurs or in insufficiently ventilated areas, use NIOSH-approved organic vapor air-purifying respirator, self-contained breathing apparatus, or air-supplied respirators where there may be potential for overexposure. |

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>Clear, colorless liquid</td>
</tr>
<tr>
<td>Odor:</td>
<td>Characteristic odor</td>
</tr>
<tr>
<td>Odor Threshold:</td>
<td>ND</td>
</tr>
<tr>
<td>pH:</td>
<td>6.5-7</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>6.0 nbuOAc=1.0</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>~112 mm Hg at 20°C</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>~4.3</td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>0.25 g/100ml at 20ºC4.0-8.0 (% in air)</td>
</tr>
<tr>
<td>Flammable Limits:</td>
<td>4.0-8.0 (% in air)</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>1.31-1.32</td>
</tr>
<tr>
<td>Freezing/Melting Point:</td>
<td>&lt; -250ºF (-150ºC)</td>
</tr>
<tr>
<td>Boiling Point or range:</td>
<td>160ºF (70ºC)</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>None</td>
</tr>
<tr>
<td>Flammability:</td>
<td>NA</td>
</tr>
<tr>
<td>Volatile (%):</td>
<td>100</td>
</tr>
<tr>
<td>Partition Coefficient:</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Autoignition Temp:</td>
<td>~490ºC</td>
</tr>
<tr>
<td>Decomposition Temp:</td>
<td>ND</td>
</tr>
</tbody>
</table>
10. Stability and Reactivity

Chemical stability: Stable under normal conditions
Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use
Conditions to avoid: Contact with incompatible materials. Heat, flames and sparks.
Hazardous decomposition products: Hydrogen bromide, carbon monoxide and carbon dioxide
Hazardous polymerization: Will not occur

11. Toxicological Information

a) Information on the likely routes of exposure

Eye Contact: Causes serious eye irritation.
Skin Contact: Causes skin irritation.
Ingestion: Harmful if swallowed.
Inhalation: Irritating to respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

b) Symptoms related to the physical, chemical and toxicological characteristics

Irritating to eyes, respiratory system and skin. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause redness and pain. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Behavioral changes. Narcosis. Decrease in motor functions.

c) Delayed and immediate effects and also chronic effects from short-and long-term exposure

Chronic Effects: Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. May cause damage to organs through prolonged or repeated exposure.
Mutagenicity: Not mutagenic by Ames Test
Carcinogenicity: 106-94-5: NTP classification reasonably anticipated to be a human carcinogen. Not classified by IARC.
106-88-7: IARC classification possibly carcinogenic to humans.
Acute Toxicity: Narcotic effects. May cause respiratory irritation.
Target Organ Effects: Target organs- Liver, Kidneys, CNS. May cause respiratory irritation. May cause drowsiness and dizziness. May cause damage to organs through prolonged or repeated exposure.

d) Numerical measures of toxicity (such as acute toxicity estimates)

<table>
<thead>
<tr>
<th>Compound</th>
<th>LD50/Rat, oral</th>
<th>LD50/Rabbit, dermal</th>
<th>LC50/Rat, inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Propyl bromide</td>
<td>4260 mg/Kg</td>
<td>ND</td>
<td>253 mg/L/0.5 hr</td>
</tr>
<tr>
<td>1,2 epoxybutane</td>
<td>1180 mg/Kg</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>t-Butanol</td>
<td>1760 mg/Kg</td>
<td>ND</td>
<td>3500 mg/Kg</td>
</tr>
</tbody>
</table>

The toxicological properties of this blend have not been tested. Any available ATEmix values are calculated estimates.

12. Ecological Information

a) Ecotoxicity

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Species, Test type</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-94-5</td>
<td>Fathead Minnow, LC50 (96hr)</td>
<td>67 mg/L</td>
</tr>
<tr>
<td>106-88-7</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>75-65-0</td>
<td>ND</td>
<td>ND</td>
</tr>
</tbody>
</table>

b) Persistence and degradability

ODP: 0.0049
GWP: 0.31
Bioconcentration factor: 23 (Low)
Volatilization half-life from surface water: 2 days (average)

b) Mobility in soil, Koc
Koc: 330

13. Disposal Considerations

a) Methods of disposal

This product is not regulated as hazardous waste under RCRA. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of waste in compliance with all applicable regulations.

b) Waste from unused product

Unused product may be recertified or reclaimed. Empty containers may be recycled.

13. Hazardous waste code

Not regulated.
14. Transport Information

UN No. Not regulated.
Generic group 2344 applies, but exempt from regulation under IATA: special provision A3, IMO: special provision 223, ADR (EU): Section 2.1.2.5

UN Proper Shipping Name
DOT Non-Hazardous cleaning solvents
IATA Non-Hazardous cleaning solvents
IMDG Non-Hazardous cleaning solvents

Transport hazard classes None
Packing group PGIII
Marine Pollutant No
Special precautions Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory Information

US-
VOC, content: nPB: 1.312 g/l – 10.7 lbs/gal
VOC, % of weight: >95%
TSCA: All of the components of this product are in the EPA TSCA inventory and are in compliance with 15 USC 2601-2629
CERCLA: 40 CFR 302.4 Component: 1,2-Butylene oxide
SARA: 302 Extremely Hazardous Not listed
304 Emergency release notification Not regulated
311/312 Hazardous categories Immediate Hazard - Yes, Delayed Hazard - Yes, Fire Hazard - No, Pressure Hazard - No, Reactivity Hazard - No
313 Title III / TRI Reporting SARA 313 contains 1,2 Epoxybutane and t-Butanol which are subject to the reporting requirements of SARA Section 313, Title III
SNAP: Approved by USEPA (Federal Register May 30, 2007 Section 612 Clean Air Act).
NESHAP: Not regulated
State Regulation: CA: 106-94-5 Known to the state of California to cause reproductive effects. CAL/OSHA PEL 5ppm. 106-88-7: Known to the state of California to cause cancer.
RTK: NJ MA, PA RI, MN- Contains: n-Propyl Bromide, 1,2-Butylene oxide, t-butanol, acetonitrile
NAFTA: 3814.00.50.90 Preference Criteria B - Originating in NAFTA territory
WHMIS: Class D Division 2B, WHMIS – HC-1
Australia (AICS): Components Registered
Canada (DSL): Components Registered
EEC (EINECS): Components Registered
Japan (MITI): Components Registered
South Korea (ECL): Components Registered

16. Other Information

SDS Revision Date 4-14-2020

HMIS Rating
Health: 1
Flammability: 0
Reactivity/Physical Hazard: 0
PPE: See Section 8. Personal Protection rating to be supplied by user depending on use conditions.

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