Section 1. Product and Company Identification

Product Name 18 β-Glycyrrhetinic Acid / Enoxolone
Product ID G4597
Chemical Name (Synonyms) Enoxolone; Uralenic acid; Arthrodont; Biosone
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 Not a hazardous substance or mixture.

GHS Label elements including precautionary statements

<table>
<thead>
<tr>
<th>Pictogram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal word</td>
</tr>
<tr>
<td>Hazard and precautionary statements</td>
</tr>
<tr>
<td>Hazard statements</td>
</tr>
<tr>
<td>Not a hazardous substance or mixture.</td>
</tr>
<tr>
<td>Precautionary statements</td>
</tr>
<tr>
<td>Not a hazardous substance or mixture.</td>
</tr>
</tbody>
</table>

HMIS Classification
- Health hazard: 0
- 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. Causes respiratory tract irritation.
- Skin: May be harmful in contact with skin.
- Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substances</th>
<th>Formula</th>
<th>Formula Wt.</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C$<em>{30}$H$</em>{46}$O$_{4}$</td>
<td>470.68</td>
<td>471-53-4</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

General advice
Move out of dangerous area.

Eye Contact
Flush with plenty of water as a precaution.

Skin Contact
Wash off with soap and plenty of water.

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

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

Section 5. Firefighting Measures

Flash Point
Not available.

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

Firefighting Procedures
Wear self-contained breathing apparatus and protective clothing for firefighting if necessary.

Section 6. Accidental Release Measures

Personal Precautions
Avoid dust formation. Avoid breathing vapors, dust, mist or gas.

Environmental Precautions
No special environmental precautions required.

Methods and materials for containment and cleanup
Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7. Handling and Storage

Handling
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
Store in a dry and well-ventilated place in a tightly closed container. Recommended storage temperature: Ambient

Hazardous Decomposition Products
Hazardous decomposition products formed under fire conditions. Carbon oxides.

Other Remarks
None.
Section 8. Exposure Controls/Personal Protection

Personal protective equipment

EXPOSURE CONTROLS
Contains no substances with occupational exposure limit values.
General industrial hygiene practice.

PERSONAL PROTECTION
Eye/face protection: 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 Z677272, Size M).

Body protection: Choose body protection in relation to its type, to the concentration and amount of the dangerous substance at the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Respiratory protection is not required. Where protection from nuisance levels of dusts are desire, use type N95 (US) or type P1 (EN 143) dust masks. 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>White 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>296°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 ethanol, chloroform, dioxone, pyridine or acetic acid.</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>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

Keep away from strong oxidizing agents and strong bases.

Hazardous Decomposition Products

Hazardous decomposition products formed under fire conditions. Carbon oxides.
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.  

carboxylase 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. Causes respiratory tract irritation. Skin: May be harmful in contact with skin. Eyes: May cause 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. 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 necessary.
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 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  No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components  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  18 β-Glycyrrhetinic Acid / Enoxolone  CAS #: 471-53-4  Revision Date:

New Jersey Right To Know Components  18 β-Glycyrrhetinic Acid / Enoxolone  CAS #: 471-53-4  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

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.