

SAFETY DATA SHEET

Solvon® PB

Catalog Numbers: 20420, 20421, 20422

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Solvon® PB

US Patent 6,660,701

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	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 Statments: 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.

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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

Components:	Common Name	CAS No.	Wt %
n-Propyl bromide	nPB	106-94-5	> 94
1,2 epoxybutane	Butylene Oxide	106-88-7	< 1
t-Butanol	tert-Butanol	75-65-0	< 3

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 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.

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- 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

Exposure Limit Guidelines:

Chemical Name	OSHA	Other
n-Propyl bromide	Not Established	EPA Recommendation TWA- 25ppm
1,2 epoxybutane	Not Established	AIHA TWA- 2ppm
t-Butanol	TWA- 100ppm 15min STEL- 150ppm	NIOSH TWA- 100ppm 15min STEL- 150ppm

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

Appearance:	Clear, colorless liquid	Specific Gravity	1.31-1.32
Odor	Characteristic odor	Freezing/Melting Point	< -250°F (-150°C)
Odor Threshold	ND	Boiling Point or range	160°F (70°C)
pH	6.5-7	Flash Point	None
Evaporation Rate:	6.0 nBuOAc=1.0	Flammability	NA
Vapor Pressure	~112 mm Hg at 20°C	Volatile (%)	100
Vapor Density	~4.3	Partition Coefficient	> 1
Solubility in Water	0.25 g/100ml at 20°C 4.0-8.0 (% in air)	Autoignition Temp	~490°C
Flammable Limits	4.0-8.0 (% in air)	Decomposition Temp	ND

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.
Incompatible materials:	Alkali earth metals. Alkaline metals. Strong acids. Strong bases.
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)

n-Propyl bromide	LD50/Rat, oral -- 4260 mg/Kg LC50/Rat, inhalation -- 253 mg/L/0.5 hr
1,2 epoxybutane	LD50/Rat, oral -- 1180 mg/Kg LD50/Rabbit, dermal -- 1760 mg/Kg.
t-Butanol	LD50/Rat, oral -- 3500 mg/Kg

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

12. Ecological Information**a) Ecotoxicity**

CAS No.	Species, Test type	Test Results
106-94-5	Fathead Minnow, LC50 (96hr)	67 mg/L
106-88-7	ND	ND
75-65-0	ND	ND

b) Persistence and degradability

ODP:	0.0049	Hydrolysis half-life:	26 Days
GWP:	0.31	Half life in Atmosphere:	11 days
Bioconcentration factor:	23 (Low)	Volatilization half-life from surface water:	2 days (average)

c) Bioaccumulative potential

LOG KOW (Bioaccumulation): 2.1 (Low)

d) Mobility in soil, K_{oc}

nPB: 330

e) Other adverse effects

No other adverse environmental effects are expected from this product.

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.

c) 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 3814.00.50.90 Preference Criteria B – Originating in NAFTA territory	
NAFTA:	Class D Division 2B, WHMIS – HC-1	
WHMIS:	Components Registered	
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 6-26-2023

HMIS Rating

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

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