



Material Safety Data Sheet

1 PRODUCT AND COMPANY IDENTIFICATION

Product Name	Ligation high Ver.2
Product Code	LGK-201
SUPPLIER	
Name	Life Science Department TOYOBO Co., Ltd.
Address	2-8 Dojima Hama 2-chome, Kita-Ku OSAKA 530-8230 JAPAN
Emergency Telephone No.	+81-6-6348-3786
Fax No.	+81-6-6348-3833

2 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Product (Substance/Preparation)	Preparation		
Chemical Nature	Solution		
Components	T4 DNA Ligase	Tris (hydroxymethyl) aminomethane	Glycerol
Chemical Name	Enzyme	Tris (hydroxymethyl) aminomethane	Glycerol
Synonym (generic name)	-	-	-
CAS No.	-	77-86-1	56-81-5
Concentration	<10%	50mM or less	<1%

3 HAZARDS IDENTIFICATION

Most Important Hazards	Few adverse human health effects are anticipated.
Specific Hazards	Not available

4 FIRST-AID MEASURES

Inhalation	In case of irritation by inhaling this product, move affected person to fresh air and await recovery. If irritation persists, seek immediate medical attention.
Skin Contact	Wash with clean water, immediately.
Eye Contact	Flush eyes with clean water for more than 15 min, and seek medical attention.
Ingestion	Induce vomiting. If indisposition continues, seek medical attention.

5 FIRE-FIGHTING MEASURES

Extinguishing Media	Water, Carbon Dioxide, Foam, Dry Chemical Powder
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6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Few adverse human health effects are anticipated.
Environmental Precautions	Recovered as possible
Methods for Cleaning up	Sweep up and place in a bag. Avoid raising a dust. Waste disposal. Ventilate the area and wash the spill site after pick up is complete.



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7 HANDLING AND STORAGE

HANDLING

Technical Measures	Wear a dust mask, latex gloves and safety glasses. Set up good ventilation and exhaust system in the work area.
Precautions	Keep away from fire or heat.
Safe Handling Advice	Good laboratory technique should be used when handling this product.

STORAGE

Technical Measures	Store in the sampling tube.
Storage Conditions	Store at about -20
Incompatible Products	Oxidizers

8 EXPOSURE CONTROLS/ PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection	Wear a dust mask. Set up good ventilation and exhaust system in the work area.
Hand Protection	Chemical safety gloves.
Eye Protection	Chemical safety
Skin and Body Protection	Long sleeves to prevent contact with skin.

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State	liquid
Colour	colorless
Odour	none
pH	7.0-8.5
Boiling Point	Not available
Melting Point	Not available
Decomposition Temperature	Not available
Flash Point	Not available
Density	Not available
Solubility	Soluble in water.

10 STABILITY AND REACTIVITY

Stability	Stable under normal handling and storage conditions
Possible Hazardous Reaction	None
Conditions to Avoid	Not available
Material to Avoid	Strong acids, strong alkalines and strong oxidizers

11 TOXICOLOGICAL INFORMATION

Acute Toxicity	Not available
Local Effects	Not available



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12 ECOLOGICAL INFORMATION

Mobility	Not available
Persistence/Degradability	Not available
Bioaccumulation	Not available

13 DISPOSAL CONSIDERATIONS

Waste from Residues	Dispose of in accordance with all applicable local and national laws and regulations.
Contaminated Packaging	Dispose of in the same way as the material.

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.

15 REGULATORY INFORMATION

Follow all of the laws and regulations in your country.

16 OTHER INFORMATION

Notice	The information in this MSDS, 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 MSDS is subject to revision as new information becomes available.
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