



## Safety Data Sheet

PYRIDOSTIGMINE BROMIDE USP

50-4441

For Compliance with OSHA 29 CFR 1910.1200 and ANSI Z400.1-1998

### Section 1: Identification

Product Name	PYRIDOSTIGMINE BROMIDE USP	
Commercial Name	PYRIDOSTIGMINE BROMIDE	
Product Use	Preparation of medicine	
Restrictions On Use	Not available.	
Product Code	50-4441	
Company	PCCA 9901 South Wilcrest Houston, TX 77099 Phone: 1-800-331-2498 Fax: 1-800-874-5760	In case of emergency contact: <b>CHEMTREC (24hr) 1-800-424-9300</b>

### Section 2: Hazard(s) Identification

OSHA Haz Com: Acute toxicity, Oral (Category 2) Skin sensitization (Category 1)  
CFR 1910.1200

Signal Word DANGER

Hazard Statement(s) Fatal if swallowed. May cause an allergic skin reaction.

Pictogram(s) or Symbol(s)



Precautionary Statement(s):

Prevention	Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Wear protective gloves. Contaminated work clothing must not be allowed out of the workplace.
Response	If swallowed: Immediately call a poison center/doctor. Rinse mouth. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Storage	Store locked up
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations

### Section 3: Composition/Information on Ingredients

Substance/Mixture	Substance
Components	PYRIDOSTIGMINE BROMIDE USP
% By Weight	100
CAS#	101-26-8
Molecular Weight	261.12
Chemical Formula	C9H13BrN2O2
Synonym(s)	3-[(Dimethylamino)-Carbonyl]oxy]-1-Methylpyridinium Bromide; 1-Methyl-3-Hydroxypyridinium Bromide; Dimethyl Carbamate; 3-Hydroxy-1-Methylpyridinium Bromide Dimethylcarbamate; 3-Dimethylaminocarbonyloxy-N-methyl-pyridinium Bromide; Mestinon; Mestinone Bromide; Regonal

Mixtures	Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
	PYRIDOSTIGMINE BROMIDE USP	101-26-8	100	Not available	Not available

**Section 4: First-Aid Measures**

<b>Inhalation</b>	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
<b>Skin Contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. For minor skin contact, avoid spreading material on unaffected skin. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
<b>Eye Contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth thoroughly. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if substance is ingested. Get medical attention if symptoms occur.
<b>Symptoms/Effects</b>	
<b>Acute</b>	Muscarinic effects. Pharmacologically active material. Occupational exposure may cause physiological effects
<b>Delayed</b>	Muscarinic effects. Pharmacologically active material. Occupational exposure may cause physiological effects

**Immediate Medical Attention**

Provide general supportive measures and treat symptomatically. Treatment of overdose may include the following: Administer activated charcoal as a slurry. For muscarinic effects (bradycardia, hypersalivation, acute lung injury, gastrointestinal symptoms), administer atropine. To reverse muscular weakness and fasciculations, administer 2-PAM (pralidoxime). For moderate to severe poisoning (fasciculations, muscle weakness, respiratory depression, coma, seizures), treat with 2-PAM in addition to atropine

**Section 5: Fire-Fighting Measures****Suitable Extinguishing Media**

Water. Foam. Dry chemical or CO<sub>2</sub>. Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable Extinguishing Media**

Not available

**Products of Combustion**

Not available

**Firefighters Special Equipment and Precautions**

Wear suitable protective equipment. Use water spray to cool unopened containers. As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

**Section 6: Accidental Release Measures**

Keep unnecessary personnel away. Wear appropriate personal protective equipment. Avoid inhalation of dust from the spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Methods and materials for containment and cleaning up: Avoid the generation of dusts during clean-up. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean surface thoroughly to remove residual contamination. Environmental precautions: Avoid discharge into drains, water courses or onto the ground.

**Section 7: Handling and Storage**

Handling: As a general rule, when handling USP Reference Standards, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Clean equipment and work surfaces with suitable detergent or solvent after use. After removing gloves, wash hands and other exposed skin thoroughly. Select and use containment devices and personal protective equipment based on a risk assessment of material potency and exposure potential Storage: Store in tight container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity

**Section 8: Exposure Controls/Personal Protection**

**Exposure Limits**      Not available.

**Engineering Controls**

For laboratory operations, use local exhaust ventilation or a ventilated enclosure for high energy operations such as particle sizing. Control exposures to below the occupational exposure level (if available). Select and use containment devices and personal protective equipment based on a risk assessment of exposure potential. Cover all containers for solutions and slurries while being transferred.

**Personal Protection**

**Eye/face protection:** Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available. **Skin protection** **Hand protection:** Wear nitrile or other impervious gloves if skin contact is possible. When the material is dissolved or suspended in an organic solvent, wear gloves that provide protection against the solvent. **Other:** Train employees in proper gowning and degowning practices. Wear lab coat. Base the choice of skin protection on the job activity, potential for skin contact and solvents and reagents in use. Do not wear protective garments in common areas (e.g., cafeterias) or out-of-doors. **Respiratory protection:** Respirators are generally not required for laboratory operations. Use a tight-fitting full-face respirator with HEPA filters for spill cleanup. Choose respiratory protection appropriate to the task and the level of existing engineering controls. **Thermal hazards:** Wear appropriate thermal protective clothing, when necessary. **General hygiene considerations:** Handling practices in this SDS are recommendations for laboratory use of reference standards. Procedures for any other uses or quantities should be determined after an appropriate assessment.

**Section 9: Physical and Chemical Properties**

<b>Appearance</b>	White. Off-white. powder.		
<b>Odor</b>	Agreeable.		
<b>Odor Threshold</b>	Not available.		
<b>Melting Point</b>	305.6 - 309.2 °F (152 - 154 °	<b>pH</b>	in aqueous solution 3.5 Solution: 1
<b>Freezing Point</b>	Not available.	<b>Vapor Pressure</b>	0.00001 kPa (77 °F (25 °C))
<b>Boiling Point/Range</b>	Not available.	<b>Vapor Density</b>	Not available.
<b>Decomposition temperature</b>	Not available.	<b>Viscosity</b>	Not available.
<b>Partition Coefficient:</b> n-octanol/water	Not available.	<b>Evaporation Rate</b>	Not available.
<b>Flash Point</b>	Not available	<b>Autoignition temperature</b>	Not available.
<b>Flammability</b>	Not available.	<b>Flammability or Explosive Limits:</b>	
		<b>Lower</b>	Not available.
		<b>Upper</b>	Not available.
<b>Solubility(ies)</b>	Freely soluble in water.		
<b>Other</b>	Acetone: Practically insoluble. Alcohol: Freely soluble. Chloroform: Freely soluble. Ether: Practically insoluble. Chemical family Pyridine derivative. Molecular formula C9-H13-N2-O2.Br Molecular weight 261.14 g/mol		

**Section 10: Stability and Reactivity**

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical Stability</b>	Material is stable under normal conditions
<b>Hazardous Polymerization</b>	No dangerous reaction known under conditions of normal use
<b>Conditions to Avoid</b>	Contact with incompatible materials
<b>Incompatible Materials</b>	Strong oxidizing agents
<b>Hazardous Decomposition Products</b>	Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions. NOx. Br-

**Section 11: Toxicological Information**
**RTECS** UU5270000

**Acute Toxicity**

Oral LD50 Mouse 31.5 mg/kg, 16 mg/kg Rat 37500 µg/kg

**Skin Corrosion/Irritation**

Not available.

**Serious Eye Damage/Irritation**

Not available.

**Respiratory or Skin Sensitization**

May cause an allergic skin reaction

**Germ Cell Mutagenicity**

Not available.

**Carcinogenicity**

Not available.

**Reproductive Toxicity**

Not available.

**Routes of Entry**

Skin. Ingestion.

**Symptoms Related to Exposure**

Burning skin. Muscle twitching. Salivation. Sweating. Gastrointestinal disturbances. Nosebleeds. Pinpoint pupils. Watery eyes. Increased menstrual bleeding. Increased urination. Clumsiness. Difficulty breathing. Slurred speech. Seizures. Restlessness. Blurred vision. Heaviness, tightness, or pressure in chest or neck. Muscle weakness. Cramps.

**Potential Health Effects**

Not available.

**Target Organ(s)** Not available.

**Section 12: Ecological Information****Ecotoxicity**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence and Degradability**

Not available

**Bioaccumulative Potential**

Not available.

**Mobility in Soil**

Not available.

**Other Adverse Effects**

Not available.

**Section 13: Disposal Considerations****Waste Disposal**

Dispose in accordance with all applicable regulations. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. The waste code should be assigned in discussion between the user, the producer and the waste disposal company. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Disposal of Container**

Since emptied containers may retain product residue, follow label warnings even after container is emptied.

**Other Considerations**

Not available.

**Section 14: Transport Information****DOT Classification**

UN number: UN2811 UN proper shipping name: Toxic solid, organic, n.o.s. (Pyridostigmine Bromide) Transport hazard class(es) Class 6.1 Subsidiary risk - Packing group III

**Section 15: Regulatory Information****Regulations**

US federal regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200 Toxic Substances Control Act (TSCA) TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated. CERCLA Hazardous Substance List (40 CFR 302.4) Not listed. SARA 304 Emergency release notification Not regulated. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) Not listed. SARA 302 Extremely hazardous substance Superfund Amendments and Reauthorization Act of 1986 (SARA) Not listed. Yes SARA 311/312 Hazardous chemical Acute toxicity (any route of exposure) Respiratory or skin sensitization Classified hazard categories SARA 313 (TRI reporting) Not regulated Other federal regulations Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Not regulated. Safe Drinking Water Act (SDWA) US state regulations California Proposition 65 California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



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### Other

Not available.

### Section 16: Other Information

Not available.