LKT Laboratories, Inc.

Safety Data Sheet

Section 1. Product and Company Identification

Product Name: 2-Hydroxyflutamide
Product ID: H9718
Chemical Name (Synonyms): Hydroxyniphtholide
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
Skin irritation (Category 2) H315
Eye irritation (Category 2A) H319
Specific target organ toxicity - single exposure (Category 3) H335

GHS Label elements including precautionary statements

Pictogram: !
Signal word: Warning
Hazard and precautionary statements
Hazard statements
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
Precautionary statements
P261: Avoid breathing dust, fumes, gas, mist, vapors, spray.
P264: Wash skin thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves, eye protection, face protection.
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 and/or physician if you feel unwell.
P321: Specific treatment (see supplemental first aid instructions on this label).
P332 + P337: 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 and/or container to an approved waste disposal plant.

HMIS Classification
Health hazard: 2
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. Causes respiratory tract irritation.
Skin: May be harmful if absorbed through skin. Causes skin irritation.
Eyes: Causes serious eye irritation.
Ingestion: May be harmful if swallowed.

### Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substances</th>
<th>Formula</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
<td>C₁₁H₁₁F₃N₂O₄</td>
<td>52806-53-8</td>
</tr>
<tr>
<td>Formula Wt.</td>
<td>292.21</td>
<td></td>
</tr>
<tr>
<td>EC No.</td>
<td></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**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Skin Contact**

Wash 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 and protective clothing for firefighting.

**Unusual Fire Hazards**

Not available.

### 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**

Store in a tightly closed container in a dry and well-ventilated place. Recommended storage temperature: -20˚C.

**Hazardous Decomposition Products**

Hazardous decomposition products formed under fire conditions. Carbon oxides, nitrogen oxides (NOx) and hydrogen fluoride.

**Other Remarks**

Store with desiccant.
Section 8. Exposure Controls/Personal Protection

Personal protective equipment

EXPOSURE CONTROLS
Contains no substances with occupation 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: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respiratory. For 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>
</tr>
</thead>
<tbody>
<tr>
<td>Solid.</td>
<td>Yellow 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>125-130 °C.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solubility</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</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>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: 1.72</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>10.09 (Air = 1.0)</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Section 10. Stability and Reactivity

Stability

Stable under recommended storage conditions.

Materials To Avoid

Hazardous Decomposition Products

Hazardous decomposition products formed under fire conditions. Carbon oxides, nitrogen oxides (NOx) and hydrogen fluoride.
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** Not available.  
**Aspiration Hazard** Not available.  
**Specific organ toxicity single exposure (GHS)** Not available.  
**Specific organ toxicity repeated exposure (GHS)** Not available.  
**Teratogenicity** Not available.  
**Synergistic effects** Not available.  
**Additional Information** RTECS: TX1466250  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Potential Health Effects**  
Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.  
Skin: May be harmful if absorbed through skin. Causes skin irritation.  
Eyes: Causes serious eye irritation.  
Ingestion: 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 and
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.

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

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

Pennsylvania Right To Know Components 2-Hydroxyflutamide CAS #: 52806-53-8 Revision Date:

New Jersey Right To Know Components 2-Hydroxyflutamide CAS #: 52806-53-8 Revision Date:

California Prop 65 Components This product does not contain any chemicals known to 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.