

SAFETY DATA SHEETS

This SDS packet was issued with item:

078081962

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

078074500 078082145 078082160 078082178 078082186 078388898 078388914 078388922 078388955 078388963
078388971 078398996 078399004 078445623 078480157 078669247 078694988 078697798 078697806 078697913
078879409 078879417 078879425 078879433 078879441 078879458 078879466 078879474 078879482 078907222
078907223 078907224 078907225 078907226 078907227 078907228 078907229 078907230

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

078079039

MATERIAL SAFETY DATA SHEET

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Vet-A-Mix,
A Division of LLOYD, Inc
Phone No. (712) 246-4000
Page 1 of 2

P.O. Box 130, Shenandoah, IA 51601-0130
Thyro-Tabs[®], levothyroxine sodium tablets USP
MSDS Date: 2/16/93 (Original)
12/19/95, 01/03/05, 5/26/06, 6/28/06 (Revised)

Product Name: Thyro-Tabs[®], levothyroxine sodium tablets USP

1. INGREDIENTS: (% w/w), unless otherwise noted

COMPONENT	CAS#	%	EXPOSURE LIMITS, ppm	
			OSHA PEL	ACGIH TLV (mg/m ³)
Polyvinylpyrrolidone	9003-39-8	1.8	TWA: 15 (total) 5 (respirable)	TWA: 10 (total) 5 (respirable)
Levothyroxine Sodium	55-03-8	0.086-0.86*	--None Established--	

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). Only those ingredients composing $\geq 1\%$ ($\geq 0.1\%$ for carcinogens or suspect carcinogens) of the formula (w/w) and which have hazards identified are listed. The exposure limits listed for polyvinylpyrrolidone are for nuisance dusts and not applicable in the solid dosage form.

* This product is available in potencies of 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8 and 1.0 mg levothyroxine sodium per tablet.

2. PHYSICAL DATA:

APPEARANCE: Color-coded and potency-embossed scored caplet-shaped tablet; 0.1 mg - yellow; 0.2 mg - pink; 0.3 mg - green; 0.4 mg - maroon; 0.5 mg - white; 0.6 mg - purple; 0.7 mg - orange; 0.8 mg - blue; and 1.0 mg - tan.

Other physical data have not been determined.

3. FIRE AND EXPLOSION HAZARD DATA:

This has not been evaluated.

EXTINGUISHING MEDIA: Water fog, alcohol foam, CO₂, dry chemical.

4. REACTIVITY DATA:

This has not been evaluated. The product is expected to be stable under normal storage conditions; avoid strong oxidizers. Levothyroxine sodium produces highly toxic iodine vapors as hazardous decomposition products.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Sweep up and dispose of in DOT-approved waste containers. Keep out of sewers, storm drains, surface waters and soil.

DISPOSAL METHOD: Dispose of contaminated product and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate federal, state and local regulatory agencies to ascertain proper disposal procedures.

6. HEALTH HAZARD DATA:

Polyvinylpyrrolidone: May possibly cause skin irritation or dermatitis in some individuals upon prolonged contact. Oral LD50 (rat) : >100 g/kg

EYE: This product is not expected to irritate the eyes.

SKIN CONTACT: This product is not expected to irritate the skin.

INGESTION: This has not been evaluated.

MATERIAL SAFETY DATA SHEET

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Vet-A-Mix,
A Division of LLOYD, Inc
Phone No. (712) 246-4000
Page 2 of 2

P.O. Box 130, Shenandoah, IA 51601-0130
Thyro-Tabs[®], levothyroxine sodium tablets USP
MSDS Date: 2/16/93 (Original)
12/19/95, 01/03/05, 5/26/06, 6/28/06 (Revised)

INHALATION: Inhalation exposure under normal conditions of use is not likely to cause adverse effects. Generation of dust or prolonged excessive exposure to dust should be avoided to prevent adverse health effects.

SIGNS AND SYMPTOMS OF EXPOSURE:

Levothyroxine Sodium: Effects of overexposure after ingestion includes nervousness, sweating, hyperhidrosis, insomnia, tachycardia, blood pressure variation and loss of weight.

7. FIRST AID:

EYES: Immediately flush eyes with copious amounts of running water for 15 minutes.

SKIN: Wash with soap and water.

INGESTION: SEEK MEDICAL ATTENTION IMMEDIATELY. Induce vomiting and follow up with symptomatic and supportive treatment.

INHALATION: If a person has been exposed to excessive quantities of dust due to mishaps, move the person to fresh air. Give artificial respiration if not breathing.

Seek medical attention immediately if excessive exposure occurs.

8. HANDLING PRECAUTIONS:

There is no OSHA PEL or ACGIH TLV for this product. Under normal conditions of use, no special handling precautions are required in areas with adequate ventilation. However, under conditions of prolonged exposure in which quantities of dust are generated, mechanical ventilation, safety glasses with side shields, gloves and a NIOSH approved dust respirator are recommended.

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Exercise reasonable care and caution.

REGULATORY INFORMATION: (Not meant to be all-inclusive--selected regulations represented.)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See MSDS for health and safety information.

U.S. REGULATIONS: SARA HAZARD CATEGORY: This product has been reviewed according to the federal EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to be exempt from reporting requirements. Nevertheless, potential reporters should check with their state emergency response commissions to determine if this product must be reported under applicable state requirements.

SDS: Tolazine®
(tolazoline hydrochloride injection, USP)

SAFETY DATA SHEET

1. Identification

Product Identifier: Tolazine® (tolazoline hydrochloride injection, USP)

Synonyms: 1H-Imidazoline, 4,5-dihydro-2-(phenylmethyl)-, monohydrochloride.

National Drug Code (NDC): 59399-113-90

Recommended Use: Reversing Agent and Antagonist for Intravenous use in Horses Only

Company: Akorn, Inc.
1925 West Field Court, Suite 300
Lake Forest, Illinois 60045

Contact Telephone: 1-800-932-5676

E mail: customer.service@akorn.com

Emergency Phone Number: CHEMTREC 1-800-424-9300 (U.S. and Canada)

2. Hazard(s) Identification

Physical Hazards: Not classifiable.

Health Hazards: Not classifiable.

Symbol(s): None.

Signal Word: None.

Hazard Statement(s): None.

Precautionary Statement(s): None.

Hazards Not Otherwise Classified: Not classifiable.

Supplementary Information: While this material is not classifiable as hazardous under the OSHA standard, this SDS contains valuable information critical to safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

3. Composition/Information on Ingredients

Chemical Name	CAS Number	Synonyms	Chemical Formula	Molecular Weight	Percentage
Tolazoline Hydrochloride	59-97-2	1H-Imidazoline, 4,5-dihydro-2-(phenylmethyl)-, monohydrochloride	C ₁₀ H ₁₂ N ₂ •HCl	196.68	10%

*The formula also contains Chlorobutanol, 5.0 mg; Tartaric Acid, 7.8 mg; Sodium Citrate Dihydrate, 7.8 mg; and Water for Injection. The pH is adjusted with Hydrochloric Acid and Sodium Citrate.

SDS: Tolazine®
(tolazoline hydrochloride injection, USP)

4. First Aid Measures

Ingestion:	If a person vomits place them in the recovery position so that vomit will not reenter the mouth and throat. Rinse mouth with water. If swallowed, seek medical advice immediately and show the container or label. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Eye Contact:	Remove from source of exposure. Flush with copious amounts of water for at least 15 minutes. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. Ensure that medical personnel are aware of the material(s) involved and are aware of precautions to protect themselves.
Skin Contact:	Remove from source of exposure. Remove and isolate contaminated clothing and shoes. Flush with copious amounts of water for at least 20 minutes. Use soap. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. Ensure that medical personnel are aware of the material(s) involved and are aware of precautions to protect themselves.
Inhalation:	Remove from source of exposure. Move individual(s) to fresh air. Give artificial respiration if individual(s) are not breathing and call emergency medical service. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. Ensure that medical personnel are aware of the material(s) involved and are aware of precautions to protect themselves.
Protection of First-Aiders:	Use personal protective equipment (see section 8).
WARNING:	Keep out of reach of children. Not for human use. This drug is for use in horses only and not for use in food-producing animals.
Signs and Symptoms:	A person that has been exposed to and absorbed this product may experience, dizziness, headaches, irritability, nervousness or restlessness, nausea, vomiting, diarrhea, skin flushing, skin rash, sweating and tremors.
Medical Conditions Aggravated by Exposure:	Not determined.
Notes to Physician:	This product contains an alpha-2 adrenoreceptor antagonist. Epinephrine should not be used to treat hypotension in humans resulting from exposure to this product since tolazoline may cause "epinephrine reversal" (further reduction in blood pressure, followed by an exaggerated rebound).

SDS: Tolazine®
(tolazoline hydrochloride injection, USP)

5. Firefighting Measures

Suitable Extinguishing Media:	As with any fire, use extinguishing media appropriate for primary cause of fire such as carbon dioxide, dry chemical extinguishing powder or foam.
Unsuitable Extinguishing Media:	Not determined.
Special Fire Fighting Procedures:	No special provisions required beyond normal firefighting equipment such as flame and chemical resistant clothing and self-contained breathing apparatus.

Specific Hazards Arising from the Chemical:

Hazardous Combustion Products:	Not determined.
Other Specific Hazards:	Containers may burst if exposed to extreme heat.
Special Protective Equipment/ Precautions for Firefighters:	Wear self-contained breathing apparatus and full and protective gear.

6. Accidental Release Measures

Personal Precautions:	Use personal protective equipment recommended in Section 8 of this document and isolate the hazard area.
Personal Protective Equipment:	For personal protection see section 8.
Methods for Cleaning Up:	Isolate area around spill. Put on suitable protective clothing and equipment as specified by site spill control procedures. Absorb the liquid with suitable material and clean affected area with soap and water.
Environmental Precautions:	No data available.
Reference to Other Sections:	Refer to Sections 8, 12 and 13 for further information.

7. Handling and Storage

Precautions for Safe Handling:	Handle in accordance with product label and/or product insert information. Handle in accordance with good industrial hygiene and safety practices.
Conditions for Safe Storage, Including Any Incompatibilities:	Protect from light. Store according to label and/or product insert information. Store away from oxidizing agents and acids.
Specific End Use:	Pharmaceuticals.

SDS: Tolazine®
(tolazoline hydrochloride injection, USP)

8. Exposure Controls/Personal Protection

Occupational Exposure Guidelines:

Common or Chemical Name	Employee Exposure Limits
Tolazoline Hydrochloride	Not established.

Engineering Controls:

Engineering controls are normally not needed during the normal use of this product.

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).

Eyes Protection:

Not required for the normal use of this product. Safety glasses with side shields 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.

Hand Protection:

Not required for the normal use of this product. Chemically compatible gloves are recommended. 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 non-latex gloves. Use of powdered latex gloves should be avoided due to the risk of latex allergy.

Skin Protection:

Not required for the normal use of this product. Wear protective laboratory coat, apron, or disposable garment when working with large quantities.

9. Physical and Chemical Properties

Physical State/Color:

Clear to light yellow solution.

Odor:

Slight camphor-like.

Odor Threshold:

No data available.

pH:

3.3.

Melting Point:

No data available.

Freezing Point:

No data available.

Boiling Point:

No data available.

Flash Point:

No data available.

Evaporation Rate:

No data available.

Flammability (solid, gas):

No data available.

Flammability Limit - Lower:

No data available.

Flammability Limit - Upper:

No data available.

Vapor Pressure:

No data available.

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(tolazoline hydrochloride injection, USP)

Vapor Density:	No data available.
Relative Density:	No data available.
Solubility(ies):	No data available.
Partition Coefficient (n-octanol/water):	No data available.
Auto-Ignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	No data available.

10. Stability and Reactivity

Reactivity:	No data available.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of Hazardous Reactions:	No data available.
Conditions to Avoid (e.g., static discharge, shock, or vibration):	No data available.
Incompatible Materials:	Strong oxidizer.
Hazardous Decomposition Products:	Not determined. During thermal decomposition, it may be possible to generate irritating vapors and/or toxic fumes of carbon oxides (COx) and nitrogen oxides (NOx).

11. Toxicological Information

Information on the Likely Routes of Exposure:

Inhalation:	This product may be absorbed after inhalation.
Ingestion:	This product may be absorbed after oral consumption.
Skin Contact:	This product may be absorbed after dermal contact.
Eye Contact:	This product may be absorbed through the conjunctiva.
Symptoms Related to the Physical, Chemical and Toxicological Characteristics:	See Section 4. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.
Delayed and Immediate Effects of Exposure:	No data available.

Acute Toxicity:

Compound	Species	Route	Test Type	Dose
Tolazoline Hydrochloride	Mouse	Oral	LD ₅₀	400 mg/kg
Tolazoline Hydrochloride	Rat	Oral	LD ₅₀	1,200 mg/kg

LD₅₀: Dosage that produces 50% mortality.

SDS: Tolazine®
(tolazoline hydrochloride injection, USP)

Acute Toxicity – Dermal:	No data available.
Acute Toxicity – Inhalation:	No data available.
Corrosivity:	No data available.
Dermal Irritation:	No data available.
Eye Irritation:	No data available.
Sensitization:	No data available.
Toxicokinetics/Metabolism:	No data available.
Target Organ Effect:	No data available.
Reproductive Effects:	No data available.
Carcinogenicity:	No data available.

National Toxicology Program (NTP): Not considered to be a carcinogen.

International Agency for Research on Cancer (IARC): Not considered to be a carcinogen.

Occupational Safety and Health Administration (OSHA): Not considered to be a carcinogen.

Mutagenicity:	No data available.
Aspiration Hazard:	No data available.

12. Ecological Information

Ecotoxicity

Aquatic:

Compound	Species	Test Type	Dose
Tolazoline Hydrochloride	Fathead minnow (Pimephales promelas)	LC ₅₀ (96hr)	322-389 mg/L

Terrestrial:	No data available.
Persistence and Degradability:	No data available.
Bioaccumulative Potential:	No data available.
Mobility in Soil:	No data available.
Mobility in Environment:	No data available.
Other Adverse Effects:	No data available.

13. Disposal Considerations

Dispose of all waste in accordance with Federal, State and Local regulations.

14. Transport Information

UN Number:	Not applicable.
UN Proper Shipping Name:	Not applicable.
Transport Hazard Class(es):	Not applicable.
Packing Group:	Not applicable.

Department of Transportation: Not regulated as a hazardous material.

International Air Transport Association (IATA): Not regulated as a dangerous good.

SDS: Tolazine®
(tolazoline hydrochloride injection, USP)

**International Maritime Dangerous
Good (IMDG):**

Not regulated as a dangerous good.

15. Regulatory Information

US Federal Regulations:

**Toxic Substance Control Act
(TSCA):**

Exempt.

**CERCLA Hazardous Substance
and Reportable Quantity:**

Not listed.

**SARA 313:
SARA 302:**

Not listed.
Not listed.

State Regulations

Massachusetts:

Not listed.

New Jersey:

Not listed.

Pennsylvania:

Not listed.

California Proposition 65:

Not listed.

16. Other Information

Revision Date: 07/23/2015

Revision Number: 0

Disclaimer: This document is generated to distribute health, safety and environmental data. It is not a specification sheet and none of the displayed data should be construed as a specification. Information on this SDS sheet was obtained from sources which we believe are reliable, and we believe that the information is complete and accurate. However, the information is provided without any warranty, express or implied, regarding its correctness. Some of the information presented and conclusions drawn are from sources other than direct test data of the substance. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may also be beyond our knowledge. It is the user's responsibility to determine the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. If the product is used as a component in another product, this SDS information may not be applicable. For these reasons, we do not assume any responsibility and expressly disclaim liability for any loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

SDS: Tolazine®
(tolazoline hydrochloride injection, USP)

SAFETY DATA SHEET

1. Identification

Product Identifier: Tolazine® (tolazoline hydrochloride injection, USP)

Synonyms: 1H-Imidazoline, 4,5-dihydro-2-(phenylmethyl)-, monohydrochloride.

National Drug Code (NDC): 59399-113-90

Recommended Use: Reversing Agent and Antagonist for Intravenous use in Horses Only

Company: Akorn, Inc.
1925 West Field Court, Suite 300
Lake Forest, Illinois 60045

Contact Telephone: 1-800-932-5676

E mail: customer.service@akorn.com

Emergency Phone Number: CHEMTREC 1-800-424-9300 (U.S. and Canada)

2. Hazard(s) Identification

Physical Hazards: Not classifiable.
Health Hazards: Not classifiable.
Symbol(s): None.
Signal Word: None.
Hazard Statement(s): None.
Precautionary Statement(s): None.
Hazards Not Otherwise Classified: Not classifiable.

Supplementary Information: While this material is not classifiable as hazardous under the OSHA standard, this SDS contains valuable information critical to safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

3. Composition/Information on Ingredients

Chemical Name	CAS Number	Synonyms	Chemical Formula	Molecular Weight	Percentage
Tolazoline Hydrochloride	59-97-2	1H-Imidazoline, 4,5-dihydro-2-(phenylmethyl)-, monohydrochloride	C ₁₀ H ₁₂ N ₂ •HCl	196.68	10%

*The formula also contains Chlorobutanol, 5.0 mg; Tartaric Acid, 7.8 mg; Sodium Citrate Dihydrate, 7.8 mg; and Water for Injection. The pH is adjusted with Hydrochloric Acid and Sodium Citrate.

SDS: Tolazine®
(tolazoline hydrochloride injection, USP)

4. First Aid Measures

Ingestion:	If a person vomits place them in the recovery position so that vomit will not reenter the mouth and throat. Rinse mouth with water. If swallowed, seek medical advice immediately and show the container or label. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Eye Contact:	Remove from source of exposure. Flush with copious amounts of water for at least 15 minutes. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. Ensure that medical personnel are aware of the material(s) involved and are aware of precautions to protect themselves.
Skin Contact:	Remove from source of exposure. Remove and isolate contaminated clothing and shoes. Flush with copious amounts of water for at least 20 minutes. Use soap. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. Ensure that medical personnel are aware of the material(s) involved and are aware of precautions to protect themselves.
Inhalation:	Remove from source of exposure. Move individual(s) to fresh air. Give artificial respiration if individual(s) are not breathing and call emergency medical service. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. Ensure that medical personnel are aware of the material(s) involved and are aware of precautions to protect themselves.
Protection of First-Aiders:	Use personal protective equipment (see section 8).
WARNING:	Keep out of reach of children. Not for human use. This drug is for use in horses only and not for use in food-producing animals.
Signs and Symptoms:	A person that has been exposed to and absorbed this product may experience, dizziness, headaches, irritability, nervousness or restlessness, nausea, vomiting, diarrhea, skin flushing, skin rash, sweating and tremors.
Medical Conditions Aggravated by Exposure:	Not determined.
Notes to Physician:	This product contains an alpha-2 adrenoreceptor antagonist. Epinephrine should not be used to treat hypotension in humans resulting from exposure to this product since tolazoline may cause "epinephrine reversal" (further reduction in blood pressure, followed by an exaggerated rebound).

SDS: Tolazine®
(tolazoline hydrochloride injection, USP)

5. Firefighting Measures

Suitable Extinguishing Media:	As with any fire, use extinguishing media appropriate for primary cause of fire such as carbon dioxide, dry chemical extinguishing powder or foam.
Unsuitable Extinguishing Media:	Not determined.
Special Fire Fighting Procedures:	No special provisions required beyond normal firefighting equipment such as flame and chemical resistant clothing and self-contained breathing apparatus.

Specific Hazards Arising from the Chemical:

Hazardous Combustion Products:	Not determined.
Other Specific Hazards:	Containers may burst if exposed to extreme heat.
Special Protective Equipment/ Precautions for Firefighters:	Wear self-contained breathing apparatus and full and protective gear.

6. Accidental Release Measures

Personal Precautions:	Use personal protective equipment recommended in Section 8 of this document and isolate the hazard area.
Personal Protective Equipment:	For personal protection see section 8.
Methods for Cleaning Up:	Isolate area around spill. Put on suitable protective clothing and equipment as specified by site spill control procedures. Absorb the liquid with suitable material and clean affected area with soap and water.
Environmental Precautions:	No data available.
Reference to Other Sections:	Refer to Sections 8, 12 and 13 for further information.

7. Handling and Storage

Precautions for Safe Handling:	Handle in accordance with product label and/or product insert information. Handle in accordance with good industrial hygiene and safety practices.
Conditions for Safe Storage, Including Any Incompatibilities:	Protect from light. Store according to label and/or product insert information. Store away from oxidizing agents and acids.
Specific End Use:	Pharmaceuticals.

SDS: Tolazine®
(tolazoline hydrochloride injection, USP)

8. Exposure Controls/Personal Protection

Occupational Exposure Guidelines:

Common or Chemical Name	Employee Exposure Limits
Tolazoline Hydrochloride	Not established.

Engineering Controls:

Engineering controls are normally not needed during the normal use of this product.

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).

Eyes Protection:

Not required for the normal use of this product. Safety glasses with side shields 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.

Hand Protection:

Not required for the normal use of this product. Chemically compatible gloves are recommended. 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 non-latex gloves. Use of powdered latex gloves should be avoided due to the risk of latex allergy.

Skin Protection:

Not required for the normal use of this product. Wear protective laboratory coat, apron, or disposable garment when working with large quantities.

9. Physical and Chemical Properties

Physical State/Color:

Clear to light yellow solution.

Odor:

Slight camphor-like.

Odor Threshold:

No data available.

pH:

3.3.

Melting Point:

No data available.

Freezing Point:

No data available.

Boiling Point:

No data available.

Flash Point:

No data available.

Evaporation Rate:

No data available.

Flammability (solid, gas):

No data available.

Flammability Limit - Lower:

No data available.

Flammability Limit - Upper:

No data available.

Vapor Pressure:

No data available.

SDS: Tolazine®
(tolazoline hydrochloride injection, USP)

Vapor Density:	No data available.
Relative Density:	No data available.
Solubility(ies):	No data available.
Partition Coefficient (n-octanol/water):	No data available.
Auto-Ignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	No data available.

10. Stability and Reactivity

Reactivity:	No data available.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of Hazardous Reactions:	No data available.
Conditions to Avoid (e.g., static discharge, shock, or vibration):	No data available.
Incompatible Materials:	Strong oxidizer.
Hazardous Decomposition Products:	Not determined. During thermal decomposition, it may be possible to generate irritating vapors and/or toxic fumes of carbon oxides (COx) and nitrogen oxides (NOx).

11. Toxicological Information

Information on the Likely Routes of Exposure:

Inhalation:	This product may be absorbed after inhalation.
Ingestion:	This product may be absorbed after oral consumption.
Skin Contact:	This product may be absorbed after dermal contact.
Eye Contact:	This product may be absorbed through the conjunctiva.

Symptoms Related to the Physical, Chemical and Toxicological Characteristics:

See Section 4. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Delayed and Immediate Effects of Exposure:

No data available.

Acute Toxicity:

Compound	Species	Route	Test Type	Dose
Tolazoline Hydrochloride	Mouse	Oral	LD ₅₀	400 mg/kg
Tolazoline Hydrochloride	Rat	Oral	LD ₅₀	1,200 mg/kg

LD₅₀: Dosage that produces 50% mortality.

SDS: Tolazine®
(tolazoline hydrochloride injection, USP)

Acute Toxicity – Dermal:	No data available.
Acute Toxicity – Inhalation:	No data available.
Corrosivity:	No data available.
Dermal Irritation:	No data available.
Eye Irritation:	No data available.
Sensitization:	No data available.
Toxicokinetics/Metabolism:	No data available.
Target Organ Effect:	No data available.
Reproductive Effects:	No data available.
Carcinogenicity:	No data available.

National Toxicology Program (NTP): Not considered to be a carcinogen.

International Agency for Research on Cancer (IARC): Not considered to be a carcinogen.

Occupational Safety and Health Administration (OSHA): Not considered to be a carcinogen.

Mutagenicity:	No data available.
Aspiration Hazard:	No data available.

12. Ecological Information

Ecotoxicity

Aquatic:

Compound	Species	Test Type	Dose
Tolazoline Hydrochloride	Fathead minnow (Pimephales promelas)	LC ₅₀ (96hr)	322-389 mg/L

Terrestrial:	No data available.
Persistence and Degradability:	No data available.
Bioaccumulative Potential:	No data available.
Mobility in Soil:	No data available.
Mobility in Environment:	No data available.
Other Adverse Effects:	No data available.

13. Disposal Considerations

Dispose of all waste in accordance with Federal, State and Local regulations.

14. Transport Information

UN Number:	Not applicable.
UN Proper Shipping Name:	Not applicable.
Transport Hazard Class(es):	Not applicable.
Packing Group:	Not applicable.

Department of Transportation: Not regulated as a hazardous material.

International Air Transport Association (IATA): Not regulated as a dangerous good.

SDS: Tolazine®
(tolazoline hydrochloride injection, USP)

**International Maritime Dangerous
Good (IMDG):**

Not regulated as a dangerous good.

15. Regulatory Information

US Federal Regulations:

**Toxic Substance Control Act
(TSCA):**

Exempt.

**CERCLA Hazardous Substance
and Reportable Quantity:**

Not listed.

**SARA 313:
SARA 302:**

Not listed.
Not listed.

State Regulations

Massachusetts:

Not listed.

New Jersey:

Not listed.

Pennsylvania:

Not listed.

California Proposition 65:

Not listed.

16. Other Information

Revision Date: 07/23/2015

Revision Number: 0

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