SAFETY DATA SHEET

Section 1. Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>Glucocerebrosides, plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Number(s):</td>
<td>1522; 1522-100</td>
</tr>
<tr>
<td>Synonym(s):</td>
<td>Glucosylceramide; Ceramide beta-D-glucoside</td>
</tr>
<tr>
<td>CAS Number:</td>
<td>No data available</td>
</tr>
<tr>
<td>Source:</td>
<td>Natural, plant</td>
</tr>
<tr>
<td>Product Use:</td>
<td>This product is to be used for research only. It is not intended for drug or diagnostic use, human consumption or to be used in food or food additives.</td>
</tr>
</tbody>
</table>

Matreya LLC
2178 High Tech Road, State College, PA 16803
Tel: 800-342-3595/814-355-1030
Fax: 814-355-1031
Email: customerservice@matreya.com
Web: www.matreya.com

24 Hour Emergency Number: Chemtrec
800-424-9300 (within United States)

Section 2. Hazards Identification

Emergency Overview: No data available
Target Organs: No data available
GHS Classification: Not a hazardous substance according to GHS classification standards.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Product Name</th>
<th>CAS Number</th>
<th>Percent</th>
<th>Hazardous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glucocerebrosides, plant</td>
<td>497155-61-0</td>
<td>100</td>
<td>NO</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

Inhalation:
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Skin:
Wash with soap and water. Get medical attention if irritation develops or persists.

Eyes:
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel.

Ingestion:
Wash out mouth with water, keep at rest. Seek immediate medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
Section 5. Fire Fighting Measures

Suitable extinguishing media:
Use dry chemical, alcohol-resistant appropriate foam, carbon dioxide, or water spray.

Specific hazards arising from the chemical:
No data available

Special protective actions for fire fighters:
No data available

Special protective equipment for fire fighters:
Wear breathing apparatus and use water spray to keep fire-exposed containers cool.

Section 6. Accidental Release Measures

Personal precautions:
Wear appropriate personal protective equipment. After contact with skin, wash immediately with plenty of water.

Environmental precautions:
Do not let product enter drains.

Methods and Materials for containment and cleaning up:
Sweep up and keep in suitable, closed container for disposal.

Section 7. Handling and Storage

Precautions for safe handling:
Avoid contact with eyes, skin or clothing. Do not ingest. Use only with adequate ventilation. Keep sealed when not in use. Wear appropriate personal protective equipment.

Conditions for safe storage, including incompatibilities:
Recommended storage temperature: -20°C. Keep container tightly closed in a dry and well-ventilated place.

Section 8. Exposure Controls/Personal Protection

This product contains no substances with occupational exposure limit values.

Engineering Controls:
No specific ventilation required.

Personal Protective Equipment:
Respiratory protection:
Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, 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).

Hand protection:
For prolonged or repeated contact use protective gloves. Recommended: Nitrile rubber

Eye protection:
Safety eyewear should be worn at all times to avoid exposure to liquid splashes, mists, or dusts. Recommended: Safety glasses with side shields or goggles.

Skin protection:
Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. Recommended: Lab coat

Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid</td>
</tr>
<tr>
<td>Odor:</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>No data available</td>
</tr>
<tr>
<td>pH:</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting/Freezing point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Property</td>
<td>Value</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper/Lower flammability or explosive limit:</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density:</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility (ies):</td>
<td>Chloroform/methanol, 2:1</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature:</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>No data available</td>
</tr>
<tr>
<td>Molecular formula:</td>
<td>C_{40}H_{75}NO_{9}</td>
</tr>
<tr>
<td>Molecular weight:</td>
<td>714 (2-hydroxyhexadecanoyl)</td>
</tr>
</tbody>
</table>

**Section 10. Stability and Reactivity**

**Reactivity:**
Stable under recommended storage conditions.

**Chemical stability:**
Stable under recommended storage conditions.

**Possibility of hazardous reaction:**
No data available

**Conditions to avoid:**
No data available

**Incompatible materials:**
No data available

**Hazardous decomposition products:**
No data available

**Section 11. Toxicological Information**

**Acute toxicity:**
No data available

**Skin corrosion / irritation:**
No data available

**Serious eye damage / irritation:**
No data available

**Respiratory or skin sensitization:**
No data available

**Germ cell mutagenicity:**
No data available

**Carcinogenicity:**
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC, ACGIH, NTP or OSHA.

**Reproductive toxicity:**
No data available

**Specific target organ toxicity - single exposure:**
No data available

**Specific target organ toxicity - repeated exposure:**
No data available

**Aspiration hazard:**
No data available
Section 12. Ecological Information

Toxicity:
No ecological data available for this product.

Persistence and degradability:
No data available

Bioaccumulative potential:
No data available

Bioaccumulation:
No data available

Mobility in soil:
No data available

Other adverse effects:
No data available

Section 13. Disposal Consideration

Disposal methods:
Observe all federal, state and local environmental regulations.

Section 14. Transportation Information

DOT (US)
UN Number: Not dangerous goods

Land Transport ADR/RID
UN Number: Not dangerous goods

Maritime Transport IMDG
UN Number: Not dangerous goods

Air Transport ICAO/IATA
UN Number: Not dangerous goods

Section 15. Regulatory Information

<table>
<thead>
<tr>
<th>Product Name</th>
<th>CAS Number</th>
</tr>
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<tbody>
<tr>
<td>Glucocerebrosides, plant</td>
<td>497155-61-0</td>
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</table>

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 Hazards:
No 311/312 SARA Hazards

California Prop. 65 Components:
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

DSL/NDSL status:
This product contains the following components that are not on the Canadian DSL nor NDSL lists.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
</tr>
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<tbody>
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</tbody>
</table>
Section 16. Other Information

Manufacturer Supplementary Notes:
The statements contained herein are based upon technical data that MATREYA LLC believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment. MATREYA LLC MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. MATREYA LLC ASSUMES NO LIABILITY FOR ANY USE OF THESE CHEMICALS BY THE END USER.

Revision Summary:

<table>
<thead>
<tr>
<th>Date</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/25/2012</td>
<td>Version 2</td>
</tr>
<tr>
<td>10/17/2012</td>
<td>Version 3</td>
</tr>
<tr>
<td>03/30/2015</td>
<td>Version 5: Changed company address.</td>
</tr>
<tr>
<td>8/2/2017</td>
<td>Version 6: Removed Chemtrec International number.</td>
</tr>
<tr>
<td>4/18/2018</td>
<td>Version 7: Added CAS number.</td>
</tr>
<tr>
<td>2/13/2019</td>
<td>Version 8: Reviewed, no changes.</td>
</tr>
</tbody>
</table>

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