1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Glycolaldehyde dimer
Product Number: sc-215101
Supplier: Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, CA  95060
800.457.3801 or 831.457.3800
Emergency:
ChemWatch
Within the US & Canada: 877–715–9305
Outside the US & Canada: +800 2436 2255 (1–800-CHEMCALL) or call +613 9573 3112

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: 1,4-Dioxane-2,5-diol; 2,5-Dihydroxy-1,4-dioxane; Hydroxyacetaldehyde dimer;
Formula: C4H8O4
Molecular Weight: 120.1 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,4-Dioxane-2,5-diol</td>
<td>23147–58–2</td>
<td>–</td>
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</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Emergency Overview
OSHA Hazards
No known OSHA hazards
HMIS Classification
Health Hazard: 0
Flammability: 0
Physical hazards: 0
NFPA Rating
Health Hazard: 0
Fire: 0
Reactivity Hazard: 0
Potential Health Effects
Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion May be harmful if swallowed.

4. FIRST AID MEASURES

If inhaled
If breathed in, move person into fresh air. If not breathing give artificial respiration
In case of skin contact
Wash off with soap and plenty of water.
In case of eye contact
Flush eyes with water as a precaution.
If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water.
5. FIRE-FIGHTING MEASURES
Flammable properties
Flash point no data available
Ignition temperature no data available
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES
Personal precautions
Avoid dust formation.
Environmental precautions
Do not let product enter drains.
Methods for cleaning up
Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE
Handling
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
Storage
Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: 4° C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Contains no substances with occupational exposure limit values.
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.
Eye protection
Safety glasses
Hygiene measures
General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>pH</th>
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<tbody>
<tr>
<td>Form</td>
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</tr>
<tr>
<td>Melting point</td>
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<tr>
<td>Flash point</td>
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<tr>
<td>Lower explosion limit</td>
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<tr>
<td>Water solubility</td>
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</tbody>
</table>

10. STABILITY AND REACTIVITY
Storage stability
Stable under recommended storage conditions.
Materials to avoid
acids, Bases, Oxidizing agents
Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. – Carbon oxides
11. TOXICOLOGICAL INFORMATION

Acute toxicity
no data available

Irritation and corrosion
no data available

Sensitisation
no data available

Chronic exposure
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.

Potential Health Effects
Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Ingestion May be harmful if swallowed.

12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Observe all federal, state, and local environmental regulations.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US) IMDG IATA
Not dangerous goods Not dangerous goods Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards
No known OSHA hazards

TSCA Status
Not On TSCA Inventory

1,4-Dioxane-2,5-diol
CAS-No.: 23147–58–2

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

1,4-Dioxane-2,5-diol
CAS-No.: 23147–58–2

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards
No SARA Hazards
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.

Massachusetts Right To Know Components
No Components Listed

Pennsylvania Right To Know Components
1,4-Dioxane-2,5-diol  CAS-No.: 23147–58–2

New Jersey Right To Know Components
1,4-Dioxane-2,5-diol  CAS-No.: 23147–58–2

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.

16. OTHER INFORMATION
The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.

5/31/2011