

# Oxethazaine

sc-253222

## Material Safety Data Sheet



The Power to Question

Hazard Alert Code  
Key:

EXTREME

HIGH

MODERATE

LOW

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

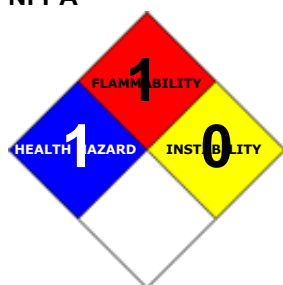
### PRODUCT NAME

Oxethazaine

### STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

### NFPA



### SUPPLIER

Company: Santa Cruz Biotechnology, Inc.

Address:

2145 Delaware Ave

Santa Cruz, CA 95060

Telephone: 800.457.3801 or 831.457.3800

Emergency Tel: CHEMWATCH: From within the US and  
Canada: 877-715-9305

Emergency Tel: From outside the US and Canada: +800 2436  
2255 (1-800-CHEMCALL) or call +613 9573 3112

### PRODUCT USE

A local surface anaesthetic of the amide type for the symptomatic relief of oesophagitis. Given by mouth in conjunction with antacids.

### SYNONYMS

C28-H41-N3-O3, "acetamide, 2, 2' -[(2-hydroxyethyl)imino]-bis[N-(alpha, alpha-", dimethylphenyl)-N-methyl-, "acetamide, 2, 2' -[(2-hydroxyethyl)imino]-bis[N-(alpha, alpha-", dimethylphenyl)-N-methyl-, "acetamide, 2, 2' -[(2-hydroxyethyl)imino]-bis[N-(1, 1-dimethylphenyl)-N-", methyl-, "acetamide, 2, 2' -[(2-hydroxyethyl)imino]-bis[N-(1, 1-dimethylphenyl)-N-", methyl-, "N, N-bis-(N-methyl-N-phenyl-tert-butylacetamido)-beta-hydroxyethylamine", "N, N-bis-(N-methyl-N-phenyl-tert-butylacetamido)-beta-hydroxyethylamine", 2-di(N-methyl-N-phenyl-tert-butylcarbamoymethyl)aminoethanol, 2-di(N-methyl-N-phenyl-tert-butylcarbamoymethyl)aminoethanol, Betagil, Emoran, FH-099, H4-099, Mucaine, Mucosin, Mutesa, Oxaine, Oxtacaine, Oxethacaina, Oxethacaine, Oxethazine, Stomacain, Tepilta, Topicain, WY-806, "local anaesthetic"

## Section 2 - HAZARDS IDENTIFICATION

### CANADIAN WHMIS SYMBOLS



### EMERGENCY OVERVIEW RISK

### POTENTIAL HEALTH EFFECTS

### ACUTE HEALTH EFFECTS

## SWALLOWED

■ Although ingestion is not thought to produce harmful effects, the material may still be damaging to the health of the individual following ingestion, especially where pre-existing organ (e.g. liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality (death) rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

■ 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. Local anesthetics may affect the heart, depressing the heart muscle, dilating the peripheral blood vessels and causing low blood pressure and a slow heart rate.

## EYE

■ There is some evidence to suggest that this material can cause eye 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. Absorption into the body can cause degeneration of the optic nerve, leading to blindness.

## SKIN

■ The material is not thought to produce adverse health effects or skin irritation following contact (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

■ Open cuts, abraded or irritated skin should not be exposed to this material.

■ 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.

## INHALED

■ There is some evidence to suggest that this material, if inhaled, can irritate the throat and lungs of some persons.

■ Although inhalation is not thought to produce harmful effects, the material may still produce health damage, especially where pre-existing organ (e.g. liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally confined to doses producing mortality (death) rather than those producing morbidity (disease, ill-health).

■ 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.

■ 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. Cardiac arrest may result from cardiovascular collapse. Bradycardia, and hypotension may also be produced. Excessive application to mucous membranes has been associated with methemoglobinemia producing a cyanosis.

## CHRONIC HEALTH EFFECTS

Principal routes of exposure are usually by inadvertent ingestion of excess drug and inhalation of dust.

In vitro, oxethazaine produces antispasmodic action on smooth muscle. It antagonises the action of serotonin on smooth muscle as demonstrated on isolated rabbit jejunum strips.






No evidence of impaired fertility was seen in breeding experiments with male and female rats fed Mucaïne orally through the experiment. A reproductive study in rabbits showed no harm to the foetus. There are, however, no adequate or controlled studies in pregnant women.

■ 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. Prolonged eye contact may result in permanent clouding of the cornea with loss of vision, severe corneal inflammation and possible perforation.

Exposure to small quantities may induce hypersensitivity reactions characterized by acute bronchospasm, hives (urticaria), deep dermal wheals (angioneurotic edema), running nose (rhinitis) and blurred vision. Anaphylactic shock and skin rash (non-thrombocytopenic purpura) may occur. An individual may be predisposed to such anti-body mediated reaction if other chemical agents have caused prior sensitization (cross-sensitivity).

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

### HAZARD RATINGS

		Min	Max
Flammability:	1		
Toxicity:	2		
Body Contact:	2		
Reactivity:	1		Min/Nil=0 Low=1 Moderate=2 High=3 Extreme=4
Chronic:	2		

NAME	CAS RN	%
oxethazaine	126-27-2	>98

## Section 4 - FIRST AID MEASURES

### SWALLOWED

■ If conscious, give water. Poison Information Centers in each State capital city can provide additional assistance.

### EYE

■ If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with 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.
- Continue flushing until advised to stop by the Poisons Information Center or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

#### **SKIN**

- If skin contact occurs:
  - Immediately remove all contaminated clothing, including footwear
  - Flush skin and hair with running water (and soap if available).
  - Seek medical attention in event of irritation.

#### **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**

- 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.

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. Circulation should be maintained with plasma infusion (or suitable electrolytes). Vasopressors such as ephedrine, metaraminol and methoxamine have been suggested in marked hypotension although their use is accompanied by the risk of CNS excitement. (Vasopressors should not be given in patients receiving oxytocic drugs.) Convulsions may be controlled by the use of diazepam or short acting barbiturates such as thiopentone sodium. **MARTINDALE; The Extra Pharmacopoeia, 29th Edition** Local anesthetics produce vasodilation by blocking sympathetic nerves. Elevating the patient's legs and positioning the patient on the left side will help decrease blood pressure.

### **Section 5 - FIRE FIGHTING MEASURES**

Upper Explosive Limit (%):	Not available
Specific Gravity (water=1):	Not available
Lower Explosive Limit (%):	Not available
Relative Vapor Density (air=1):	Not applicable

#### **EXTINGUISHING MEDIA**

- - Water spray or fog.
  - Foam.
  - Dry chemical powder.
  - BCF (where regulations permit).
  - Carbon dioxide.

#### **FIRE FIGHTING**

- - Alert Emergency Responders and tell them location and nature of hazard.
  - Wear breathing apparatus plus protective gloves for fire only.
  - Prevent, by any means available, spillage from entering drains or water course.
  - Use fire fighting procedures suitable for surrounding area.
  - Do not approach containers suspected to be hot.
  - Cool fire exposed containers with water spray from a protected location.
  - If safe to do so, remove containers from path of fire.
  - Equipment should be thoroughly decontaminated after use.

#### **GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS**

- - Solid which exhibits difficult combustion or is difficult to ignite.
  - 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.
  - Dry dust can be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport.
  - Build-up of electrostatic charge may be prevented by bonding and grounding.
  - Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.

Combustion products include: carbon monoxide (CO) and nitrogen oxides (NOx).

#### **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

- 
- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Control personal contact by using protective equipment.
- Use dry clean up procedures and avoid generating dust.
- Place in a suitable, labelled container for waste disposal.

### MAJOR SPILLS

- 
- Clean up all spills immediately.
- Wear protective clothing, safety glasses, dust mask, gloves.
- Secure load if safe to do so. Bundle/collect recoverable product.
- Use dry clean up procedures and avoid generating dust.
- Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).
- Water may be used to prevent dusting.
- Collect remaining material in containers with covers for disposal.
- Flush spill area with water.

### ACUTE EXPOSURE GUIDELINE LEVELS (AEGL) (in ppm)

AEGL 1: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic nonsensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.

AEGL 2: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.

AEGL 3: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience life-threatening health effects or death.

## Section 7 - HANDLING AND STORAGE

### PROCEDURE FOR HANDLING

- 
- Avoid generating and breathing dust
- Avoid contact with skin and eyes.
- Wear nominated personal protective equipment when handling.
- Use in a well-ventilated area.
- Use good occupational work practices.
- Observe manufacturer's storing and handling recommendations.

### RECOMMENDED STORAGE METHODS

- Packaging as recommended by manufacturer.
- Check that containers are clearly labeled

Plastic container.

### STORAGE REQUIREMENTS

- 
- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

### SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



X: Must not be stored together

O: May be stored together with specific preventions

+: May be stored together

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

The following materials had no OELs on our records

- oxethazaine: CAS:126-27-2

## MATERIAL DATA

### OXETHAZAINE:

■ Airborne particulate or vapor must be kept to levels as low as is practicably achievable given access to modern engineering controls and monitoring hardware. Biologically active compounds may produce idiosyncratic effects which are entirely unpredictable on the basis of literature searches and prior clinical experience (both recent and past).

## PERSONAL PROTECTION



Consult your EHS staff for recommendations

### ■ EYE

No special equipment needed when handling small quantities of substance.

For bulk handling wear:

Chemical goggles or

Face shield.

### HANDS/FEET

Rubber gloves

PVC gloves

Protective shoe covers

Head covering.

### OTHER

No special equipment when handling small quantities of substance otherwise:

Coveralls

For Emergencies:

Vinyl suit

Safety shower

### RESPIRATOR

High Efficiency Dust Respirator (P2, P3)

For non-routine emergencies wear full face mask self-contained breathing apparatus.

### RESPIRATOR

Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
10 x PEL	P1	-	PAPR-P1
	Air-line*	-	-
50 x PEL	Air-line**	P2	PAPR-P2
100 x PEL	-	P3	-
		Air-line*	-
100+ x PEL	-	Air-line**	PAPR-P3

\* - Negative pressure demand \*\* - Continuous flow

Explanation of Respirator Codes:

Class 1 low to medium absorption capacity filters.

Class 2 medium absorption capacity filters.

Class 3 high absorption capacity filters.

PAPR Powered Air Purifying Respirator (positive pressure) cartridge.

Type A for use against certain organic gases and vapors.

Type AX for use against low boiling point organic compounds (less than 65°C).

Type B for use against certain inorganic gases and other acid gases and vapors.

Type E for use against sulfur dioxide and other acid gases and vapors.

Type K for use against ammonia and organic ammonia derivatives

Class P1 intended for use against mechanically generated particulates of sizes most commonly encountered in industry, e.g. asbestos, silica.

Class P2 intended for use against both mechanically and thermally generated particulates, e.g. metal fume.

Class P3 intended for use against all particulates containing highly toxic materials, e.g. beryllium.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

Use appropriate NIOSH-certified respirator based on informed professional judgement. In conditions where no reasonable estimate of exposure can be made, assume the exposure is in a concentration IDLH and use NIOSH-certified full face pressure demand SCBA with a minimum service life of 30 minutes, or a combination full facepiece pressure demand SAR with auxiliary self-contained air supply. Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.

## 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.

Barrier protection or laminar flow cabinets should be considered for laboratory scale handling.

The need for respiratory protection should also be assessed where incidental or accidental exposure is anticipated: Dependent on levels of contamination, PAPR, full face air purifying devices with P2 or P3 filters or air supplied respirators should be evaluated.

Fume-hoods and other open-face containment devices are acceptable when face velocities of at least 1 m/s (200 feet/minute) are achieved. Partitions, barriers, and other partial containment technologies are required to prevent migration of the material to uncontrolled areas. For non-routine emergencies maximum local and general exhaust are necessary. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh

circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapors, etc. evaporating from tank (in still air)	0.25-0.5 m/s (50-100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
Within each range the appropriate value depends on:	
Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2.5 m/s (200-500 f/min.) for extraction of gases discharged 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL PROPERTIES

Solid.

Does not mix with water.

State	Divided solid	Molecular Weight	467.72
Melting Range (°F)	219.2- 219.2.5	Boiling Range (°F)	Not available
Solubility in water (g/L)	Partly miscible	Flash Point (°F)	Not available
pH (1% solution)	Not applicable	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

Crystalline solid; does not mix well with water. Soluble in dilute acids.

## Section 10 - CHEMICAL STABILITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

- 
- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerization will not occur.

### STORAGE INCOMPATIBILITY

- Avoid reaction with oxidizing agents.
- Avoid strong acids, bases.
- Be sure container is tightly closed when not in use.

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

## Section 11 - TOXICOLOGICAL INFORMATION

oxethazaine

### TOXICITY AND IRRITATION

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

TOXICITY	IRRITATION
Intraperitoneal (rat) LD50: 30 mg/kg	Nil Reported
Oral (mouse) LD50: 400 mg/kg *	
Intraperitoneal (mouse) LD50: 27 mg/kg	
Subcutaneous (mouse) LD50: 58 mg/kg	

- NOTE: Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing



damage or change to cellular DNA.  
\* Australian Prescriptions Product Guide.

## CARCINOGEN

Anaesthetics,  
volatile

International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC  
Monographs

Group 3

## Section 12 - ECOLOGICAL INFORMATION

Refer to data for ingredients, which follows:  
OXETHAZAINE:

### Ecotoxicity

Ingredient  
oxethazaine

Persistence: Water/Soil  
HIGH

Persistence: Air

Bioaccumulation  
LOW

Mobility  
LOW

## Section 13 - DISPOSAL CONSIDERATIONS

### Disposal Instructions

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

1

- Recycle wherever possible. Special hazard may exist - specialist advice may be required.
- Consult manufacturer for recycling options.
- Consult Waste Management Authority for disposal.
- Bury or incinerate residue at an approved site.
- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.
- Puncture containers to prevent re-use and bury at an authorized landfill.

## Section 14 - TRANSPORTATION INFORMATION

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

## Section 15 - REGULATORY INFORMATION

**oxethazaine (CAS: 126-27-2) is found on the following regulatory lists;**

"International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs"

## Section 16 - OTHER INFORMATION

### LIMITED EVIDENCE

- 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\*.
- Exposure may produce irreversible effects\*.

\* (limited evidence).

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■ Classification of the mixture 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](http://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.

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