



Safety Data Sheet

1 Chemical product and company identification

Identification of the product *E. coli* Alkaline Phosphatase
 Product Code BAP-111
 SUPPLIER
 Name TOYOBO Co., Ltd.
 Address 2-8 Dojima Hama 2-chome, Kita-Ku, OSAKA, 530-8230 JAPAN
 Department Life Science Department
 Emergency Telephone No. +81-6-6348-3786
 Fax No. +81-6-6348-3833
 Recommended use and restrictions on use Dephosphorylation of DNA (Reagent for research)

2 HAZARDS IDENTIFICATION

Most Important Hazards Few adverse human health effects are anticipated.
 Specific Hazards Classification not possible
 GHS Classification
 Hazard class and category
 Physical Hazards Classification not possible
 Health Hazards

	<i>E. coli</i> Alkaline Phosphatase	10x Buffer
Acute toxicity - oral	Classification not possible	Not classified
Skin corrosion/Irritation	Category 3	Classification not possible
Serious eye damage/Eye irritation	Category 2B	Classification not possible

 Environmental Hazards Classification not possible

Label elements

E. coli Alkaline Phosphatase
 Pictograms or symbols —
 Signal word Warning
 Hazard statements Causes mild skin irritation.
 Causes eye irritation.
 Precautionary statement(s)
 Prevention —
 Response If skin irritation occurs: Get medical advice / attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice / attention.



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3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Product (Substance/Preparation)	Mixture	
Chemical Nature	Aqueous solution of enzyme, substrate, etc.	
Parts Name	Main components	CAS No. (EC NO.)
<i>E. coli</i> Alkaline Phosphatase	enzyme	-
10x Buffer	Glycerol	56-81-5
	Tris(Hydroxymethyl)aminomethane	77-86-1
	Magnesium chloride	7786-30-3
Components Contributing to the Hazard		
Common Chemical Name (or Generic Name)	Glycerol	
Synonyms	Glycerin	
Contained	<i>E. coli</i> Alkaline Phosphatase : 50%	
Chemical formula	CH ₂ OHCHOHCH ₂ OH	
CAS No.	56-81-5	

4 FIRST-AID MEASURES

Inhalation	Remove person to fresh air. Call a doctor if you feel unwell.
Skin Contact	Wash with clean water, immediately.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue If eye irritation persists: Get medical advice / attention.
Ingestion	If swallowed: Rinse mouth. Do NOT induce vomiting. If indisposition continues, seek medical attention.

5 FIRE-FIGHTING MEASURES

Extinguishing Media	Water, Carbon Dioxide, Foam, Dry Chemical Powder
Protection of fire-fighters	Fire-fighting should be done from the windward side of fire area. Fire-fighters should wear proper protective equipment in case of large scale fire.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Wear protective gear to avoid eye/skin contact and inhalation.
Environmental Precautions	Avoid disposition to the environment.
Methods for Cleaning up	Use cloth, paper or anything similar to soak up the solution leaking out of the container. Take up under vacuum using dust collecting filter.



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7 HANDLING AND STORAGE

HANDLING

Technical Measures	Wear protective equipments and avoid contact with eyes and skin. Handle with ventilation and local exhaust system.
Precautions	Avoid substance contact .After handling, wash hands with clean water.
Safe Handling Advice	Always keeping things tidy and in order, and keep laboratory Clean..

STORAGE

Technical Measures	Store in the laboratory bottle
Storage Conditions	Store at about -20°C
Incompatible Products	Oxidizers
Packaging Materials	Store in the original package.

8 EXPOSURE CONTROLS/ PERSONAL PROTECTION

ENGINEERING MEASURES Set up good ventilation and exhaust system in the work area.

Control Parameter

Limit Values

Glycerol

JSOH	OEL	Not established
ACGIH	TLV	10mg/m ³
OSHA	PEL	total dust:15mg/m ³ TWA respirable fr.: 5mg/m ³ TWA

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection	Wear a mask.
Hand Protection	Chemical safety gloves.
Eye Protection	Chemical safety goggles.
Skin and Body Protection	Long sleeves to prevent contact with skin.

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State	<i>E. coli</i> Alkaline Phosphatase is liquid over -20°C 10x Buffer is solid over -20°C
Colour	Colourless
Odour	None
pH	7.0-9.0
Flash Point	No flammability due to aqueous solution, but glycerol whose flash point 160°C may stay behind after volatilization <i>E. coli</i> Alkaline Phosphatase.
Boiling Point	No data available
Melting Point	No data available
Decomposition Temperature	No data available
Specific Gravity	1.0-1.2
Solubility	Soluble in water

10 STABILITY AND REACTIVITY

Stability	Stable at -20°C
Possible Hazardous Reactions	None
Conditions to Avoid	Strong heat and Direct sunlight
Material to Avoid	strong oxidizers and strong reducers
Hazardous Decomposition Product	No information available



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11 TOXICOLOGICAL INFORMATION

E. coli Alkaline Phosphatase

Acute Toxicity Classification not possible

Local Effects May cause eye and skin irritation. May cause respiratory tract irritation.

Toxicological information on the component of this product

Glycerol

Acute toxicity (LD50) Oral-mouse: 4090mg/kg

Oral-rat: 12.6g/kg

Skin corrosion/Irritation Category 3

Serious eye damage/Eye irritation Category 2B

12 ECOLOGICAL INFORMATION

Mobility Soluble in water and diffusible into water environment.

Persistence/Degradability No information available

Bioaccumulation Biodegradable

13 DISPOSAL CONSIDERATIONS

Waste from Residues Dispose of in accordance with all applicable local and national laws and regulations.

Contaminated Packaging Dispose of in accordance with all applicable local and national laws and regulations.

14 TRANSPORT INFORMATION

International Regulations

UN Classification Number Not classified

Follow all of the laws and regulations in your respective country.

Specific Precautions To prevent packages from breaking, handle with care. Store at about -20°C when it is transported.

15 REGULATORY INFORMATION

Follow all of the laws and regulations in your country.

16 OTHER INFORMATION

Notice

The information in this SDS, to the best of our knowledge, is accurate and correct. However, TOYOBO makes no warranty and assumes no liability whatsoever in connection with any use of this information. The information shall not be taken as being all inclusive and is to be used only a guide. All materials and mixtures may be present unknown hazards and should be used with caution. The SDS is subject to revision as new information becomes available.