

# SAFETY DATA SHEETS

**This SDS packet was issued with item:**

078056445

N/A



UPDATED PRODUCT CODE: 710461  
VERSION DATE: 6/2007

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## MATERIAL SAFETY DATA SHEET

### ----- 1. CHEMICAL PRODUCT and COMPANY IDENTIFICATION -----

Product Name: SALIX™  
Product Family: PHARMACEUTICALS

**PRODUCT:**

SALIX™ INJECTABLE

**PRODUCT CODE:**

710461

**SYNONYMS:**

FUROSEMIDE

PRODUCT USE: Refer to product insert for proper usage.

COMPANY ADDRESS - Intervet Inc - 29160 Intervet Lane - Millsboro, DE 19966

### ----- 2. COMPOSITION / INFORMATION on INGREDIENTS -----

**HAZARDOUS COMPONENT:**

**CONCENTRATION:**

**CAS NUMBER:**

FUROSEMIDE LIQUID

1.0%-5.0%

54-31-9

FUROSEMIDE TABLETS

12.5MG-50MG

54-31-9

### ----- 3. HAZARDS IDENTIFICATION-----

**EMERGENCY OVERVIEW:** *Warning: Milk taken from animals during treatment and for forty-eight hours (four milkings) after the last treatment must not be used for food. Cattle must not be slaughtered for food within forty-eight hours following the last treatment.*

**SIGNS AND SYMPTOMS OF EXPOSURE:** *In animals, signs of acute toxicity include lethargy, prostration, diuresis, and weight loss. In humans diuresis should be the first sign of exposure. Excessive diuresis may result in dehydration, hypokalemia, hypocalcemia and orthostatic hypotension. Other symptoms include weakness, fatigue and malaise.*

EMERGENCY: HUMAN, FIRE, SPILL OR ENVIRONMENTAL: 1-800-228-5635 EXT. 132 24 HRS.  
ANIMAL: 1-800-345-4735 EXT. 104 24 HRS.  
CHEMTREC® FOR CHEMICAL EMERGENCY SPILL, LEAK, FIRE: 1-800-424-9300

PRODUCT INFORMATION: 1-800-835-0541 OR 1-302-934-8051 9:00 A.M. – 5:00 P.M. EST



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ROUTES OF ENTRY: *Dermal, Injection, Inhalation, Ingestion*

ACUTE EFFECTS OF EXPOSURE: *May cause irritation at site of contact.*

CHRONIC EFFECTS OF EXPOSURE: *None known*

TARGET ORGAN EFFECTS: *Kidney. Furosemide inhibits the absorption of sodium and chlorine in the proximal and distal tubules, and in the loop of Henley.*

CARCINOGENIC EFFECTS: *This product is not considered a carcinogen and is not listed by OSHA, IRA or NTT.*

#### ----- 4. FIRST AID MEASURES -----

*Treatment is symptomatic and includes replacement of fluid and electrolytes.*

SKIN: *Wash immediately affected area with soap and water. Contact a physician.*

EYES: *Immediately flush with plenty of water for fifteen minutes. Contact a physician.*

INHALATION: *Remove to fresh air. If not breathing, give artificial respiration and call for medical help immediately.*

INGESTION: *Seek medical attention immediately.*

#### ----- 5. FIRE FIGHTING MEASURES -----

FLAMMABILITY: *Not Available*

EXTINGUISHING METHODS: *Use Water, Water Mist, Foam or Dry Chemical to extinguish fire.*

FIRE FIGHTING INSTRUCTIONS: *Wear full bunker gear, including SCBA. Keep upwind.*

#### ----- 6. ACCIDENTAL RELEASE MEASURES -----

PROCEDURES IN CASE OF SPILL OR LEAK: *Minor spillage may be flushed away with water. Large volume spills should be collected in salvage containers and should be incinerated in accordance with local, state and federal regulations.*

#### ----- 7. HANDLING and STORAGE -----

EMERGENCY: HUMAN, FIRE, SPILL OR ENVIRONMENTAL: 1-800-228-5635 EXT. 132 24 HRS.  
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**STORAGE:** Store at room temperature (below 25C) in well-closed containers with safety closures. The product should be colorless to slightly brown. Do not use if solution is discolored. Product is light sensitive.

**SHELF LIFE:** See expiration date on product label.

**HANDLING PRECAUTIONS:** See product label.

## ----- 8. EXPOSURE CONTROL / PERSONAL PROTECTION -----

**Furosemide Workplace Exposure Limit:** (interim) 0.5mg/m<sup>3</sup>

**EYES:** Prevent eye contact by wearing appropriate eye protection for handling tasks.

**SKIN:** Avoid skin contact. Wear chemical resistant gloves, long-sleeves and trousers to prevent dermal contact.

**RESPIRATOR PROTECTION:** Under normal conditions of use, as stated in the product insert, no respiratory protection is necessary. However, if ventilation is inadequate wear a NIOSH approved respirator.

## ----- 9. PHYSICAL and CHEMICAL PROPERTIES -----

**APPEARANCE:** 50mL vials, 12.5mg yellow tablet, or 50mg yellow tablet

**PH:** 7.0-7.8

## ----- 10. STABILITY and REACTIVITY -----

**CHEMICAL STABILITY:** Stable

**CONDITIONS TO AVOID:** None known

**INCOMPATIBILITY:** None Known

**HAZARDOUS POLYMERIZATION:** Will not occur

## ----- 11. TOXICOLOGICAL INFORMATION -----

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Oral LD 50 Rat: 4600 mg/kg  
Intraperitoneal LD50 (rat): Not available  
Intraperitoneal LD50 (mouse): Not available

----- 12. ECOLOGICAL INFORMATION -----

ECOTOXICITY: *Salix (Furosemide)* administered to animals presents negligible impact on the environment.

----- 13. DISPOSAL CONSIDERATIONS -----

Minor spillage may be flushed away with water. Large volume spills should be collected in salvage containers and should be incinerated in accordance with local, state and federal regulations.

----- 14. TRANSPORTATION -----

DOT SHIPPING INFORMATION: Not regulated by the DOT

----- 15. REGULATORY INFORMATION -----

US FEDERAL REGULATIONS: *Salix (Furosemide)* is regulated under the US FDA.

----- 16. OTHER INFORMATION -----

DISCLAIMER:

**The information contained herein is true and accurate to the best of the knowledge of Intervet Inc. However, all data, instructions and/or recommendations are made without guarantee. The buyer and handler assume all risk and liability of use, storage and/or handling of this product not in accordance with the terms of the product label.**

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## Furosemide Injection Formulation

Version            Revision Date:            SDS Number:            Date of last issue: 04/24/2019  
4.2                09/13/2019              632214-00009            Date of first issue: 05/03/2016

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### SECTION 1. IDENTIFICATION

Product name                            : Furosemide Injection Formulation

#### Manufacturer or supplier's details

Company name of supplier            : Merck & Co., Inc  
Address                                    : 2000 Galloping Hill Road  
    Kenilworth - New Jersey - U.S.A. 07033  
Telephone                                : 908-740-4000  
Telefax                                    : 908-735-1496  
Emergency telephone                 : 1-908-423-6000  
E-mail address                         : EHSDATASTEWARD@merck.com

#### Recommended use of the chemical and restrictions on use

Recommended use                      : Veterinary product

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### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with 29 CFR 1910.1200

Specific target organ toxicity        : Category 1 (Kidney, Liver)  
- repeated exposure

#### GHS label elements

Hazard pictograms                     :



Signal Word                             : Danger

Hazard Statements                    : H372 Causes damage to organs (Kidney, Liver) through prolonged or repeated exposure.

Precautionary Statements         : **Prevention:**  
P260 Do not breathe mist or vapors.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.

**Response:**  
P314 Get medical advice/ attention if you feel unwell.

**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

#### Other hazards

None known.

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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture                 : Mixture

#### Components

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| Chemical name | CAS-No. | Concentration (% w/w) |
|---------------|---------|-----------------------|
| Furosemide    | 54-31-9 | $\geq 5 - < 10$       |

Actual concentration is withheld as a trade secret

### SECTION 4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
 When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.  
 Get medical attention if symptoms occur.
- In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.  
 Get medical attention if symptoms occur.
- In case of eye contact : Flush eyes with water as a precaution.  
 Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.  
 Get medical attention if symptoms occur.  
 Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : Causes damage to organs through prolonged or repeated exposure.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : Treat symptomatically and supportively.

### SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray  
 Alcohol-resistant foam  
 Carbon dioxide (CO<sub>2</sub>)  
 Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Nitrogen oxides (NO<sub>x</sub>)  
 Carbon oxides  
 Sulfur oxides  
 Chlorine compounds
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
 Use water spray to cool unopened containers.  
 Remove undamaged containers from fire area if it is safe to do so.  
 Evacuate area.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.  
 Use personal protective equipment.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

## Furosemide Injection Formulation

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- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.
- Environmental precautions : Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g., by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### SECTION 7. HANDLING AND STORAGE

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : Use only with adequate ventilation.
- Advice on safe handling : Avoid inhalation of vapor or mist. Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment. Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labeled containers. Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:  
 Strong oxidizing agents  
 Organic peroxides  
 Explosives  
 Gases

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

| Components | CAS-No. | Value type (Form of | Control parameters / Permissible | Basis |
|------------|---------|---------------------|----------------------------------|-------|
|------------|---------|---------------------|----------------------------------|-------|



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|            |         | exposure) | concentration              |          |
|------------|---------|-----------|----------------------------|----------|
| Furosemide | 54-31-9 | TWA       | 200 µg/m <sup>3</sup>      | Internal |
|            |         | TWA       | OEB 2 (>=100 - 1000 ug/m3) | Internal |

**Engineering measures** : Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).  
 All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.  
 Laboratory operations do not require special containment.

### Personal protective equipment

**Respiratory protection** : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

**Hand protection**  
**Material** : Chemical-resistant gloves

**Eye protection** : Wear safety glasses with side shields or goggles.  
 If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.  
 Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

**Skin and body protection** : Work uniform or laboratory coat.  
**Hygiene measures** : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.  
 When using do not eat, drink or smoke.  
 Wash contaminated clothing before re-use.  
 The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** : Aqueous solution  
**Color** : yellow  
**Odor** : No data available

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Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Density : No data available

Solubility(ies)  
Water solubility : No data available

Partition coefficient: n-octanol/water : No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity  
Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle size : Not applicable

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### SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.  
Chemical stability : Stable under normal conditions.

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Possibility of hazardous reactions : Can react with strong oxidizing agents.  
Conditions to avoid : None known.  
Incompatible materials : Oxidizing agents  
Hazardous decomposition products : No hazardous decomposition products are known.

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**SECTION 11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

Inhalation  
Skin contact  
Ingestion  
Eye contact

**Acute toxicity**

Not classified based on available information.

**Product:**

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg  
Method: Calculation method

**Components:****Furosemide:**

Acute oral toxicity : LD50 (Rat): 2,600 mg/kg  
LD50 (Dog): 2,000 mg/kg  
LD50 (Rabbit): 800 mg/kg

Acute toxicity (other routes of administration) : LD0 (Humans): 6 - 29 mg/kg  
Application Route: Intravenous

LD50 (Rat): 800 mg/kg  
Application Route: Intravenous

**Skin corrosion/irritation**

Not classified based on available information.

**Serious eye damage/eye irritation**

Not classified based on available information.

**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

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### Components:

#### **Furosemide:**

|                       |   |   |
|-----------------------|---|---|
| Genotoxicity in vitro | : | <p>Test Type: Bacterial reverse mutation assay (AMES)<br/>Result: negative</p> <p>Test Type: In vitro mammalian cell gene mutation test<br/>Test system: mouse lymphoma cells<br/>Result: positive</p> <p>Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)<br/>Test system: mammalian liver cells<br/>Result: negative</p> <p>Test Type: Chromosome aberration test in vitro<br/>Test system: Chinese hamster ovary cells<br/>Result: positive</p> <p>Test Type: In vitro sister chromatid exchange assay in mammalian cells<br/>Test system: Chinese hamster cells<br/>Result: negative</p> |
| Genotoxicity in vivo  | : | <p>Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)<br/>Species: Mouse<br/>Application Route: Ingestion<br/>Result: negative</p> <p>Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)<br/>Species: Chinese hamster<br/>Application Route: Ingestion<br/>Result: negative</p>   |

#### **Carcinogenicity**

Not classified based on available information.

### Components:

#### **Furosemide:**

|                   |   |                      |
|-------------------|---|----------------------|
| Species           | : | Rat                  |
| Application Route | : | Ingestion            |
| Exposure time     | : | 104 weeks            |
| LOAEL             | : | 16 mg/kg body weight |
| Result            | : | equivocal            |

|                   |   |                      |
|-------------------|---|----------------------|
| Species           | : | Mouse                |
| Application Route | : | Ingestion            |
| Exposure time     | : | 2 Years              |
| LOAEL             | : | 91 mg/kg body weight |
| Result            | : | positive             |

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is

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identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### Reproductive toxicity

Not classified based on available information.

### Components:

#### **Furosemide:**

Effects on fertility : Test Type: One-generation reproduction toxicity study  
 Species: Rat  
 Application Route: Ingestion  
 General Toxicity Parent: NOAEL: 90 mg/kg body weight  
 Result: No effects on reproduction parameters.

Test Type: One-generation reproduction toxicity study  
 Species: Mouse  
 Application Route: Ingestion  
 General Toxicity Parent: NOAEL: 200 mg/kg body weight  
 Result: No effects on reproduction parameters.

Effects on fetal development : Test Type: Fertility/early embryonic development  
 Species: Rat  
 Application Route: Ingestion  
 General Toxicity Maternal: LOAEL: 50 mg/kg body weight  
 Developmental Toxicity: NOAEL: 300 mg/kg body weight  
 Result: No embryotoxic effects., No teratogenic effects.

Test Type: Fertility/early embryonic development  
 Species: Mouse  
 Application Route: Ingestion  
 General Toxicity Maternal: LOAEL: 25 mg/kg body weight  
 Result: Maternal toxicity observed., Fetal effects.

Test Type: Fertility/early embryonic development  
 Species: Rabbit  
 Application Route: Ingestion  
 General Toxicity Maternal: LOAEL: <= 12 mg/kg body weight  
 Developmental Toxicity: LOAEL: 12.5 mg/kg body weight  
 Result: Maternal toxicity observed., Reduced number of viable fetuses.

Test Type: Fertility/early embryonic development  
 Species: Rabbit  
 Application Route: Ingestion  
 General Toxicity Maternal: LOAEL: 15 mg/kg body weight  
 Result: Maternal toxicity observed., No effects on fetal development.

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**STOT-single exposure**

Not classified based on available information.

**STOT-repeated exposure**

Causes damage to organs (Kidney, Liver) through prolonged or repeated exposure.

**Components:****Furosemide:**

Routes of exposure : Ingestion  
Target Organs : Kidney  
Assessment : Shown to produce significant health effects in animals at concentrations of 10 mg/kg bw or less.

**Repeated dose toxicity****Components:****Furosemide:**

Species : Dog  
NOAEL : 4 mg/kg  
LOAEL : 8 mg/kg  
Application Route : Ingestion  
Exposure time : 12 Months  
Target Organs : Kidney  
Symptoms : Blood disorders  
Remarks : Significant toxicity observed in testing

**Aspiration toxicity**

Not classified based on available information.

**Experience with human exposure****Components:****Furosemide:**

Inhalation : Remarks: May be harmful if inhaled.  
Skin contact : Remarks: May irritate skin.  
Eye contact : Remarks: May cause eye irritation.  
Ingestion : Symptoms: Kidney disorders, Headache, electrolyte imbalance, dry mouth, hearing loss, Irregular cardiac activity, Gastrointestinal disturbance, hypotension

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****Furosemide:**

Toxicity to fish : LC50: 500 mg/l  
Exposure time: 96 h

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**Persistence and degradability**

No data available

**Bioaccumulative potential****Components:****Furosemide:**

Partition coefficient: n-octanol/water : log Pow: 2.03

**Mobility in soil**

No data available

**Other adverse effects**

No data available

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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.  
Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

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**SECTION 14. TRANSPORT INFORMATION****International Regulations****UNRTDG**

Not regulated as a dangerous good

**IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**Domestic regulation****49 CFR**

Not regulated as a dangerous good

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**SECTION 15. REGULATORY INFORMATION****EPCRA - Emergency Planning and Community Right-to-Know****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

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### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Specific target organ toxicity (single or repeated exposure)

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### US State Regulations

#### Pennsylvania Right To Know

Water 7732-18-5  
 Furosemide 54-31-9

#### The ingredients of this product are reported in the following inventories:

AICS : not determined

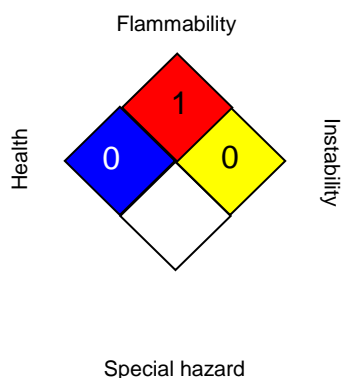
DSL : not determined

IECSC : not determined

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA 704:



#### HMIS® IV:

|                        |          |          |
|------------------------|----------|----------|
| <b>HEALTH</b>          | *        | <b>3</b> |
| <b>FLAMMABILITY</b>    | <b>1</b> |          |
| <b>PHYSICAL HAZARD</b> | <b>0</b> |          |

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with



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x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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