



**PENSOLV™ PB2000**

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Date Prepared: March 15, 2015  
MSDS No.: 4681

**SECTION 1: IDENTIFICATION**

**Product name:** PENSOLV PB2000

**Recommended use:** Degreasing, vapor degreasing

**Physical Description:** Clear water white liquid with halogenated solvent odor

**Generic Ingredients:** Halogenated solvent

**Manufacturer:**

Penetone Corporation  
700 Gotham Parkway  
Carlstadt, NJ 07072  
800-631-1652 or 201-567-3000

**Business Contact:**

Customer Service  
800-631-1652 x2602 or 2272  
Product Safety  
800-631-1652 x2211 or 2257

**Emergency Phone Numbers:**    **PENETONE 201-567-3000**    **CHEMTREC 800-424-9300**

**SECTION 2: HAZARDS IDENTIFICATION**

**GHS CLASSIFICATION:**

<p><b>Health:</b> Aspiration hazard: 1 Reproductive toxicity: 1B Eye irritation: 2A Skin irritation: 2</p>	<p>Specific target organ toxicity - repeated exposure: 2 Specific target organ toxicity - single exposure: 3</p> <p><b>Physical:</b> Not classified</p>
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**DANGER!**

May Be Fatal If Swallowed and Enters Airways.  
Causes Skin Irritation and Serious Eye Irritation.  
May Cause Respiratory Irritation.  
May Cause Drowsiness or Dizziness.  
May Damage Fertility or the Unborn Child.  
May Cause Damage to Organs Through Prolonged or Repeated Exposure If Inhaled.



<b>Precautions:</b>	
<p><u>Prevention:</u> Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breath fumes/mist/vapor/spray. Use only outdoors or in a well ventilated area. Wear protective gloves/protective clothing/eye and face protection. Do not eat, drink, or smoke when using this product. Wash hands and exposed skin thoroughly after handling.</p> <p><u>Response:</u> <i>If exposed or concerned:</i> Get medical advice/attention. <i>If on skin:</i> Wash with plenty of water. A mild soap may be used. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.</p>	<p><i>If in eyes:</i> Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. <i>If swallowed:</i> Immediately call a poison center/doctor/emergency room/911 if you feel unwell. Do NOT induce vomiting. <i>If inhaled:</i> Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/emergency room/911 if you feel unwell.</p> <p><u>Storage:</u> Store locked up. Store in a well ventilated place. Keep container tightly closed.</p> <p><u>Disposal:</u> Dispose of contents/container in accordance with local, regional, and national regulations (see Sections 13 and 15 of SDS for disposal and reporting requirements).</p>



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### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

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Chemical Name	CAS#	Concentration Wt%
1-Bromopropane	106-94-5	100

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### SECTION 4: FIRST-AID MEASURES

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#### General Description of Symptoms & First-Aid Measures

Most likely work-place exposure routes will be *skin contact* or *inhalation*.

For *skin contact*, typically no immediate effects will be observed. A slight tingling sensation might be felt some time after exposure. Slight reddening or minor irritation could also develop if product is not quickly washed off. Repeated exposure may cause skin dryness or cracking.

*Inhalation* of mist may result in minor discomfort to the upper respiratory tract (nose and throat). Typical symptoms could include coughing and sneezing. *Inhalation* of vapors may produce varied effects, particularly if exposure occurs above the recommended workplace exposure limits (see SECTION 8). Typical symptoms would include headaches, dizziness, and drowsiness. In extreme cases, unconsciousness and other central nervous effects may occur.

#### Eyes

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists or develops: Get medical advice or attention. Penetone recommends that after any eye exposure a physician be seen immediately.

#### Ingestion

If swallowed: Rinse mouth. Do NOT induce vomiting. Call a poison center, doctor, physician or other competent medical authority if you feel unwell.

#### Inhalation

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center, doctor, physician or other competent medical authority if you feel unwell.

#### Skin

If on skin: Wash with plenty of water or a mild soap. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice or attention.

#### Special Treatment / Other

None

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### SECTION 5: FIRE FIGHTING MEASURES

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#### Flammable Properties

**Classification:** Non-flammable

**Flash Point:** None-to-boil, TCC

**Autoignition Temperature:** 860°F (460°C)

**Lower Flammable Limit:** 3.6% **Upper Flammable Limit:** 9.7%

#### Specific Hazards

Product has a very low boiling point of around 150-160°F. Containers can expand and explode under fire conditions due to vapor buildup.

#### Extinguishing Media

**Suitable:** SMALL FIRE: Use dry chemical, carbon dioxide (CO<sub>2</sub>), water spray or alcohol resistant foam. LARGE FIRE: water spray, water fog, or alcohol resistant foam.



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**Unsuitable:** Do not use solid water stream as this may spread fire.

**Protection & Precautions for Firefighters**

**Protective Equipment & Clothing:** Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection.

**Fire Fighting Guidance:** Cool containers with flooding quantities of water until well after fire is out. Move containers from fire area if you can do it safely. Dike fire control water for later disposal; do not scatter material. Containers can expand and explode under fire conditions due to vapor buildup. Always stay away from containers engulfed in fire.

**Hazardous Combustion Products:** Smoke, fumes, and oxides of carbon and bromine, hydrogen bromide gas.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**Land Spill**

Stop leak if you can do it safely. For large spills, dike and pump into properly labeled containers for reclamation or disposal. For small spill, soak up with absorbent material and place in properly labeled containers for disposal. Product vapors are heavier than air and will concentrate in low areas. Keep personnel out of low, confined, or poorly ventilated areas. Keep upwind of spill. Ventilate area of leak or spill. Confined space entry procedures may be required.

**Water Spill**

Product is much denser than water and will sink making recovery difficult. Check with local environmental regulatory agencies for reporting requirements.

**See SECTION 8 for EXPOSURE CONTROLS and PERSONAL PROTECTION.**

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**SECTION 7: HANDLING & STORAGE**

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**Handling**

Avoid contact with eyes, skin and clothing. After handling, always wash hands thoroughly with soap and water. Avoid personal contact with any residue. Do not cut, weld, or reuse empty container.

**Storage**

Keep container tightly closed when not in use. Do not store in direct sunlight. Avoid storing above 120°F (49°C). Do not store near oxidizing agents or strong bases.

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**SECTION 8: EXPOSURE CONTROLS and PERSONAL PROTECTION**

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**Engineering Controls**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

**Personal Protection**

**Inhalation** A respiratory protection program that meets OSHA's 29 CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use. Use of an organic vapor mask or respirator is recommended.

**Skin** Wear chemical resistant gloves such as: rubber, nitrile, neoprene, or latex when skin contact is possible. Protective clothing including gloves, apron, sleeves, boots, head and face protection should be worn depending on how the product is used. PPE should be cleaned thoroughly after each use.

**Eyes** Penetone recommends always wearing safety glasses as a minimum in any workplace. Conditions may



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warrant the use of chemical goggles and possibly a face shield. Consult your standard operating procedure or safety professional for advice. Use protective eye and face devices that comply with ANSI Z87.1-1987.

**Additional Remarks**

Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use.

**Occupational Exposure Limits**

<u>Component Name</u>	<u>Source</u>	<u>Value</u>	<u>Type</u>	<u>Notation</u>
1-Bromopropane	ACGIH	0.1 ppm	TWA	A3

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**SECTION 9: PHYSICAL & CHEMICAL PROPERTIES**

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**Appearance:** Clear water white liquid  
**Odor:** Halogenated  
**Odor Threshold:** Not determined  
**pH:** Not applicable  
**Melting Point / Freezing:** -166°F (-110°C)  
**Boiling Point / Boiling Point Range:** 158-160°F (70-71°C)  
**Flash Point:** None to boiling point, Tag closed cup  
**Evaporation Rate:** less than 1 (n-butyl acetate =1)  
**Flammability:** Not applicable  
**Lower Flammable Limit:** 3%  
**Upper Flammable Limit:** 9.7%  
**Explosive Properties:** Not applicable  
**Vapor Pressure:** 111 mm Hg @ 20°C  
**Relative Vapor Density:** 4.25  
**Relative Density:** 1.29 at 77°F (25°C)  
**Solubility (Water):** Insoluble  
**Partition Coefficient ( $K_{ow}$ ):**  $\log P_{ow} = 2.1$   
**Auto-ignition temperature:** 860°F (460°C)  
**Decomposition temperature:** Not available  
**Viscosity:** less than 5 centipoise at room temperature

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**SECTION 10: STABILITY & REACTIVITY**

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**Reactivity**

Product will react with oxidizing agents, bases, and certain metals such as zinc, aluminum, and alkali metals. Reaction with zinc and aluminum could be vigorous if the metals are in a finely divided state.

**Chemical Stability**

Stable.

**Hazardous Reactions**

Product will react with oxidizing agents, bases, and certain metals such as zinc, aluminum, and alkali metals. Reaction with zinc and aluminum could be vigorous if the metals are in a finely divided state.

**Conditions to Avoid**

Do not store near strong oxidizing agents or bases. Do not store in aluminum.



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**Incompatible Materials**

Strong oxidizing agents. Strong bases. Aluminum.

**Hazardous Decomposition Products**

Smoke, fumes, and oxides of carbon and bromine, hydrogen bromide gas.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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**Product Summary**

Product is mildly irritating to skin and severely irritating to the eyes. Long term contact will defat the skin and may cause drying and flaking. Aerosol droplets, mists, and vapor may cause eye irritation and respiratory irritation. Vapor concentrations above recommended exposure levels may cause headaches, dizziness, drowsiness, unconsciousness and other central nervous system effects. Product has demonstrated fetal and reproductive organ effects in animal studies.

**Acute Toxicity:**

**Dermal:** LD50 >2,000 mg/kg rat

**Inhalation:** Lc50 253 mg/l 0.5 hr rat, irritating to respiratory system, dizziness

**Oral:** LD50 4,260 mg/kg rat

**Skin Corrosion/Irritation**

Irritating to skin

**Serious Eye Damage/Irritation**

Irritating to eyes

**Sensitization - Respiratory or Skin**

No data available

**Germ Cell Mutagenicity**

Positive Ames test

**Carcinogenicity**

Not classified as a carcinogen by IARC, NTP, or OSHA.

**Reproductive Toxicity**

May cause congenital malformation in the fetus. May damage the unborn child. May impair fertility. Presumed human reproductive toxicant. In inhalation studies on rats, 1-bromopropane has caused paternal effects on sperm (morphology, motility, and count) and effects on prostate, seminal vesicle, Cowper's gland, and accessory glands.

**Specific Target Organ Effects - Single Exposure**

May cause respiratory irritation, drowsiness, or dizziness.

**Specific Target Organ Effects - Repeated or Prolonged Exposure**

Causes damage to organs through prolonged or repeated exposure.

**Aspiration Hazard**

Based upon comparison to similar products, product is considered an aspiration hazard

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**SECTION 12: ECOLOGICAL INFORMATION**

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**Product Summary**

Product is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 50-300 100 mg/l)



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**Ecotoxicity**

Fathead minnow 96 hr LC50 67.3 mg/l  
Water flea 48 hr EC50 210 mg/l

**Persistence and Degradability**

28 day biodegradability of 19%. Product is not readily biodegradable. Product not considered to be persistent.

**Bioaccumulative Potential**

Log Kow is 2.1 and bioconcentration factor is 23, suggesting the product has a low potential to bioaccumulate.

**Mobility in soil**

No data available

**Other Adverse Effects**

None known

**SECTION 13: DISPOSAL CONSIDERATIONS**

Product is nonhazardous under RCRA definitions. Dispose of contents/container in accordance with all applicable federal, state, and local regulations.

**Note:** Contaminated product, soil, water, container residues and spill cleanup materials may be hazardous wastes. Appropriate hazardous waste designation is the responsibility of the user.

**SECTION 14: TRANSPORT INFORMATION**

**ID No.:** Not applicable, nonhazardous material  
**Proper Shipping Name:** Not applicable  
**Hazard Class:** Not applicable  
**Packing Group:** Not applicable  
**Label:** None  
**Marine Pollutant:** Not applicable  
**RQ:** None  
**Special Precautions:** None

**SECTION 15: REGULATORY INFORMATION**

**TSCA**

The ingredients in this product are listed on the TSCA inventory.

**RCRA HAZARD CLASS**

Nonhazardous waste

**SARA 311/312 REPORTABLE HAZARD CATEGORIES:** Immediate (Acute) Health

**REPORTING REQUIREMENTS** (all quantities in pounds)

Component	CAS / 313 Code	Section 302 (EHS) TPQ	Section 304 EHS RQ	CERCLA RQ	Section 313	CAA 112(r) TQ	CWA / OPA
no component subject to reporting							



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**NEW JERSEY RIGHT-TO-KNOW INFORMATION**

This product contains 1-bromopropane (CAS#106-94-5)

**CALIFORNIA PROPOSITION 65 INFORMATION**

This product contains a chemical recognized by the state of California to cause developmental effects, male, female: 1-bromopropane (CAS# 106-94-5).

**SCAQMD INFORMATION**

Is there a photochemically reactive material present? No  
What is the % by volume of photochemically reactive material? 0  
What is the VOC content? 1350 g/l  
What is the vapor pressure of VOC's? Number mm Hg @ 20°C

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**SECTION 16: OTHER INFORMATION**

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**REVISION SUMMARY**

New GHS format

**SUPERSEDES ISSUE DATE**

February 24, 2004

**HAZARD RATING SYSTEMS:**

	<u>HMIS</u>	<u>NFPA</u>
HEALTH	2	2
FLAMMABILITY	1	1
REACTIVITY	0	0
	B	

**KEY**  
4 = Severe  
3 = Serious  
2 = Moderate  
1 = Slight  
0 = Minimal

FOR ADDITIONAL PRODUCT INFORMATION, CONTACT YOUR SALES ENGINEER  
FOR ADDITIONAL HEALTH/SAFETY INFORMATION, CALL 201-567-3000

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