

SAFETY DATA SHEET

Date: August 26, 2022

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: 4X Protein Loading Buffer with Orange Tracking Dye
Catalog Number: 40136
Unit Size: 15 mL
Manufacturer/Supplier: Biotium, Inc.
46117 Landing Parkway, Fremont, CA 94538, USA
Phone: 1-510-265-1027, Fax: 1-510-265-1352
Web: <http://www.biotium.com>

Use as laboratory reagent. For research use only. Not for food, drug, household, or cosmetic use.

2. HAZARDS IDENTIFICATION

GHS Classification None
Signal word None
Health hazards None
Physical hazards None
Hazard statements None
Precautionary statements None
GHS hazard pictogram None

WHMIS classification

Sodium dodecyl sulfate:
Combustible dusts
Acute toxicity - oral - Category 4
Skin corrosion / irritation - Category 2
Serious eye damage / eye irritation - Category 2A

Hazard pictogram



NFPA Rating

Sodium dodecyl sulfate
Health hazard: 0
Fire: 0
Reactivity Hazard: 0

Glycerol:

Health hazard: 1
Fire: 1
Reactivity Hazard: 0

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

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

Hazard pictogram None
Signal word None
Hazard statements None
Precautionary statements None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS No.	EC No.	Weight %	Classification
Sodium dodecyl sulfate	151-21-3	205-788-1	1-5%	WHMIS Classification Combustible dusts Acute toxicity - oral - Category 4 Skin corrosion / irritation - Category 2 Serious eye damage / eye irritation - Category 2A
Glycerol	56-81-5	200-289-5	<55%	N/A

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 room temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Substance: Glycerol

CAS no. 56-81-5

Country	Australia	Belgium	Canada - Ontario	Canada - Québec	Finland	France
Limit value, 8hours	10 (1) mg/m ³	10 mg/m ³	10 mg/m ³	10 mg/m ³	20 mg/m ³	10 mg/m ³
Limit value, short term	--	--	--	--	--	--

Country	Germany (AGS)	Germany (DFG)	Ireland	New Zealand	Poland	Singapore	South Korea
Limit value, 8hours	200 (1) mg/m ³	200 (1) mg/m ³	10 mg/m ³	10 (1) mg/m ³	10 mg/m ³	10 mg/m ³	10 mg/m ³
Limit value, short term	400 (1)(2) mg/m ³	400 (1)(2) mg/m ³	--	--	--	--	--

Country	Spain	Switzerland	United Kingdom	USA-OSHA
Limit value, 8hours	10 mg/m ³	50 inhalable aerosol	10 mg/m ³	15 inhalable dust 5 respirable dust
Limit value, short term	--	100 inhalable aerosol	--	--

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

Germany (AGS) (1) Inhalable fraction (2) 15 minutes average value.

Germany6 (DDFG) (1) Inhalable fraction (2) 15 minutes average value.

New Zealand (1) The value for inhalable dust containing no asbestos and less than 1% free silica.

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	4X Protein Loading Buffer with Orange Tracking Dye
Appearance	Orange liquid
Odor	No data available
Odor threshold	No data available
pH	6.8
Melting point/freezing point	No data available
Boiling point	No data available

Flash point	No data available
Evaporate rate	No data available
Flammability	No data available
Explosive limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Solubility	Water soluble
Partition coefficient:n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data 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

Sodium dodecyl sulfate

Acute toxicity

Oral LD50

LD50 Oral - Rat - female - 977 mg/kg
(OECD Test Guideline 401)

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute toxicity estimate Inhalation - 4 h - 1.51 mg/l - dust/mist

Inhalation LC50

LC50 Inhalation Rat: > 3,900 mg/m³/1H

Dermal LD50

LD50 Dermal - Rabbit - > 2,000 mg/kg
(OECD Test Guideline 404)

Other information on acute toxicity

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Irritations

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irreversible effects on the eye

(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximization Test

Result: negative

Remarks: (IUCLID)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Test Type: Mutagenicity (mammal cell test):
Test system: Mouse lymphoma test
Method: OECD Test Guideline 476
Result: negative

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 No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available

Aspiration hazard

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: None

Glycerol

Acute toxicity

Oral LD50 LD50 Oral - Rat – 12600 mg/kg
LD50 Oral – Mice – 4090 mg/kg
TDlo Oral – Human – 1428 mg/kg

Inhalation LC50 None

Dermal LD50 None

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

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Reproductive toxicity No data available

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No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available

Aspiration hazard

No data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

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Eyes May cause eye irritation.

Additional Information

RTECS: MA8050000

12. ECOLOGICAL INFORMATION

Sodium dodecyl sulfate**Toxicity**

Toxicity to Fish: Flow-through test LC50 - Pimephales promelas (fathead minnow) - 29 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates: flow-through test EC50 - Daphnia dubia (Water flea) - 5.55 mg/l - 48 h Remarks: (ECHA); flow-through test NOEC - Ceriodaphnia dubia (water flea) - 0.88 mg/l - 7 d (US-EPA)

Toxicity to algae: ErC50 - Desmodesmus subspicatus (green algae) - > 120 mg/l - 72h (DIN 38412)

Toxicity to bacteria: EC50 - activated sludge - 130 mg/l - 3 h (OECD Test Guideline 209)

Persistence and degradability

aerobic - Exposure time 28 d
Result: 95 % - Readily biodegradable.
(OECD Test Guideline 301B)

Bioaccumulative potential

Cyprinus carpio (Carp) - 72 h
(Sodium dodecyl sulphate)
Bioconcentration factor (BCF): 3.9 - 5.3

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

Glycerol**Toxicity**

Toxicity threshold (cell multiplication inhibition test) Algae (Microcystis aeruginosa) 2900 mg/l

Toxicity threshold (cell multiplication inhibition test) Protozoa (Entosiphon sulcatum) 3200 mg/l

LC50; Species: Goldfish; Concentration: >5000 mg/L for 24 hr - modified ASTM D 1345

LC50; Species: Daphnia magna (Water flea, age < or = 24 hr); Conditions: freshwater, static, 20-22 °C;

Concentration: >10000 mg/L for 24 hr /formulated product/

Persistence and degradability

aerobic - Exposure time 2 d
Result: 90 % - Readily biodegradable.
Remarks: (ECHA)

Bioaccumulative potential

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), TDG Not dangerous goods during transportation
UN number None
UN proper shipping name None
Transport hazard class None
Packing group None
Environmental hazards None
Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code None
Special precaution for user None

15. REGULATION INFORMATION

US Federal Regulations

US Toxic Substances Control Act (TSCA): Sodium dodecyl sulfate: listed
Glycerol: listed

SARA 302: No chemicals were found.

SARA 313: No chemicals were found.

SARA 311/312 Hazards: No chemicals were found.

WHMIS Hazard Class

Sodium dodecyl sulfate:

Combustible dusts

Acute toxicity - oral - Category 4

Skin corrosion / irritation - Category 2

Serious eye damage / eye irritation - Category 2A

16. OTHER INFORMATION

Classification according to Regulation (EC) Nr. 1272/2008
Refer to section 2 and section 3

Prepared by: Regulatory Department
Biotium Inc.

Version no. 1

Revision date (Initials)

Reason for revision

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.