Material Safety Data Sheet
Dextrose Monohydrate

Section 1: Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name: Dextrose Monohydrate</th>
<th>Company Information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name: Dextrose Monohydrate</td>
<td>Chemtrade International</td>
</tr>
<tr>
<td>Customs Tariff No: 17023000</td>
<td>Rm. 201, Unit 3, Building 8, Shijia Garden, No. 93, Xiangjiang Road, Qingdao Development Zone, Qingdao, Shandong, China 266555</td>
</tr>
<tr>
<td>Synonym Name: alpha-D-Glucopyranose, monohydrate; alpha-D-Glucose monohydrate; Dextrose monohydrate.</td>
<td>Tel: 0086-532-86893005</td>
</tr>
<tr>
<td>Chemical Formula: C₆H₁₂O₆·H₂O</td>
<td>Fax: 0086-532-86893005</td>
</tr>
</tbody>
</table>

Section 2: Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>EINECS No.</th>
<th>% by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dextrose Monohydrate</td>
<td>5996-10-1</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Section 3: Hazards Identification

Appearance: white solid.

Caution! Dust may cause mechanical eye irritation. This is expected to be a low hazard for usual industrial handling.

Target Organs: Teeth.

Potential Health Effects
Eye: Dust may cause mechanical irritation.
Skin: Dust may cause mechanical irritation. Low hazard for usual industrial handling.
Ingestion: No hazard expected in normal industrial use. Causes tooth decay.
Inhalation: No hazard expected in normal industrial use. Inhalation of dust may cause respiratory tract irritation.
Chronic: No information found.

Section 4: First Aid Measures

Eyes: Get medical aid. Gently lift eyelids and flush continuously with water.
Skin: Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.
Ingestion: Get medical aid if irritation or symptoms occur.
Inhalation: Remove from exposure and move to fresh air immediately. Get medical aid if cough or other symptoms appear.
Notes to Physician: Treat symptomatically and supportively.

Section 5: Fire and Explosion Data

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dusts at sufficient concentrations can form explosive mixtures with air.
Extinguishing Media: Use water spray, dry chemical, or carbon dioxide.
Flash Point: Not applicable.
Autoignition Temperature: Not applicable.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 0; Flammability: 1; Instability: 0

Section 6: Accidental Release Measures
**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation.

---

**Section 7: Handling and Storage**

**Handling:** Minimize dust generation and accumulation.

**Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances.

---

**Section 8: Exposure Controls/Personal Protection**

**Engineering Controls:** Good general ventilation should be sufficient to control airborne levels.

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dextrose monohydrate</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Dextrose anhydrous</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Deleted Registry Number</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>replaced by 14431-43-7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**OSHA Vacated PELs:** Dextrose monohydrate: No OSHA Vacated PELs are listed for this chemical. Dextrose anhydrous: No OSHA Vacated PELs are listed for this chemical. Deleted Registry Number replaced by 14431-43-7: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Protective garments not normally required.

**Clothing:** Protective garments not normally required.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

---

**Section 9: Physical and Chemical Properties**

**Physical State:** Solid

**Appearance:** white

**Odor:** odorless

**pH:** 5.9 (0.5M)

**Vapor Pressure:** Negligible.

**Vapor Density:** Not applicable.

**Evaporation Rate:** Negligible.

**Viscosity:** Not applicable.

**Boiling Point:** Not available.

**Freezing/Melting Point:** Not available.

**Decomposition Temperature:** Not available.

**Solubility:** Soluble in water.

**Specific Gravity/Density:** 1.54 (water=1)

**Molecular Formula:** C6H12O6.H2O

**Molecular Weight:** 198.18

---

**Section 10: Stability and Reactivity Data**

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Dust generation.

**Incompatibilities with Other Materials:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide.

**Hazardous Polymerization:** Has not been reported.

---

**Section 11: Toxicological Information**
RTECS#:
CAS# 14431-43-7 unlisted.
CAS# 50-99-7; LZ6600000
CAS# 5996-10-1 unlisted.
LD50/LC50:
Not available.

CAS# 50-99-7:
Oral, rat: LD50 = 25800 mg/kg;

CAS# 5996-10-1:

Carcinogenicity:
CAS# 14431-43-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 50-99-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 5996-10-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.
Teratogenicity: No data available.
Reproductive Effects: No data available.
Mutagenicity: No data available.
Neurotoxicity: No information available.
Other Studies:

Section 12: Ecological Information
No information available.

Section 13: Disposal Considerations
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14: Transport Information
US DOT: Not regulated as a hazardous material
Identification: No information found

Section 15: Other Regulatory Information

US FEDERAL

TSCA
CAS# 14431-43-7 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).
CAS# 50-99-7 is listed on the TSCA inventory.
CAS# 5996-10-1 is not listed on the TSCA inventory. It is for research and development use only.

Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.

Section 12b
None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.

**SARA Codes**
- CAS # 50-99-7: Not controlled.

**Section 313**  No chemicals are reportable under Section 313.

**Clean Air Act:**
- This material does not contain any hazardous air pollutants.
- This material does not contain any Class 1 Ozone depletors.
- This material does not contain any Class 2 Ozone depletors.

**Clean Water Act:**
- None of the chemicals in this product are listed as Hazardous Substances under the CWA.
- None of the chemicals in this product are listed as Priority Pollutants under the CWA.
- None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**
- None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**
- CAS# 14431-43-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
- CAS# 50-99-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
- CAS# 5996-10-1 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

**California Prop 65**

California No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations**

**European Labeling in Accordance with EC Directives**

**Hazard Symbols:**
- Not available.

**Risk Phrases:**

**Safety Phrases:**

**WGK (Water Danger/Protection)**
- CAS# 14431-43-7: No information available.
- CAS# 50-99-7: 0
- CAS# 5996-10-1: 0

**Canada - DSL/NDSL**
- CAS# 50-99-7 is listed on Canada's DSL List.

**Canada - WHMIS**
- This product has a WHMIS classification of Not controlled.
- This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

---

**Section 16: Other Information**

**MSDS Creation Date:** 6/16/2000  
**Revision #4 Date:** 3/15/2007

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Chemtrade International be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, however arising, even if Chemtrade International has been advised of the possibility of such damages.