

**Safety Data Sheet**

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:
CHEMTREC (24hr) 1-800-424-9300

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; Mestinson; Mestinson Bromide; Regonal

Mixtures

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

**Safety Data Sheet**

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

Section 4: First-Aid Measures

Inhalation	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.
Skin Contact	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.
Eye Contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	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.
Symptoms/Effects	
Acute	Muscarinic effects. Pharmacologically active material. Occupational exposure may cause physiological effects
Delayed	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 CO₂. 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

Appearance	White. Off-white. powder.		
Odor	Agreeable.		
Odor Threshold	Not available.		
Melting Point	305.6 - 309.2 °F (152 - 154 °	pH	in aqueous solution 3.5 Solution: 1
Freezing Point	Not available.	Vapor Pressure	0.00001 kPa (77 °F (25 °C))
Boiling Point/Range	Not available.	Vapor Density	Not available.
Decomposition temperature	Not available.	Viscosity	Not available.
Partition Coefficient: n-octanol/water	Not available.	Evaporation Rate	Not available.
Flash Point	Not available	Autoignition temperature	Not available.
Flammability	Not available.	Flammability or Explosive Limits:	
		Lower	Not available.
		Upper	Not available.
Solubility(ies)	Freely soluble in water.		
Other	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

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical Stability	Material is stable under normal conditions
Hazardous Polymerization	No dangerous reaction known under conditions of normal use
Conditions to Avoid	Contact with incompatible materials
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	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.

**Safety Data Sheet**

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

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. YesSARA 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



Safety Data Sheet

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

Other

Not available.

Section 16: Other Information

Not available.