Section 1. Product and Company Identification

Product Name: Raltrexed  
Product ID: R0245  
Chemical Name (Synonyms): LKT Laboratories, Inc  
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:  
Acute toxicity, Oral (Category 2) H300  
Reproductive toxicity (Category 1B) H360

GHS Label elements including precautionary statements

Pictogram:  
Signal word: Danger  
Hazard and precautionary statements:  
Goldenrod: Hazard statements  
H300 - Fatal if swallowed.  
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.  
P264 - Wash skin thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P281 - Use personal protective equipment as required.  
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
P308 + P313 - IF exposed or concerned: Get medical advice/attention.  
P321 - Specific treatment (see supplemental first aid instruction on this label).  
P330 - Rinse mouth.  
P405 - Store locked up.  
P501 - Dispose of contents/container to an approved waste disposal plant.

HMIS Classification:  
Health hazard: 3  
Chronic health hazard: *  
Flammability: 0  
Physical hazard: 0

NFPA Rating:  
Health hazard: 3  
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 - Acute toxicity. - Fatal 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_{21}H_{22}N_{4}O_{6}S</td>
<td>458.49</td>
</tr>
<tr>
<td>CAS No.</td>
<td>112887-68-0</td>
<td></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. Take victim immediately to hospital. 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 firefighting if necessary.

Unusual Fire Hazards
Not available.

Section 6. Accidental Release Measures

Personal Precautions
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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 contact with skin and eyes. 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
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), sulfur oxides.

Other Remarks
Section 8. Exposure Controls/Personal Protection

**EXPOSURE CONTROLS**
Contains no substances with occupational exposure limit values. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

**PERSONAL PROTECTION**
**Eye/face protection**: Face shield and safety glasses. 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. Full and splash contact - Material: Nitrile rubber; Minimum layer thickness: 0.11 mm, Break through time: 480 min, Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M).

**Body protection**: Complete suit protecting against chemicals. 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).

Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Solubility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid.</td>
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</table>

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Volatility</th>
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<tbody>
<tr>
<td>180-184°C</td>
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</table>

<table>
<thead>
<tr>
<th>Melting Point</th>
<th>Density</th>
</tr>
</thead>
<tbody>
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<td>Not available.</td>
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</table>

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

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

<table>
<thead>
<tr>
<th>Water solubility</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</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>log Pow: 1.69</td>
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</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>
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</tbody>
</table>

Section 10. Stability and Reactivity

**Stability**
Stable under recommended storage conditions.

**Materials To Avoid**
Strong oxidizing agents.

**Hazardous Decomposition Products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), sulfur oxides.
### Section 11. Toxicological Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>Not available</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not available</td>
</tr>
<tr>
<td>Inhalation LC50</td>
<td>Not available</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not available</td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>Not available</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not available</td>
</tr>
<tr>
<td>Other information on acute toxicity</td>
<td>Not available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
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<tr>
<td>Reproductive Toxicity</td>
<td>Presumed human reproductive toxicant.</td>
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<tr>
<td>Aspiration Hazard</td>
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<tr>
<td>Specific organ toxicity</td>
<td>Not available</td>
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<tr>
<td>Single exposure (GHS)</td>
<td>Not available</td>
</tr>
<tr>
<td>Synergistic effects</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific organ toxicity</td>
<td>Not available</td>
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<tr>
<td>Repeated exposure (GHS)</td>
<td>Not available</td>
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<tr>
<td>Additional Information</td>
<td>RTECS: Not available</td>
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<tr>
<td>Teratogenicity</td>
<td>Not available</td>
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<tr>
<td>Signs and symptoms of exposure</td>
<td>Not available</td>
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</tbody>
</table>

#### 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: Acute toxicity. Fatal if swallowed.
- Reproductive toxicity: May damage fertility or the unborn child.

#### Carcinogenicity

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.
- 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity</td>
<td>Not available</td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>Not available</td>
</tr>
<tr>
<td>PBT and vPvB assessment</td>
<td>Not available as chemical safety assessment not required/not</td>
</tr>
</tbody>
</table>
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. Dissolve or mix the material with combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Section 14. Transport Information

**DOT (US)**
- UN number: 2811
- Class: 6.1
- Packing group: III
- Proper shipping name: Toxic solid, organic, n.o.s. (Raltitrexed)
- Poison Inhalation hazard: no

**IATA**
- UN number: 2811
- Class: 6.1
- Packing group: III
- Proper shipping name: Toxic solid, organic, n.o.s. (Raltitrexed)

**IMDG**
- UN number: 2811
- Class: 6.1
- Packing group: III
- EMS: F-A, S-A
- Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Raltitrexed)

Section 15. Regulatory Information

**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**
Acute health hazard

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

**Pennsylvania Right To Know Components**
- Raltitrexed
- CAS #: 112887-68-0
- Revision Date:

**New Jersey Right To Know Components**
- Raltitrexed
- CAS #: 112887-68-0
- 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.