Section 1. Product and Company Identification

Product Name: Furosemide  
Product ID: F8270  
Chemical Name (Synonyms): Fursemide; Beronald; Discoid; Duraturid; Eutensin; Fulsix; Furosedon; Impugan; Katlex; Lasix; Macasirrol; Nicorol; Odemase; Rosemide; Urex  
Supplier: LKT Laboratories, Inc  
545 Phalen Blvd.  
St. Paul, MN 55130 USA  
Ph: 651-644-8424 Fax: 651-644-8357  
www.lktlabs.com - getinfo@lktlabs.com  
Emergency Phone #: 1-800-424-9300

Section 2. Hazards Identification

GHS Classification: Reproductive toxicity (Category 1B), H360

GHS Label elements including precautionary statements

Pictogram
Signal word: Danger
Hazard and precautionary statements
Hazard statement: H360 - May damage fertility or the unborn child.  
Precautionary statements:  
P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P281 - Use personal protective equipment as required.  
P308 + P313 - IF exposed or concerned: Get medical advice/ attention.  
P405 - Store locked up.  
P501 - Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification
Health hazard: 1  
Chronic health hazard:  
Flammability: 0  
Physical hazard: 0

NFPA Rating
Health hazard: 0  
Fire hazard: 0  
Reactivity hazard: 0

Potential Health Effects
Inhalation - May be harmful if inhaled. May cause respiratory tract irritation.  
Skin - May be harmful if absorbed through skin. May cause skin irritation.  
Eyes - May cause eye irritation.
Ingestion - May be harmful if swallowed.
Reproductive toxicity - May damage fertility or the unborn child.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substances</th>
<th>Ingredient: Title Compound</th>
<th>Percent: 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
<td>C_{12}H_{11}ClN_{2}O_{5}S</td>
<td>Formula Wt. 330.74</td>
</tr>
<tr>
<td>CAS No.</td>
<td>54-31-9</td>
<td>EC No. 200-203-6</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Eye Contact
Flush eyes with water as a precaution.

Skin Contact
Wash off with soap and plenty of water. Consult a physician.

Inhalation
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5. Firefighting Measures

Flash Point
Not available.

Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Firefighting Procedures
Wear self-contained breathing apparatus for fire fighting if necessary.

Unusual Fire Hazards
Carbon oxides, nitrogen oxides (NOx), sulfur oxides, hydrogen chloride gas.

Section 6. Accidental Release Measures

Personal Precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing dust, vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleanup
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7. Handling and Storage

Handling
Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place.
Recommended storage temperature: Ambient

Hazardous Decomposition Products
Not available.

Other Remarks
Section 8. Exposure Controls/Personal Protection

**Personal protective equipment**

**EXPOSURE CONTROLS**
Contains no substances with occupational exposure limit values. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**PERSONAL PROTECTION**

- **Eye/face protection**: Safety glasses with side-shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
- **Skin protection**: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
- **Body protection**: Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

- **Respiratory protection**: Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid.</td>
<td>Cream to off-white powder.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Volatility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Melting Point</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>203-206°C</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solubility</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soluble in acetone, DMF, and methanol. Slightly soluble in water, chloroform, and ether.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flash Point</th>
<th>Ignition temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lower explosion limit</th>
<th>Autoignition temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Upper explosion limit</th>
<th>Vapor pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water solubility</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slightly soluble in water.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partition coefficient: n-octanol/water</th>
<th>Odor Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relative vapor density</th>
<th>Evaporation rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

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Section 10. Stability and Reactivity

**Stability**

Stable under recommended storage conditions.

**Materials To Avoid**

Strong oxidizing agents.

**Hazardous Decomposition Products**

Not available.
Section 11. Toxicological Information

Oral LD50  Rat - 2,600 mg/kg.
Inhalation LC50  Not available.
Dermal LD50  Not available.
Other information on acute toxicity  Not available.
Skin corrosion/irritation  Not available.
Serious eye damage/irritation  Not available.
Respiratory or skin sensitization  Not available.
Germ cell mutagenicity  Not available.
Carcinogenicity  This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.
   IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Furosemide).
   ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH
   NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
   OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Section 12. Ecological Information

Toxicity  Not available.
Mobility in soil  Not available.
PBT and vPvB assessment  PBT/vPvB assessment not available as chemical safety assessment not required/not
Persistence and degradability Not available.

Bioaccumulative potential Not available.

Other adverse effects Not available.

Section 13. Disposal Considerations

Waste Disposal
Dispose of material according to all federal, state, and local regulations.
Offer material to a licensed, professional waste disposal company to dispose of as unused product.

Section 14. Transport Information

DOT (US) Not dangerous goods.

IATA Not dangerous goods.

IMDG Not dangerous goods.

Further Information

Section 15. Regulatory Information

Reach No.

SARA 302 Components SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components 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.

SARA 311/312 Components Chronic health hazard

Massachusetts Right To Know Components No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components Furosemide CAS #: 54-31-9 Revision Date:

New Jersey Right To Know Components Furosemide CAS #: 54-31-9 Revision Date:

California Prop 65 Components This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16. Other Information

Other information The information in this document is believed to be correct but is not necessarily complete. LKT does not guarantee the accuracy of the information. The burden of verifying the information in this document rests solely upon the user.
For emergencies in the USA, call CHEMTREC 800-424-9300