Section 1. Product and Company Identification

Product Name: Doxycycline Hyclate
Product ID: D5897
Chemical Name (Synonyms): Doxycycline hydrochloride hemiethanolate hemihydrate; Atridox; Bassado; Clinofug; Doryx; Hydramycin; Mespafinn; Retens; Spanor; Unacil; Zadorin
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 4), H302
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

GHS Label elements including precautionary statements

Pictogram
Signal word: Warning
Hazard and precautionary statements
Hazard statements
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
Precautionary statements
P261 - Avoid breathing dust, fumes, gas, mist, vapors and spray.
P264 - Wash skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, eye protection and face protection.
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a POISON CENTER or doctor/ physician if you feel unwell.
P321 - Specific treatment (see supplemental first aid instructions on this label).
P330 - Rinse mouth.
P332 + P313 - If skin irritation occurs: Get medical advice/ attention.
P337 + P313 - If eye irritation persists: Get medical advice/ attention.
P362 - Take off contaminated clothing and wash before reuse.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification
Health hazard: 0
Chronic health hazard: 0
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. Organ toxicity - single exposure - respiratory system.
Skin - May be harmful if absorbed through skin. May cause skin irritation.
Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substances</th>
<th>Formula</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingredient: Title Compound</td>
<td>((C_{22}H_{24}N_2O_8)_2 \cdot 2HCl \cdot H_2O \cdot C_2H_6O)</td>
<td>24390-14-5</td>
</tr>
<tr>
<td>Percent: 100</td>
<td>Formula Wt. 512.9</td>
<td>EC No.</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 plenty of water for at least 15 minutes and consult a physician.

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), 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
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
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 confirming 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. Full and Splash contact - Material: Nitrile rubber. Minimum layer thickness: 0.11mm, Break through time: 480 min., Material tested: Dermatrill® (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:** For nuisance exposures, use type P95 (US) or type P1 (EU EN 143) particle respirator. For a higher level protection, use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. 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>Color</th>
<th>Yellow crystal powder.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>Volatility</td>
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</tr>
<tr>
<td>220°C-223°C</td>
<td>Density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Ignition</td>
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<tr>
<td>220°C-223°C</td>
<td>temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Autoignition</td>
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<tr>
<td>Soluble in water 50 mg/mL; DMSO.</td>
<td>temperature</td>
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<tr>
<td>Flash Point</td>
<td>Vapor pressure</td>
<td>Not available.</td>
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<tr>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Water solubility</td>
<td>Soluble in water 50 mg/mL.</td>
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<tr>
<td>Not available.</td>
<td>Odor</td>
<td>Not available.</td>
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<tr>
<td>Upper explosion limit</td>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available.</td>
</tr>
<tr>
<td>Not available.</td>
<td>Odor Threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>Odor Threshold</td>
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</tr>
<tr>
<td>Not available.</td>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Section 10. Stability and Reactivity

**Stability**
Stable under recommended storage conditions. This chemical decomposes on exposure to light.

**Materials To Avoid**
Strong oxidizing agents.

**Hazardous Decomposition Products**
Not available.
Section 11. Toxicological Information

**Oral LD50** Not available.

**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.

**Reproductive Toxicity** Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

**Aspiration Hazard** Not available.

**Specific organ toxicity single exposure (GHS)** Inhalation - May cause respiratory irritation.

**Synergistic effects** Not available.

**Specific organ toxicity repeated exposure (GHS)** Not available.

**Additional Information** RTECS: QI8925000

**Teratogenicity** Not available.

**Signs and symptoms of exposure** Narcosis, damage to the heart. Liver - irregularities - based on human evidence.

**Potential Health Effects** Inhalation - May be harmful if inhaled. May cause respiratory tract irritation. Organ toxicity - single exposure - respiratory system. Skin - May be harmful if absorbed through skin. May cause skin irritation. Eyes - May cause eye irritation. Ingestion - Acute toxicity. May be harmful if swallowed.

**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

**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.  

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  No SARA hazards.  
Massachusetts Right To Know Components  No components are subject to the Massachusetts Right to Know Act.  
Pennsylvania Right To Know Components  Doxycycline Hyclate  CAS No.: 24390-14-5  Revision Date:

New Jersey Right To Know Components  Doxycycline Hyclate  CAS No.: 24390-14-5  Revision Date:

California Prop 65 Components  WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Doxycycline Hyclate  CAS No.: 24390-14-5  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.