Mepivacaine hydrochloride

sc-252996

Material Safety Data Sheet

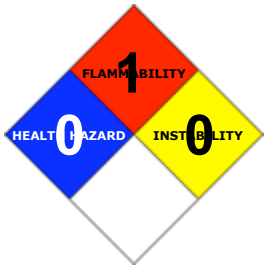
Hazard Alert Code Key:	EXTREME	HIGH	MODERATE	LOW

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Mepivacaine hydrochloride

STATEMENT OF HAZARDOUS NATURE
CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

NFPA



SUPPLIER
Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800
EMERGENCY:
ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

SYNONYMS
C15-H22-N2-O.HCl, "2' , 6' -pipecoloxylidide, 1-methyl-, monohydrochloride", "DL-mepivacaine hydrochloride", "N-(2, 6-dimethylphenyl)-1-methyl-2-piperidinecarboxamide hydrochloride", "1-methyl-2' , 6' -pipecoloxylidide hydrochloride", "dl-1-methyl-2' , 6' -pipecoloxylidide hydrochloride", "(1-methyl-DL-piperidine-2-carboxylic acid)-2, 6-dimethylanilide", hydrochloride, "2-piperidinecarboxamide, N-(2, 6-dimethylphenyl)-1-methyl-, ", monohydrochloride, Carbocaina, "Carbocaine hydrochloride", Chlorocain, Meaverin, Mepicaton, Mepivastesin, Scandicain, "for +(+)-form", dexivacaine, "local anaesthetic"

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability:	1		
Toxicity:	2		
Body Contact:	2		
Reactivity:	1		
Chronic:	2		

Min/Nil=0
Low=1
Moderate=2
High=3
Extreme=4

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW

RISK

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

■ Accidental ingestion of the material may be damaging to the health of the individual.
■ Systemic toxicity due to local anesthetics may be manifested by yawning, restlessness, excitement, ringing sound in the ear, nausea and vomiting.
Early warning signs are numbness of the tongue and around the mouth region.

EYE

■ There is some evidence to suggest that this material can causeeye irritation and damage in some persons.
■ Direct eye contact with local anesthetics may reduce sensation in the eyes and increase the risk of injury due to foreign bodies.
There may be drying of the cornea, a burning sensation, excessive tears, sensitivity to light, swelling and redness of the conjunctiva and increased blinking.

SKIN

■ Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.
■ Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.
■ There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.
■ When applied to the skin, local anesthetics can cause burning, stinging, tenderness, redness, sloughing, blisters and tissue death.
There may be skin eruptions caused by simultaneous exposure to light.
■ Open cuts, abraded or irritated skin should not be exposed to this material.
■ Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED

■ There is some evidence to suggest that the material can cause respiratory irritation in some persons.
The body's response to such irritation can cause further lung damage.
■ Inhalation of local anesthetics may result in upper respiratory tract effects including burning sensation, stinging, tenderness, swelling, sloughing, tissue necrosis and irritation.
Systemic poisoning is characterized by lightheadedness, nervousness, apprehension, euphoria, confusion, dizziness, drowsiness, tinnitus, blurred or double vision, vomiting and sensations of heat, cold or numbness, twitching, tremors, convulsions, unconsciousness and respiratory depression and arrest.
■ Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

CHRONIC HEALTH EFFECTS

■ Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
Repeated or prolonged exposure with local anesthetics may result in sensitization of skin, with the development of lesions, hives and edema. There may be anaphylactic reactions that may cause death.
Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.
Foetal bradycardia has followed paracervical block with mepivacaine during labour.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
mepivacaine hydrochloride	1722-62-9	>98

Section 4 - FIRST AID MEASURES

SWALLOWED

· If swallowed do NOT induce vomiting. · If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

EYE

■ If this product comes in contact with the eyes: · Wash out immediately with fresh running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

SKIN

■ If skin contact occurs: · Immediately remove all contaminated clothing, including footwear · Flush skin and hair with running water (and soap if available).

INHALED

· If dust is inhaled, remove from contaminated area. · Encourage patient to blow nose to ensure clear passage of breathing. · If irritation or discomfort persists seek medical attention.

NOTES TO PHYSICIAN

■ When systemic reaction to local anesthetic occurs, steps should be taken to maintain circulation and respiration and control convulsions. Airway should be established and oxygen given together with assisted ventilation if necessary.
Metabolism of amide-type anesthetics occurs in the liver and in some cases in the kidney. Because these undergo extensive and rapid hepatic metabolism, only about 1/3 of an oral dose reaches the systemic circulation.
Mepivacaine is rapidly metabolised in the liver and less than 10% of the dose is reported to be excreted unchanged in the urine. Several metabolites are also excreted via the kidneys and include glucuronide conjugates of hydroxy compounds and an N-demethylated compound, 2',6'-pipecoloxylidide (PPX).

Section 5 - FIRE FIGHTING MEASURES

Vapour Pressure (mmHG):	Negligible
Upper Explosive Limit (%):	Not available
Specific Gravity (water=1):	Not available
Lower Explosive Limit (%):	Not available

EXTINGUISHING MEDIA

· Water spray or fog.
· Foam.

FIRE FIGHTING

· Alert Emergency Responders and tell them location and nature of hazard.
· Wear breathing apparatus plus protective gloves.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

· Combustible solid which burns but propagates flame with difficulty.
· Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.
Combustion products include: carbon monoxide (CO), carbon dioxide (CO2), hydrogen chloride, phosgene, nitrogen oxides (NOx), other pyrolysis products typical of burning organic material.
May emit poisonous fumes.
May emit corrosive fumes.

FIRE INCOMPATIBILITY

■ Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids,chlorine bleaches, pool chlorine etc. as ignition may result.

PERSONAL PROTECTION

Glasses:
Chemical goggles.
Gloves:
Respirator:
Particulate

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
· Clean up waste regularly and abnormal spills immediately.
· Avoid breathing dust and contact with skin and eyes.
· Wear protective clothing, gloves, safety glasses and dust respirator.
· Use dry clean up procedures and avoid generating dust.
· Vacuum up or sweep up. NOTE: Vacuum cleaner must be fitted with an exhaust micro filter (HEPA type) (consider explosion-proof machines designed to be grounded during storage and use).
· Dampen with water to prevent dusting before sweeping.
· Place in suitable containers for disposal.
MAJOR SPILLS
■ Moderate hazard.
· CAUTION: Advise personnel in area.
· Alert Emergency Responders and tell them location and nature of hazard.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

· Avoid all personal contact, including inhalation.
· Wear protective clothing when risk of exposure occurs.
Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.
· Do NOT cut, drill, grind or weld such containers.
· In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.

RECOMMENDED STORAGE METHODS

· Packaging as recommended by manufacturer.
· Check that containers are clearly labelled.
· Tamper-proof containers.
· Polyethylene or polypropylene containers.
· Metal drum with sealed plastic liner.
Glass container.

STORAGE REQUIREMENTS

■ NOTE: Special security requirements may be mandated under Federal/State Regulation(s).
· Store in original containers.
· Store in vault fitted with warning devices or detectors recommended by various Federal/State authorities.
· Store in vault used only for the purpose of storage of drugs of addiction.
· Vault must be locked at all times except when the materials stored therein are required.
· Keep storage area free from debris, wastes and combustibles.
· Keep dry.
· Keep containers securely sealed.
· Protect containers against physical damage.
· Check regularly for spills and leaks.

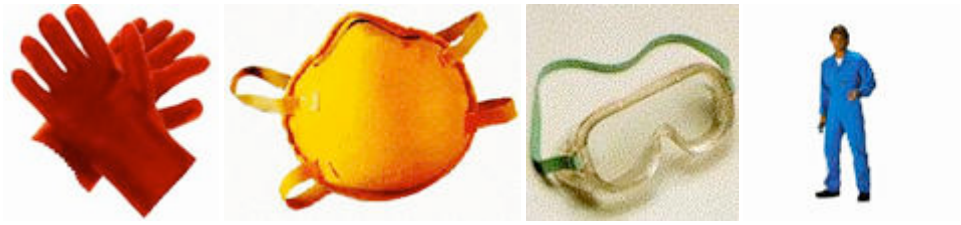
Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

• mepivacaine hydrochloride: CAS:1722-62-9

PERSONAL PROTECTION



RESPIRATOR

•Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

■ When handling very small quantities of the material eye protection may not be required.
For laboratory, larger scale or bulk handling or where regular exposure in an occupational setting occurs:
· Chemical goggles
· Face shield. Full face shield may be required for supplementary but never for primary protection of eyes
· Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

HANDS/FEET

■ Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
· frequency and duration of contact,
· chemical resistance of glove material,
· glove thickness and

· dexterity
Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).
· When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
· When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
· Contaminated gloves should be replaced.
Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.
· Rubber gloves (nitrile or low-protein, powder-free latex). Employees allergic to latex gloves should use nitrile gloves in preference.
· Double gloving should be considered.
· PVC gloves.
· Protective shoe covers. [AS/NZS 2210]
· Head covering.
Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.
· polychloroprene
· nitrile rubber
· butyl rubber
· fluorocaoutchouc
· polyvinyl chloride
Gloves should be examined for wear and/ or degradation constantly.

OTHER

· For quantities up to 500 grams a laboratory coat may be suitable.
· For quantities up to 1 kilogram a disposable laboratory coat or coverall of low permeability is recommended. Coveralls should be buttoned at collar and cuffs.
· For quantities over 1 kilogram and manufacturing operations, wear disposable coverall of low permeability and disposable shoe covers.
· For manufacturing operations, air-supplied full body suits may be required for the provision of advanced respiratory protection.
· Eye wash unit.
· Ensure there is ready access to an emergency shower.
· For Emergencies: Vinyl suit.

ENGINEERING CONTROLS

■ Enclosed local exhaust ventilation is required at points of dust, fume or vapor generation.
HEPA terminated local exhaust ventilation should be considered at point of generation of dust, fumes or vapors.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Solid.
Mixes with water.

State	Divided solid	Molecular Weight	282.8
Melting Range (°F)	491- 504	Viscosity	Not available
Boiling Range (°F)	Not available	Solubility in water (g/L)	Miscible
Flash Point (°F)	Not available	pH (1% solution)	4.5 (2% soln)
Decomposition Temp (°F)	Not available	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not available	Vapour Pressure (mmHG)	Negligible
Upper Explosive Limit (%)	Not available	Specific Gravity (water=1)	Not available
Lower Explosive Limit (%)	Not available	Relative Vapor Density (air=1)	Not applicable
Volatile Component (%vol)	Negligible	Evaporation Rate	Not applicable

APPEARANCE

White, odourless, crystalline powder with slightly bitter numbing taste; soluble in water, methanol and alcohol (1:10). A 4.6% solution is iso-osmotic with serum.

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY

· Presence of incompatible materials.
· Product is considered stable.

STORAGE INCOMPATIBILITY

· Avoid strong acids, bases.

Avoid reaction with oxidizing agents.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

mepivacaine hydrochloride

TOXICITY AND IRRITATION

MEPIVACAINE HYDROCHLORIDE:

■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
Intraperitoneal (mouse) LD50: 117 mg/kg	Nil Reported
Subcutaneous (mouse) LD50: 260 mg/kg	
Intravenous (mouse) LD50: 32 mg/kg	
Implant (mouse) LD50: 260 mg/kg	
Subcutaneous (rabbit) LD50: 110 mg/kg	
Intravenous (rabbit) LD50: 22 mg/kg	
Implant (rabbit) LD50: 110 mg/kg	
Subcutaneous (g.pig) LD50: 94 mg/kg	
Intravenous (g.pig) LD50: 20 mg/kg	
Oral (Rat) LD50: >5000 mg/kg *	

Paternal effects recorded.

Adverse reactions are generally dose related and due to high plasma levels, which may result from unintentional intravascular injection of the local anesthetic solution.

Reactions may include: restlessness, anxiety, dizziness, tinnitus, blurred vision, or tremors. Other effects may be nausea, vomiting, chills and constriction of the pupils.

Inadvertent intravascular injection may lead to high plasma levels and related depression of the myocardium, decreased cardiac output heart block, hypotension, bradycardia, ventricular arrhythmias and possibly cardiac arrest.

* Pharmacia and Upjohn SDS Carbocaine V hydrochloride

The symptoms of overdose include lack of breathing; drop in blood pressure; seizures; dizziness; difficult breathing; unusual tiredness or weakness; and bluish discoloration of fingernails, lips, or skin. Systemic toxicity can be fatal.

CARCINOGEN

Anaesthetics, volatile	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group	3

Section 12 - ECOLOGICAL INFORMATION

No data

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
mepivacaine hydrochloride	No Data Available	No Data Available		

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

¦ Valuable substance, hold all residues for recovery. Disposal of the material must be carried out in accordance with the requirements of the relevant Federal/State Act(s) or Code(s) regulating the disposal of Drugs of Addiction.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

· Reduction
· Reuse
· Recycling

· Disposal (if all else fails)
This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.
DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.
· Recycle wherever possible.
· Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.

Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

Section 15 - REGULATORY INFORMATION

mepivacaine hydrochloride (CAS: 1722-62-9) is found on the following regulatory lists;
"Canada Domestic Substances List (DSL)","US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory"

Section 16 - OTHER INFORMATION

LIMITED EVIDENCE
■ Skin contact and/or ingestion may produce health damage*.
■ Cumulative effects may result following exposure*.
■ May produce discomfort of the eyes, respiratory tract and skin*.
■ Repeated exposure potentially causes skin dryness and cracking*.
* (limited evidence).

Denmark Advisory list for selfclassification of dangerous substances
Substance CAS Suggested codes mepivacaine hydrochloride 1722- 62- 9 Rep3; R63 Xn; R22 R43 N; R50

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■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Issue Date: Jan-11-2011

Print Date:Jul-16-2011