



Safety Data Sheet

1 Chemical product and company identification

Identification of the product	RNase Inhibitor Recombinant type
Product Code	SIN-201, 229, 259
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	Stabilization of RNA

2 HAZARDS IDENTIFICATION

Most Important Hazards	Few adverse human health effects are anticipated.
GHS Classification	
Hazard class and category	
Physical Hazards	Classification not possible
Health Hazards	
Acute Toxicity	Classification not possible
Skin corrosion/Irritation	Category 3
Serious eye damage/Eye irritation	Category 2B
Environmental Hazards	Classification not possible
Label elements	
RNase Inhibitor Recombinant type	
Pictograms or symbols	—
Signal word	Warning
Hazard statements	Causes mild skin irritation. Causes eye irritation.
Precautionary statement(s)	
Prevention	Wash hands thoroughly after handling.
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.



Safety Data Sheet

3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Product (Substance/Mixture)	Mixture	
Chemical Nature	Aqueous solution of enzyme,	
Parts Name	Main components	CAS No. (EC NO.)
RNase Inhibitor Recombinant type	HEPES	7365-45-9
	Ribonuclease Inhibitor	-
	Glycerol	56-81-5
	Potassium chloride	7447-40-7
	Dithiothreito	3483-12-3
	Polyoxyethylene Sorbitan Monolaurate	9005-64-6

Components Contributing to the Hazard

Common Chemical Name (or Generic Name)	Glycerol
Synonyms	Glycerin
Contained Parts:Percentage	50%
Chemical formula	CH ₂ OHCHOHCH ₂ OH
CAS No.	56-81-5

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	Rinse cautiously with water for several minutes.
Ingestion	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.



Safety Data Sheet

7 HANDLING AND STORAGE

HANDLING

Technical Measures	Wear protective equipments and avoid contact with eyes and skin. Handle with ventilation and local
Precautions	After handling, wash with clean water.
Safe Handling Advice	Good laboratory technique should be used when handling this product.

STORAGE

Storage Conditions	Store at about -20°C
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

JSOH OEL

ACGIH TLV

OSHA PEL

Glycerol

Not established

10mg/m³

total dust: 15mg/m³TWA

respirable fr.: 5mg/m³TWA

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection	Wear a dust 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	liquid over -20°C.
Colour	Colourless
Odour	None
pH	7.0-9.0
Flash Point	Not flammable due to aqueous solution, but glycerol whose flash point 160°C may stay behind after volatilization.
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
n-octanol/water partition coefficient	Glycerol Pow = -2.66

10 STABILITY AND REACTIVITY

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



Safety Data Sheet

11 TOXICOLOGICAL INFORMATION

Acute Toxicity	Classification not possible
Local Effects	Causes mild skin irritation.Causes eye 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

Ecotoxicity	No data available
Persistence/Degradability	Biodegradable
Bioaccumulative potential	Thought to be not bioaccumulative.
Mobility in soil	Soluble in water and diffusible into water environment.

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.
--------	---