Safety Data Sheet

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

Section 1: Identification

Product Name Tizanidine Hydrochloride USP
Commercial Name 5-chloro-N-(4,5-dihydro-1H-imidazol-2-yl)-2,1,3- benzothiadiazol-4- amine hydrochloride
Product Use Not available
Restrictions On Use Not available

Product Code 30-4791

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: CFR 1910.1200 Acute Toxicity, oral: Category 4 Reproductive Toxicity: Category 2 Specific target organ toxicity, single exposure: Category 3 narcotic effects

Signal Word DANGER

Hazard Statement(s) Harmful if swallowed. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. Causes damage to organs (cardiovasular system) through prolonged or repeated exposure.

Pictogram(s) or Symbol(s)

Precautionary Statement(s):

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area Wash thoroughly after handling Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.

Response IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician. IF exposed or concerned: Get medical advice/attention. Rinse mouth

Storage Store in a well-ventilated place. Keep container tightly closed. 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 Tizanidine Hydrochloride
% By Weight Pure material
CAS# 64461-82-21
Molecular Weight 290.2
Chemical Formula C9H9Cl2N5S
Synonym(s) 5-chloro-4-[(2-imidazolin-2-yl) amino]- 2,1,3- benzothiadiazole hydrochloride

Mixtures

Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
Tizanidine Hydrochloride	64461-82-21	Pure material	N/A	N/A

Section 4: First-Aid Measures

Inhalation	Move to fresh air. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin Contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists
Eye Contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Symptoms/Effects	
Acute	Sedation. Hypotension.
Delayed	Sedation. Hypotension.

Immediate Medical Attention

Treatment of overdose should be symptomatic and supportive: Do not induce vomiting. Administer activated charcoal as a slurry. For hypotension, infuse 10- 20 mL/kg isotonic fluid. Administer dopamine or norepinephrine if hypotension persists. For bradycardia, administer atropine intravenously. Monitor vital signs. Monitor ECG. Monitor fluid and electrolyte status. (Meditext)

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media

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

Unsuitable Extinguishing Media

Not available.

Products of Combustion

Not available.

Firefighters Special Equipment and Precautions

Wear suitable protective equipment. As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing. Cool containers exposed to flames with water until well after the fire is out.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation. Wear appropriate personal protective equipment. Methods and materials for containment and cleaning up: Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid the generation of dusts during clean-up. For waste disposal, see section 13 of the SDS. Wash spill site.

Section 7: Handling and Storage

Precautions for safe 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. Conditions for safe storage, including any incompatibilities: 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	Airborne exposure should be controlled primarily by engineering controls such as general dilution ventilation, local exhaust ventilation, or process enclosure. Local exhaust ventilation is generally preferred to general exhaust because it can control the contaminant at its source, preventing dispersion into the work area. An industrial hygiene survey involving air monitoring may be used to determine the effectiveness of engineering controls. Effectiveness of engineering controls intended for use with highly potent materials should be assessed by use of nontoxic surrogate materials. Local exhaust ventilation such as a laboratory fume hood or other vented enclosure is recommended, particularly for grinding, crushing, weighing, or other dust-generating procedures.

Personal Protection	Eye/face protection Safety glasses with sideshields are recommended. Face shields or goggles may be required if splash potential exists or if corrosive materials are present. Approved eye protection (e.g., bearing the ANSI Z87 or CSA stamp) is preferred. Maintain eyewash facilities in the work area. Skin protection Hand protection: Chemically compatible gloves. For handling solutions, ensure that the glove material is protective against the solvent being used. Use handling practices that minimize direct hand contact. Employees who are sensitive to natural rubber (latex) should use nitrile or other synthetic nonlatex gloves. Use of powdered latex gloves should be avoided due to the risk of latex allergy. Other: For handling of laboratory scale quantities, a cloth lab coat is recommended. Where significant quantities are handled, work clothing may be necessary to prevent take-home contamination. Respiratory protection: Where respirators are deemed necessary to reduce or control occupational exposures, use NIOSH-approved respiratory protection and have an effective respirator program in place (applicable U.S. regulation OSHA 29 CFR 1910.134). Thermal hazards Not available.

Section 9: Physical and Chemical Properties

Appearance	White to off-white or pale yellow powder. Solid. Powder.
Odor	Odorless or faint characteristic odor.
Odor Threshold	Not available

Melting Point	546.8 - 554 °F (286 - 290 °C)	**pH**	4.3 - 5.3 (1% w/v solution)
Freezing Point	Not available	**Vapor Pressure**	Not available
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)	Slightly soluble in water. Slightly soluble in methanol; insoluble in chloroform and in acetone; soluble in fat
Other	Not available.

Section 10: Stability and Reactivity

Reactivity	No dangerous reaction known under conditions of normal use
Chemical Stability	Material is stable under normal conditions
Hazardous Polymerization	Not available
Conditions to Avoid	Not available.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	SOx, NOx, Cl-. Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions.

Section 11: Toxicological Information

RTECS Not available

Acute Toxicity
Harmful if swallowed. Acute Oral Mouse235 mg/kg Rabbit 98 mg/kg Rat 414 mg/kg

Skin Corrosion/Irritation
Not available.

Serious Eye Damage/Irritation
Not available.

Respiratory or Skin Sensitization
Not available

Germ Cell Mutagenicity
Not available

Carcinogenicity
Not available

Reproductive Toxicity
Suspected of damaging fertility or the unborn child.

Routes of Entry
Ingestion.

Symptoms Related to Exposure
Drowsiness. Fatigue. Weakness. Dizziness. Headache. Anxiety. Hallucinations. Insomnia Burning or tingling sensations. Speech or language disturbances. Blurred vision. Dry mouth. Nausea. Vomiting. Indigestion. Stomach pain. Muscle pain. Back pain. Fever. Yellow eyes and/or skin. Painful or difficult urination.

Potential Health Effects
Sedation. Low blood pressure. Orthostatic hypotension. Liver injury. Slow heartbeat. Irregular heartbeat. Urinary tract infection. Respiratory failure. Coma.

Target Organ(s) Liver impairment. Kidney impairment. Hypotension. Heart disease. Use of oral contraceptives.

Section 12: Ecological Information

Ecotoxicity
Not available

Persistance and Degradability
Not available

Bioaccumulative Potential
Not available

Mobility in Soil
Not available

Other Adverse Effects
Not available

Section 13: Disposal Considerations

Waste Disposal
This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). 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. Dispose in accordance with all applicable regulations.

Disposal of Container
Empty containers should be taken to an approved waste handling site for recycling or disposal . 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
DOT Not regulated as a hazardous material by DOT.

Section 15: Regulatory Information

Regulations
US federal regulations CERCLA/SARA Hazardous Substances - Not applicable. One or more components are not listed on TSCA. Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No SARA 302 Extremely hazardous substance No SARA 311/312 Hazardous chemical No Other federal regulations Safe Drinking Water Act (SDWA) Not regulated. Food and Drug Administration (FDA) Not regulated. US state regulations 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.

Other
Not availabe

Section 16: Other Information

Usage: muscle relaxant