



# Material Safety Data Sheet

12601 Twinbrook Parkway  
Rockville, MD 20852 USA

Telephone calls: (301) 881-0666  
8:00am - 5:00pm EST Mon. - Fri.

Responsible Party: Reference Standards Technical Services

## ATTENTION !

USP Reference Standards are sold for chemical test and assay purposes only, and NOT for human consumption. The information contained herein is applicable solely to the chemical substance when used as a USP Reference Standard and does not necessarily relate to any other use of the substance described, (i.e. at different concentrations, in drug dosage forms, or in bulk quantities). USP Reference Standards are intended for use by persons having technical skill and at their own discretion and risk. This information has been developed by USP staff from sources considered reliable but has not been independently verified by the USP. Therefore, the USP Convention cannot guarantee the accuracy of the information in these sources nor should the statements contained herein be considered an official expression. NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE is made with respect to the information contained herein.

## CLONIDINE HYDROCHLORIDE

Catalog Number: 1140407

Package Size: 200 mg

Revision Date:

April 5, 2004

EMERGENCY OVERVIEW - Toxic. WARNING: Extremely small amounts of this material are pharmacologically active.

### SECTION 1 - IDENTIFICATION

**Common Name:** Clonidine Hydrochloride

**Formula:** C<sub>9</sub>H<sub>9</sub>Cl<sub>2</sub>N<sub>3</sub> . HCl

**Synonym:** n/f

**Chemical Name:** Benzenamine, 2,6-dichloro-N-2-imidazolidinylidene-, monohydrochloride

**CAS Number:** 4205-91-8

**RTECS Number:** NJ2490000

**Chemical Family:** Imidazoline

**Therapeutic Category:** Antihypertensive

### SECTION 2 - INGREDIENT INFORMATION

<u>Principle Components</u>	<u>Percent</u>	<u>Exposure Limits</u>
Clonidine Hydrochloride	Pure Material	n/f

### SECTION 3 - HEALTH HAZARD INFORMATION

**Usual Adult Dose:** The usual oral adult dose of clonidine hydrochloride is 100 to 600 micrograms (0.1 to 0.6 mg) in divided doses, not to exceed 2.4 mg per day. Clonidine hydrochloride is also applied topically to the skin, in doses of 100 micrograms (0.1 mg) per day.

**Adverse Effects:** Adverse effects may include mental depression; swelling of feet and lower legs; constipation; dizziness; drowsiness; dry mouth; unusual tiredness or weakness; loss of appetite; decreased sexual ability; dry, itchy or burning eyes; lightheadedness or fainting; nausea; vomiting; and nervousness. Possible allergic reaction to material if inhaled, ingested or in contact with skin.

# CLONIDINE HYDROCHLORIDE

Catalog Number: 1140407

Package Size: 200 mg

Revision Date:

April 5, 2004

- Overdose Effects:** Symptoms of overdose may include dizziness or fainting, difficulty breathing, slowed heartbeat, pinpoint pupils, feeling cold, and extreme tiredness or weakness.
- Acute:** Possible eye, skin, gastrointestinal and/or respiratory tract irritation.
- Chronic:** Possible hypersensitization and tolerance.
- Inhalation:** May cause irritation. Avoid inhalation. Remove to fresh air.
- Eye:** May cause irritation. Flush with copious quantities of water.
- Skin:** May cause irritation, contact dermatitis, and darkening of skin. Avoid contact. Flush with copious quantities of water. This material is slowly absorbed through the skin.
- Ingestion:** May cause irritation, bitter taste, and toxicity. Avoid ingestion. Flush out mouth with water. This material is well absorbed from the gastrointestinal tract. Onset of action is 30 to 60 minutes; duration is 8 hours.

**Medical Conditions Aggravated by Exposure:** Hypersensitivity to material.

**Cross Sensitivity:** Persons sensitive to ophthalmic apraclonidine may be sensitive to this material also.

**Pregnancy Comments:** Adequate and well-controlled pregnancy studies in humans have not been done. Some studies in animals have shown clonidine to cause embryo death following both low and high doses; however, other studies in animals have not shown clonidine to cause adverse effects.

**Pregnancy Category:** C

## 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 for clonidine overdose should be symptomatic and supportive and may include the following:

1. Do NOT induce vomiting. Gastric lavage may be useful following recent and/or large ingestion. Administration of activated charcoal and/or a cathartic may be beneficial.
2. For bradycardia - Use atropine sulfate.
3. For hypertension - Administer intravenous furosemide, diazoxide, phentolamine, or nitroprusside.
4. For hypotension - Consider intravenous fluids or vasopressor agents; administer a dopamine infusion.
5. Naloxone may be useful for management of respiratory depression, hypotension, or coma; monitor blood pressure for paradoxical hypertension.
6. If necessary, use a tolazoline infusion; however, this is not recommended due to inconsistent outcomes.
7. Dialysis is not likely to significantly enhance elimination. [USP DI 2004 and PDR 2004]

## SECTION 5 - TOXICOLOGICAL INFORMATION

**Oral Rat:** LD50: 126 mg/kg

**Oral Mouse:** LD50: 135 mg/kg

**Irritancy Data:** n/f

**Target Organ(s):** Cardiovascular system and central nervous system.

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

**Other:** No

## SECTION 6 - FIREFIGHTING MEASURES

**Flash Point:** n/f

**Upper Flammable Limit:** n/f

# CLONIDINE HYDROCHLORIDE

Catalog Number: 1140407      Package Size: 200 mg

Revision Date: April 5, 2004

**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.

## SECTION 7 - PHYSICAL HAZARDS

**Conditions to Avoid:** Avoid exposure to moisture.  
**Incompatibilities:** Oxidizing agents  
**Decomposition Products:** When heated to decomposition material emits toxic fumes of NO<sub>x</sub> and Cl<sup>-</sup>. 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 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:** A fine, white crystalline powder; odorless.  
**Melting Point:** 305 - 312° C  
**Solubility in Water:** 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