46117 Landing Parkway, Fremont, CA 94538 U.S.A.
Tel: 1-510-265-1027; Fax: 1-510-265-1352

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MATERIAL 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

Name	CAS No.	EC No.	Index No.	Weight **%**	Classification according to 67/548/EEC	Classification according to regulation (EC)No1278/2008
Glycerol	56-81-5	200-289-5	N/A	50%	N/A	NA

4. FIRST- AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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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

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				Union		
Limit value,8hours	--	10 mg/m^3	--	--	10 mg/m^3	50 mg/m^3 inhalable aerosol
Limit value, short term	--		--	--	--	100 mg/m^3 inhalable aerosol

country	Hungary	Italy	Poland	Spain	Sweden	Netherlands	Switzerland
Limit value,8hours	--	--	10 mg/m^3	10 mg/m^3	--	--	50 mg/m^3 inhalable aerosol
Limit value, short term	--	--	--	--	--	--	100 mg/m^3 inhalable aerosol

country	United Kingdom	USA-NIOSH	USA-OSHA	Australia	Canada	Japan	South Korea
Limit value,8hours	10 mg/m^3	--	15 mg/m^3 inhalable dust 5 mg/m^3 respirable dust	10 mg/m^3 (1)	10 mg/m^3	--	10 mg/m^3
Limit value, short term	--	--	--	--	--	--	--

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

Germany STV 15 minutes average value

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	Alkaline Phosphatase conjugate
Appearance	Liquid
Odor	No information available

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Odor threshold	No information available
pH	7.4
Melting point/freezing point	No information available
Boiling point	No information available
Flash point	No information available
Evaporate rate	No information available
Flammability	No information available
Explosive limits	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	No information available
Solubility	No information available
Partition coefficient:n-octanol/water	No information available
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity	No information available
Explosive properties	No information available
Oxidising properties	No information available

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

Chemical Name	LD50 (oral) rat	LD50 (dermal) rabbit	LC50 (inhalation)
Glycerol	12,600 mg/kg	21,900 mg/kg	1 hr >570 mg/m3

Other information on acute toxicity no data available
Skin corrosion/irritation no data available
Serious eye damage/eye irritation no data available

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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

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15. REGULATION INFORTMATION

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

The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. Biotium shall not be held liable for any damage resulting from handling or contact with the above product.