Safety Data Sheet

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

Section 1: Identification

Product Name Metoprolol Tartrate USP
Commercial Name Not available.
Product Use Active Pharmaceutical Ingredient
Restrictions On Use Not available.

Product Code 55-2697

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 Serious eye damage/eye irritation Category 2A Specific target organ toxicity, single exposure Category 1 (cardiovascular system)

Signal Word DANGER

Hazard Statement(s) Causes serious eye irritation. Causes damage to organs (cardiovascular system)

Pictogram(s) or Symbol(s)

Precautionary Statement(s):

Prevention Do not breathe dust. Wash thoroughly after handling. Wear eye/face protection.

Response If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed: Call a poison center/doctor.

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 Metoprolol Tartrate USP
% By Weight 100
CAS# 56392-17-7
Molecular Weight Not available.
Chemical Formula C15H25N1O3
Synonym(s) Not available.

Mixtures

Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
Metoprolol Tartrate USP	56392-17-7	100		

Section 4: First-Aid Measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist
Skin Contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists
Eye Contact	Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately
Symptoms/Effects	
Acute	Cardiovascular effects. Pharmacologically active material. Occupational exposure may cause physiological effects.
Delayed	Cardiovascular effects. Pharmacologically active material. Occupational exposure may cause physiological effects.

Immediate Medical Attention

Provide general supportive measures and treat symptomatically. Treatment of beta-adrenergic blocker overdose may include the following: Do not induce vomiting. Maintain an open airway and assist ventilation if necessary. Administer activated charcoal as a slurry and perform gastric lavage to decrease absorption. Gastric lavage may increase vagal tone. Perform an early echocardiographic evaluation to expedite diagnosis and treatment of cardiac toxicity. For mild hypotension, administer intravenous fluids. For severe hypotension, administer intravenous glucagon, calcium, or catecholamines (dopamine, norepinephrine, epinephrine). Concurrent high-dose insulin euglycemia therapy may allow for a decrease in the dose of catecholamine. For bradycardia, administer intravenous atropine, glucagon, and isoproterenol. Cardiac pacing may also be needed. For bronchospasm, administer nebulized bronchodilators. Systemic corticosteroids may also be beneficial. For seizures administer intravenous diazepam or lorazepam. Muscle relaxants and artificial ventilation may also be required. For dysrhythmias and conduction defects, sodium bicarbonate may be helpful. For hypoglycemia, administer glucose or glucagon.

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

Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard

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. Use standard firefighting procedures and consider the hazards of other involved materials.

Section 6: Accidental Release Measures

Keep unnecessary personnel away. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear appropriate personal protective equipment. For personal protection, see section 8 of the SDS. Methods and materials for containment and cleaning up: For waste disposal, see section 13 of the SDS. 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. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Combustible dust clouds may be created where operations produce fine material (dust). 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	TWA 0.1 mg/m3
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 crystalline powder.
Odor	Odourless.
Odor Threshold	Not available.

Melting Point	248 - 251.6 °F (120 - 122 °C)	**pH**	in aqueous solution 6 - 7 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	0.6	**Evaporation Rate**	Not available.
Flash Point	Not available.	**Autoignition temperature**	752 °F (400 °C)
Flammability	Not available.	**Flammability or Explosive Limits:**	
		Lower	Not available.
		Upper	Not available.

Solubility(ies)	Very soluble in water.
Other	Acetone: Slightly soluble. Chloroform: Freely soluble. Ethanol: Freely soluble. Ether: Insoluble. Methylene chloride: Freely soluble. Chemical family Phenol derivative; aryloxypropanolamine derivative. Density 170.00 kg/m3 Dust explosion properties Minimum ignition energy (MIE) - dust cloud 1 - 3 mJ Molecular formula (C15H25NO3)2 . C4H6O6 Molecular weight 684.81 Potential for dust explosion: Potential heavy dust explosion.

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	oxidizing agents.
Hazardous Decomposition Products	NOx. Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions.

Section 11: Toxicological Information

RTECS UB7450100

Acute Toxicity
Acute Dermal: LD50 Rabbit > 3000 mg/kg Inhalation: LC50 Rat > 2510 mg/m3, 4 hours Oral: LD50 Mouse 1158 - 2460 mg/kg, Rat 3090 - 4670 mg/kg

Skin Corrosion/Irritation
Not available.

Serious Eye Damage/Irritation
Causes serious eye irritation

Respiratory or Skin Sensitization
Not available.

Germ Cell Mutagenicity
Not available.

Carcinogenicity
Not available.

Reproductive Toxicity

Knowledge about health hazard is incomplete. Some beta-adrenergic blocking agents have been reported to cause fetal and neonatal bradycardia, hypotension, and hypoglycemia when administered during pregnancy, and may also be associated with fetal growth retardation.

Routes of Entry

Eye. Ingestion.

Symptoms Related to Exposure

Beta-adrenergic blockers: Gastrointestinal disturbances. Headache. Mood or mental changes. Drowsiness. Weakness. Insomnia. Nervousness. Visual disturbances. Swelling of feet or legs. Muscle, joint, or chest paint. Seizures. Coma. Cardiovascular effects. Respiratory depression.

Potential Health Effects

Not available.

Target Organ(s) Causes damage to organs (cardiovascular system)

Section 12: Ecological Information

Ecotoxicity

Aquatic Algae EC50 Algae 7.3 mg/l, 3 daysAlgae Crustacea EC50 Water flea (Daphnia magna) > 100 mg/l, 48 hoursWater flea (Daphnia magna) Fish LC50 Zebra danio (Danio rerio) 54 mg/l, 96 hours

Persistance and Degradability

Not readily degradable

Bioaccumulative Potential

Octanol/water partition coefficient log Kow 0.6

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

Not a DOT controlled material (United States). This material is not classified dangerous good according to international transportation regulations (ADR/RID-IMDG-ICAO/IATA). DOT UN number: UN3077 UN proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Metoprolol Tartrate) Transport hazard class(es) Class 9 Subsidiary risk - Packing group III

Section 15: Regulatory Information

Regulations

US federal regulations: CERCLA/SARA Hazardous Substances - Not applicable. One or more components are not listed on TSCA. This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. 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 1910.1001-1050) Not regulated. Superfund Amendments and Reauthorization Act of 1986 (SARA) Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Hazard categories SARA 302 Extremely hazardous substance Not listed. YesSARA 311/312 Hazardous chemical 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) 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 available.

Section 16: Other Information

The information provided on this SDS Is correct to the best of our knowledge, Information and belief at the date of its publication. The Information given is designed only as a guide for safe handling, use, processing, storage, transportation, and disposal of the designated material and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text. End of Safety Data Sheet