SAFETY DATA SHEET
Date Revised: August 15, 2016

1. PRODUCT AND COMPANY IDENTIFICATION

  Product Name: Alkaline Phosphatase conjugates (including antibodies or streptavidin)
  Catalog Number: See product information sheet
  Manufacturer/Supplier: Biotium, Inc.
  Landing Parkway, Fremont, CA 94538, USA
  Phone: 1-510-265-1027, Fax: 1-510-265-1352
  Web: http://www.biotium.com

2. HAZARDS IDENTIFICATION

Classification according to Regulation (EC) No 1272/2008[CLP]
None

Classification according to Directive 1999/45/EC
None

Labelling according to Regulation (EC) No 1272/2008[CLP]

Hazard pictogram None

Signal word None

Hazard statements

Precautionary statements

HMIS Classification
Health hazard: 1
Flammability: 1
Physical hazards: 0

NFPA Rating
Health hazard: 1
Fire: 1
Reactivity Hazard: 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Index No.</th>
<th>Weight %</th>
<th>Classification according to 67/548/EEC</th>
<th>Classification according to regulation (EC)No1278/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>56-81-5</td>
<td>200-289-5</td>
<td>N/A</td>
<td>50%</td>
<td>N/A</td>
<td>NA</td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Suitable extinguishing media
carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

Special protective equipment for firefighters
Wear self contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Avoid breathing vapors, mist or gas. Remove all sources of ignition.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up
Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid inhalation of vapor or mist.
Avoid direct contact with substance.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.
Store at -20°C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters
Substance Glycerol
CAS no. 56-81-5

country | Austria | Belgium | Denmark | European | France | Germany
--- | --- | --- | --- | --- | --- | ---

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Alkaline Phosphatase conjugate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
</tbody>
</table>

**Personal protective equipment**

**Hand 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.

**Respiratory protection**
Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Eye protection**
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

(1) This value is for inhalable dust containing no asbestos and < 1% crystalline silica.

Germany STV 15 minutes average value
10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
No data available

Conditions to avoid
Heat, flames and sparks.

Materials to avoid
No data available

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 (oral) rat</th>
<th>LD50 (dermal) rabbit</th>
<th>LC50 (inhalation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>12,600 mg/kg</td>
<td>21,900 mg/kg</td>
<td>1 hr &gt;570 mg/m3</td>
</tr>
</tbody>
</table>

Other information on acute toxicity
No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available
Respiratory or skin sensitization  no data available
Germ cell mutagenicity  no data available
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.
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.
Reproductive toxicity  TDL (rat) - Route: Oral; Dose: 100 mg/kg 1 day prior to mating. TDL (human) -
Route: Oral; Dose: 1428 mg/kg
Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available
Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available
Potential health effects
Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion May be harmful if swallowed.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Additional Information
RTECS: MA8050000

12. ECOLOGICAL INFORMATION
Toxicity  Ecotoxicity in water (LC50): 58.5 ppm 96 hours (Trout)
Persistence and degradability  no information available
Biodegradation  no information available
Mobility in soil  no information available
Results of PBT and vPvB assessment  no information available
Other adverse effects  no information available
Additional information  no information available

13. DISPOSAL CONSIDERATIONS
Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

14. TRANSPORT INFORMATION
IATA, IMDG, DOT(US) not dangerous good during transportation
UN number  none
UN proper shipping name  none
Transport hazard class  none
Packing group  none
Environmental hazards  none
Special precaution for user  none
15. REGULATION INFORMATION

US Federal Regulations
US Toxic Substances Control Act (TSCA): Glycerol
SARA 302: Glycerol
SARA 313: Glycerol
SARA 311/312 Hazards: Glycerol: Health hazard (immediate, acute); health hazard (chronic)

16. OTHER INFORMATION

Classification according to Regulation (EC) Nr. 1272/2008

Prepared by: Regulatory Department
Biotium Inc.
Version no. 1
Reason for revision Update of CLP labeling and corresponding requirements

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