

SAFETY DATA SHEETS

This SDS packet was issued with item:

078941976

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

078941977 078941978

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Material Name: Macrosyn (Tulathromycin) Solution for Injection

Trade Name: MACROSYN

Synonyms Name: Tulathromycin Injectable solution

1.2. Intended Use of the Product

Not available

1.3. Name, Address, and Telephone of the Responsible Party

Distributor

Bimeda-MTC Animal Health Inc. / Bimeda-MTC Sante Animale Inc.

420 Beaverdale RD., Cambridge, ON N3C 2W4

T 519.654.8000 ext. 1055 | F 519.654.8001

www.bimeda.com

1.4. Emergency Telephone Number

Emergency Number : 519-654-8055, 800-424-9300 CHEMTREC (in US); +1 703-527-3887 CHEMTREC (International and Maritime)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification

Eye Irrit. 2A H319

Skin Sens. 1 H317

Full text of hazard classes and H-statements : see section 16

2.2. Label Elements

GHS-US/CA Labeling

Hazard Pictograms (GHS-US/CA) :



GHS07

Signal Word (GHS-US/CA) : Warning

Hazard Statements (GHS-US/CA) : H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

Precautionary Statements (GHS-US/CA) : P261 - Avoid breathing mist, spray, vapors.

P264 - Wash hands thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace.

P280 - Wear protective gloves.

P302+P352 - IF ON SKIN: Wash with plenty of water.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 - Specific treatment (see section 4 on this SDS).

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US/CA)

No data available

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

| Name | Product Identifier | % * | GHS Ingredient Classification |
|------------------------------|-----------------------|------|--|
| 1,2-Propanediol | (CAS-No.) 57-55-6 | 50 | Not classified |
| Tulathromycin | (CAS-No.) 217500-96-4 | 10 | Eye Irrit. 2A, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412 |
| Citric acid | (CAS-No.) 77-92-9 | 1.92 | Eye Irrit. 2A, H319 Comb. Dust |
| 1,2-Propanediol, 3-mercapto- | (CAS-No.) 96-27-5 | 0.5 | Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 |

Full text of H-phrases: see section 16

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Immediately drench affected area with water for at least 15 minutes. Remove contaminated clothing. Obtain medical attention if irritation/rash develops or persists.

Eye Contact: Immediately rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Skin sensitization. Causes serious eye irritation.

Inhalation: Prolonged exposure may cause irritation.

Skin Contact: May cause an allergic skin reaction.

Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None known.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, fog, carbon dioxide (CO₂), alcohol-resistant foam, or dry chemical.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Nitrogen oxides. Carbon oxides (CO, CO₂).

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Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray). Do not get in eyes, on skin, or on clothing.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Precautions for Safe Handling: Avoid contact with skin, eyes and clothing. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid breathing vapors, mist, spray.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

Storage Temperature: 20 - 25 °C (68 - 77 °F)

7.3. Specific End Use(s)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

| 1,2-Propanediol (57-55-6) | | |
|---------------------------|-------------------------------|---|
| USA AIHA | WEEL TWA (mg/m ³) | 10 mg/m ³ |
| Ontario | OEL TWA (mg/m ³) | 10 mg/m ³ (for assessing the visibility in a work environment where 1,2-Propylene glycol aerosol is present-aerosol only) 155 mg/m ³ (aerosol and vapor) |
| Ontario | OEL TWA (ppm) | 50 ppm (aerosol and vapor) |

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

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Personal Protective Equipment: Gloves. Protective clothing. Protective goggles.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.

Eye and Face Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

| | |
|--|---|
| Physical State | : Liquid |
| Appearance | : Clear, colorless to slightly yellow solution in multiple-dose vials |
| Odor | : Not available |
| Odor Threshold | : Not available |
| pH | : 5.4 |
| Evaporation Rate | : Not available |
| Melting Point | : Not available |
| Freezing Point | : Not available |
| Boiling Point | : 94 °C (201.2 °F) |
| Flash Point | : Not flammable |
| Auto-ignition Temperature | : Not available |
| Decomposition Temperature | : Not available |
| Flammability (solid, gas) | : Not applicable |
| Lower Flammable Limit | : Not available |
| Upper Flammable Limit | : Not available |
| Vapor Pressure | : Not available |
| Relative Vapor Density at 20°C | : Not available |
| Relative Density | : Not available |
| Specific Gravity | : 1 g/ml |
| Solubility | : Not available |
| Partition Coefficient: N-Octanol/Water | : Not available |
| Viscosity | : Not available |
| Log P | : -1.41 for Tulathromycin |

SECTION 10: STABILITY AND REACTIVITY

- 10.1. **Reactivity:** Hazardous reactions will not occur under normal conditions.
- 10.2. **Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. **Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. **Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, and incompatible materials.
- 10.5. **Incompatible Materials:** Strong acids, strong bases, strong oxidizers.
- 10.6. **Hazardous Decomposition Products:** Not available

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

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Acute Toxicity (Inhalation): Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

pH: 5.4

Eye Damage/Irritation: Causes serious eye irritation.

pH: 5.4

Respiratory or Skin Sensitization: May cause an allergic skin reaction.

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: May cause an allergic skin reaction.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None known.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

| | |
|---|----------------------------|
| 1,2-Propanediol, 3-mercapto- (96-27-5) | |
| ATE US/CA (oral) | 500.00 mg/kg body weight |
| ATE US/CA (dermal) | 1,100.00 mg/kg body weight |
| 1,2-Propanediol (57-55-6) | |
| LD50 Oral Rat | 20 g/kg |
| LD50 Dermal Rabbit | 20800 mg/kg |
| Citric acid (77-92-9) | |
| LD50 Oral Rat | 5400 mg/kg |
| LD50 Dermal Rat | > 2000 mg/kg |

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: Not classified.

| | |
|----------------------------------|--|
| 1,2-Propanediol (57-55-6) | |
| LC50 Fish 1 | 51600 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static]) |
| EC50 Daphnia 1 | 10000 mg/l (Exposure time: 24 h - Species: Daphnia magna) |
| LC50 Fish 2 | 41 - 47 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static]) |
| EC50 Daphnia 2 | 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |
| Citric acid (77-92-9) | |
| LC50 Fish 1 | 1516 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static]) |

12.2. Persistence and Degradability

| | |
|--------------------------------------|---------------------------------|
| Tulathromycin Injection | |
| Persistence and Degradability | Not established. |
| Citric acid (77-92-9) | |
| Persistence and Degradability | Readily biodegradable in water. |

12.3. Bioaccumulative Potential

| | |
|----------------------------------|------------------|
| Tulathromycin Injection | |
| Bioaccumulative Potential | Not established. |
| 1,2-Propanediol (57-55-6) | |
| BCF Fish 1 | < 1 |

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| | |
|-----------------------|------------------|
| Log Pow | -0.92 |
| Citric acid (77-92-9) | |
| Log Pow | -1.72 (at 20 °C) |

12.4. Mobility in Soil Not available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

- 14.1. In Accordance with DOT** Not regulated for transport
14.2. In Accordance with IMDG Not regulated for transport
14.3. In Accordance with IATA Not regulated for transport
14.4. In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

| | |
|---|---------------------------------|
| Tulathromycin Injection | |
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard |
| 1,2-Propanediol, 3-mercapto- (96-27-5) | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |
| 1,2-Propanediol (57-55-6) | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |
| Citric acid (77-92-9) | |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |

15.2. US State Regulations

| | |
|--|--|
| 1,2-Propanediol (57-55-6) | |
| U.S. - New Jersey - Right to Know Hazardous Substance List | |
| U.S. - Pennsylvania - RTK (Right to Know) List | |

15.3. Canadian Regulations

| | |
|---|--|
| 1,2-Propanediol, 3-mercapto- (96-27-5) | |
| Listed on the Canadian DSL (Domestic Substances List) | |
| 1,2-Propanediol (57-55-6) | |
| Listed on the Canadian DSL (Domestic Substances List) | |
| Citric acid (77-92-9) | |
| Listed on the Canadian DSL (Domestic Substances List) | |

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest : 03/05/2018

Revision

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

GHS Full Text Phrases:

| | |
|-----------------------|------------------------------------|
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal) Category 4 |
|-----------------------|------------------------------------|

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| | |
|---------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral) Category 4 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment - Chronic Hazard Category 3 |
| Comb. Dust | Combustible Dust |
| Eye Irrit. 2A | Serious eye damage/eye irritation Category 2A |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| Skin Sens. 1 | Skin sensitization, Category 1 |
| H302 | Harmful if swallowed |
| H312 | Harmful in contact with skin |
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |
| H319 | Causes serious eye irritation |
| H412 | Harmful to aquatic life with long lasting effects |

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

NA GHS SDS 2015 (Can, US)