Section 1. Product and Company Identification

**Product Name**: Thalidomide

**Product ID**: T2800

**Chemical Name**: 1,3-Dioxo-2-(2,6-dioxopiperidin-3-yl)isoindoline, Actimid, Calmore, Distaval, Sedimide, Telagan

**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 3) H301
Reproductive toxicity (Category 1A) H360D

**GHS Label elements including precautionary statements**

**Pictogram**

**Signal word** Danger

**Hazard and precautionary statements**

<table>
<thead>
<tr>
<th>Hazard statements</th>
<th>Precautionary statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>H301 - Toxic if swallowed.</td>
<td>P201 - Obtain special instructions before use.</td>
</tr>
<tr>
<td>H360D - May damage the unborn child.</td>
<td>P202 - Do not handle until all safety precautions have been read and understood.</td>
</tr>
<tr>
<td>Precautionary statements</td>
<td>P264 - Wash skin thoroughly after handling.</td>
</tr>
<tr>
<td>P270 - Do not eat, drink or smoke when using this product.</td>
<td></td>
</tr>
<tr>
<td>P280 - Wear protective gloves, protective clothing, eye protection, face protection.</td>
<td></td>
</tr>
<tr>
<td>P308 + P313 - IF exposed or concerned: Get medical advice/ attention.</td>
<td></td>
</tr>
<tr>
<td>P405 - Store locked up.</td>
<td></td>
</tr>
<tr>
<td>P501 - Dispose of contents/ container to an approved waste disposal plant.</td>
<td></td>
</tr>
</tbody>
</table>

**HMIS Classification**
Health hazard: 2
Chronic health hazard: *
Flammability: 0
Physical hazard: 0

**NFPA Rating**
Health hazard: 2
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.
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_{13}H_{10}N_{2}O_{4}</td>
<td>Formula Wt.</td>
</tr>
<tr>
<td>CAS No.</td>
<td>50-35-1</td>
<td>EC No. 200-031-1</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
Carbon oxides, nitrogen oxides (NOx).

Section 6. Accidental Release Measures

Personal Precautions
Wear respiratory protection. 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 contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. 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).

Other Remarks
Section 8. Exposure Controls/Personal Protection

Personal protective equipment
EXPOSURE CONTROLS
Contains no substances with occupational exposure limit values.
Hazardous components without workplace control parameters

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: 460 min., Material tested: Dermatril® (KCL 740 / Aldrich 2677272, Size M).

Physical State
Solid.

Color
White crystal powder.

Boiling Point
Not available.

Density
Not available.

Melting Point
269-271°C

Not available.

Solubility
Insoluble in water and ethanol. Soluble in DMSO (56mg/mL).

Not available.

Flash Point
Not available.

Not available.

Lower explosion limit
Not available.

Non available.

Upper explosion limit
Not available.

Vapor pressure
Not available.

Water solubility
Insoluble in water.

Not available.

Partition coefficient: n-octanol/water
Not available.

Odor
Not available.

Relative vapor density
Not available.

Evaporation rate
Not available.

Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid.</td>
<td>White crystal 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>269-271°C</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solubility</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insoluble in water and ethanol. Soluble in DMSO (56mg/mL).</td>
<td>Not available.</td>
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</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>Insoluble 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>

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).
Section 11. Toxicological Information

- **Oral LD50**: Rat - 113 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**: None found.
  - Ames test: Salmonella typhimurium
  - Result: Not a mutagenic in Ames Test.
- **Reproductive Toxicity**: May cause congenital malformation in the fetus. Known human reproductive toxicant. May damage the unborn child. Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.
- **Specific organ toxicity single exposure (GHS)**: Not available.
- **Specific organ toxicity repeated exposure (GHS)**: Not available.
- **Teratogenicity**: Not available.
- **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. Toxic if swallowed. Reproductive toxicity - May damage 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. 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 applicable.
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 a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Section 13. Disposal Considerations

Other adverse effects Not available.

Persistence and degradability Not available.

Bioaccumulative potential Not available.

Section 14. Transport Information

DOT (US) UN number: 2811 Class: 6.1 Packing Group: III
Proper shipping name: Toxic solid, organic, n.o.s. (Thalidomide)
Poison inhalation hazard: No

IATA UN number: 2811 Class: 6.1 Packing Group: III
Proper shipping name: Toxic solid, organic, n.o.s. (Thalidomide)

IMDG UN number: 2811 Class: 6.1 Packing Group: III
EMS #: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Thalidomide)
Poison inhalation hazard: No

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 Acute health hazard, chronic health hazard.

Massachusetts Right To Know Components Thalidomide CAS #: 50-35-1 Revision Date: 1993-04-24

Pennsylvania Right To Know Components Thalidomide CAS #: 50-35-1 Revision Date: 1993-04-24

New Jersey Right To Know Components Thalidomide CAS #: 50-35-1 Revision Date: 1993-04-24

California Prop 65 Components WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
Thalidomide CAS #: 50-35-1 Revision Date: 2007-09-28

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.