



Material Safety Data Sheet

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Responsible Party: Reference Standards Technical Services

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PHYSOSTIGMINE SALICYLATE

Catalog Number: 1537003 Package Size: 200 mg

Revision Date: December 6, 2002

EMERGENCY OVERVIEW - Poison.

SECTION 1 - IDENTIFICATION

Common Name: Physostigmine Salicylate

Formula: C₅H₂₁N₃O₂ . C₇H₆O₃

Synonym: Eserine salicylate

Chemical Name: Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)-, mono(2-hydroxybenzoate)

CAS Number: 57-64-7

RTECS Number: TJ2450000

Chemical Family: Pyrrolo-indole

Therapeutic Category: Cholinergic (ophthalmic)

SECTION 2 - INGREDIENT INFORMATION

<u>Principle Components</u>	<u>Percent</u>	<u>Exposure Limits</u>
Physostigmine Salicylate	Pure Material	n/f

SECTION 3 - HEALTH HAZARD INFORMATION

Usual Adult Dose: The usual adult oral dose of physostigmine salicylate is 1 to 2 mg three times a day. It is also administered topically, to the eyes, as a 0.25 to 0.5% solution.

Adverse Effects: Adverse effects may include increased watering of the mouth, unusually small pupils, nausea or vomiting, diarrhea, increased sweating, increased bronchial secretions, stomach pains, unusual watering of eyes, nervous or restlessness, frequent urge to urinate, irregular heartbeat, muscle twitching, difficult breathing, wheezing or tightness in chest, and unusual tiredness or weakness. Possible allergic reaction to material if inhaled, ingested or in contact with skin.

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Overdose Effects: n/f

Acute: Possible eye, skin and/or respiratory tract irritation, and death.

Chronic: Possible hypersensitization.

Inhalation: May cause irritation. Avoid inhalation. Remove to fresh air.

Eye: May cause irritation and seriously affect vision. Flush with copious quantities of tepid water for at least 15 minutes

Skin: May cause irritation. Flush with copious quantities of water.

Ingestion: May cause death if swallowed. Avoid ingestion. Flush out mouth with water. This material is readily absorbed from the gastrointestinal tract.

Medical Conditions Aggravated by Exposure:

Hypersensitivity to material, asthma, cardiovascular disease, intestinal or urogenital tract obstruction, gangrene, and organophosphate poisoning.

Cross Sensitivity: n/f

Pregnancy Comments: The safe therapeutic use of physostigmine salicylate during pregnancy has not been established.

Pregnancy Category: n/f

SECTION 4 - FIRST AID MEASURES

General: Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If person is not breathing give artificial respiration. If breathing is difficult give oxygen. Obtain medical attention.

Overdose Treatment: Treatment of overdose should be symptomatic and supportive and may include the following:

1. Administer atropine sulfate injection as a proven antidote.
2. Maintain open airway and monitor cardiac function.
3. For ganglionic and skeletal muscle effects, administer intravenous pralidoxime chloride.
4. Treat convulsion or shock as appropriate. [USP DI 2002]

SECTION 5 - TOXICOLOGICAL INFORMATION

Oral Rat: LD50: n/f

Oral Mouse: LD50: 2500 micrograms/kg

Irritancy Data: n/f

Target Organ(s): Eyes and Central nervous system.

Listed as a Carcinogen? **NTP:** No **IARC:** No **OSHA:** No

Other: No

SECTION 6 - FIREFIGHTING MEASURES

Flash Point: >200° F

Upper Flammable Limit: n/f

Auto-Ignition Temperature: n/f

Lower Flammable Limit: n/f

Extinguisher Media: Water spray, dry chemical, carbon dioxide or foam as appropriate for surrounding fire and materials.

Fire and Explosion Hazards: This material is assumed to be combustible. As with all dry powders it is advisable to ground mechanical equipment in contact with dry material to dissipate the potential buildup of static electricity.

Firefighting Procedures: As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

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SECTION 7 - PHYSICAL HAZARDS

Conditions to Avoid: Avoid exposure to heat, light and air, which cause material to turn red.

Incompatibilities: Metals and alkalis.

Decomposition Products: When heated to decomposition material emits toxic fumes of NOx. Emits toxic fumes under fire conditions.

Stable? Yes **Hazardous Polymerization?** No

SECTION 8 - HANDLING / SPILL / DISPOSAL MEASURES

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. Wash thoroughly after handling.

Storage: Store in tight, light-resistant container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity.

Spill Response: Wear approved respiratory protection, chemically compatible gloves and protective clothing. Wipe up spillage or collect spillage using a high efficiency vacuum cleaner. Avoid breathing dust. Place spillage in appropriately labelled container for disposal. Wash spill site.

Disposal: Dispose of waste in accordance with all applicable Federal, State and local laws.

SECTION 9 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Use a NIOSH approved respirator, if it is determined to be necessary by an industrial hygiene survey involving air monitoring. In the event that a respirator is not required, an approved dust mask should be used.

Ventilation: Recommended.

Gloves: Rubber

Eye Protection: Safety Goggles

Protective Clothing: Protect exposed skin.

SECTION 10 - PHYSICAL AND CHEMICAL PROPERTIES

NOTE: The data reported below is general information, and is not specific to the USP Reference Standard Lot provided!

Appearance and Odor: White shining crystals or white powder; odorless.

Melting Point: 185 - 187° C

Solubility in Water: Sparingly soluble

Vapor Density: n/f

Boiling Point: n/f

Evaporation Rate: n/f

Specific Gravity: n/f

Reactivity in Water: n/f

Vapor Pressure: n/f

% Volatile by Volume: n/f