Material Safety Data Sheet
Tris Glycine SDS 10X Powder

MSDS# 45458

Section 1 - Chemical Product and Company Identification

MSDS Name: Tris Glycine SDS 10X Powder
Catalog Numbers: BP1342-1
Synonyms: Tris-Glycine-Sodium Lauryl Sulfate Powder

Company Identification:
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

Risk Phrases:

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>56-40-6</td>
<td>Glycine</td>
<td>82.3</td>
</tr>
</tbody>
</table>

EINECS#:
200-272-2

Risk Symbols:

Risk Phrases:

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>77-86-1</td>
<td>Tris (hydroxymethyl) aminomethane</td>
<td>17.1</td>
</tr>
</tbody>
</table>

EINECS#:
201-064-4

Risk Symbols:

Risk Phrases:

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>151-21-3</td>
<td>Sodium lauryl sulfate</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

EINECS#:
205-788-1

Risk Symbols:

Text for R-phrases: see Section 16
Hazard Symbols: None listed
Risk Phrases: None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution! May cause eye, skin, and respiratory tract irritation. Target Organs: None known.

Potential Health Effects
Eye: May cause eye irritation.
Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid if irritation develops or persists. Wash clothing before reuse. Flush skin with plenty of soap and water.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

Autoignition Temperature: Not available.
Flash Point: Not available

Explosion Limits: Not available
Lower: Upper: Not available

NFPA Rating: health: 1; flammability: 0; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA – PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycine</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Tris (hydroxymethyl) aminomethane</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Sodium lauryl sulfate</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Glycine: None listed Tris (hydroxymethyl) aminomethane: None listed Sodium lauryl sulfate: None listed
Engineer Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

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: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a Respirators: 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
Color: white
Odor: none reported
pH: Not available
Vapor Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: Not available
Decomposition Temperature: Not available
Solubility in water: Soluble in water.
Specific Gravity/Density: Not available.
Molecular Formula: Mixture
Molecular Weight: 0

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials; dust generation.

Incompatibilities with Other Materials: Not available

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide, hydrogen bromide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

CAS# 56-40-6: MB7600000
CAS# 77-86-1: TY2900000
CAS# 151-21-3: WT1050000

RTECS:
CAS# 56-40-6: Oral, mouse: LD50 = 4920 mg/kg;
Oral, rat: LD50 = 7930 mg/kg;

RTECS:
CAS# 77-86-1: Oral, rat: LD50 = 5900 mg/kg;

RTECS:
CAS# 151-21-3: Draize test, rabbit, eye: 100 mg/24H Moderate;
Draize test, rabbit, eye: 250 ug Mild;
Draize test, rabbit, eye: 2 mg;
Draize test, rabbit, eye: 10 mg Moderate;
Draize test, rabbit, skin: 50 mg/24H Severe;
Draize test, rabbit, skin: 25 mg/24H Moderate;
Draize test, rabbit, skin: 250 mg/24H Moderate;
Draize test, rabbit, skin: 10 mg/24H;
Draize test, rabbit, skin: 50 mg/24H Mild;
Inhalation, rat: LC50 = >3900 mg/m3/1H;
Oral, rat: LD50 = 1288 mg/kg;

Glycine - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Tris (hydroxymethyl) aminomethane - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Sodium lauryl sulfate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Carcinogenicity:
Other: The toxicological properties have not been fully investigated.

Section 12 - Ecological Information
Other: No information available.

Section 13 - Disposal Considerations
Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Not regulated.
Hazard Class:
UN Number:
Packing Group:
Canada TDG
Shipping Name: Not regulated as a hazardous material
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:Not available
Risk Phrases:
Safety Phrases:
S 22 Do not breathe dust.
S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)
CAS# 56-40-6: 0
CAS# 77-86-1: 1
CAS# 151-21-3: 2

Canada
CAS# 56-40-6 is listed on Canada's DSL List
CAS# 77-86-1 is listed on Canada's DSL List
CAS# 151-21-3 is listed on Canada's DSL List
Canadian WHMIS Classifications: Not available
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.
CAS# 56-40-6 is not listed on Canada's Ingredient Disclosure List.
CAS# 77-86-1 is not listed on Canada's Ingredient Disclosure List.
CAS# 151-21-3 is listed on Canada's Ingredient Disclosure List

US Federal
TSCA

CAS# 56-40-6 is listed on the TSCA Inventory.
CAS# 77-86-1 is listed on the TSCA Inventory.
CAS# 151-21-3 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 7/15/1999
Revision #6 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility 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 the company 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 howsoever arising, even if the company has been advised of the possibility of such damages.