



Safety Data Sheet

1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification of the product **rTaq DNA Polymerase**
 Product Code TAP-201, 211, 229E, 259E, 2M, 2B, 2S

SUPPLIER

Name TOYOBO Co., Ltd.
 Address 2-2-8 Dojima Hama Kita-ku Osaka, 530-8230 Japan
 Department Biotech support Department
 Telephone No. +81-6-6348-3786
 Fax No. +81-6-6348-3833
 Recommended use and restrictions on use PCR for DNA amplification (Reagent for research)

2 HAZARDS IDENTIFICATION

Parts Name rTaq DNA Polymerase
 Most Important Hazards rTaq DNA Polymerase contain glycerol and may cause eye and skin irritation. Few adverse human health effects are anticipated.

Specific Hazards Not available

GHS Classification

Hazard class and category

Physical Hazards Flammable liquids Not classified

Health Hazards Skin corrosion /Irritation Category 3

Serious eye damage /Eye irritation Category 2B

Environmental Hazards Classification not possible

Label elements

Pictogram or symbol -

Signal word Warning

Hazard statement Causes mild skin irritation

Causes eye irritation

Precautionary statement 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.

Parts Name 10x PCR Buffer and 2mM dNTPs

Most Important Hazards Few adverse human health effects are anticipated.

Specific Hazards Not available

GHS Classification Classification not possible



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3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Product (Substance/Mixture)	Mixture	
Chemical Nature		
Parts Name	Main components	CAS No.
rTaq DNA Polymerase	Taq DNA polymerase	(EC 2.7.7.7)
	Poly(oxyethylene)nonylphenyl ether	9016-45-9
	Polyoxyethylene Sorbitan Monolaurate	9005-64-5
	Glycerol	56-81-5
10x PCR Buffer	Tris(Hydroxymethyl)aminomethane	77-86-1
2mM dNTPs	Deoxyadenosine triphosphate	1927-31-7
	Deoxycytidine triphosphate	102783-51-7
	Deoxyguanosine triphosphate	93919-41-6
	Deoxythymidine triphosphate	18423-43-3

Components Contributing to the Hazard

Common Chemical Name (or Generic Name)	Glycerol	Poly(oxyethylene)nonylphenyl ether
Synonyms	Glycerin	Nonidet P-40
Contained	rTaq DNA Polymerase : 50%	rTaq DNA Polymerase : 0.5%
Chemical formula	CH ₂ OHCHOHCH ₂ OH	HO(C ₂ H ₄ O) _n -C ₆ H ₄ -C ₉ H ₁₉
CAS No.	56-81-5	9016-45-9

Components Contributing to the Hazard

Common Chemical Name (or Generic Name)	Polyoxyethylene Sorbitan Monolaurate
Synonyms	Tween20
Contained	rTaq DNA Polymerase : 0.5%
Chemical formula	C ₁₁ H ₂₃ COOC ₆ H ₈ [O(CH ₂ CH ₂ O) _n H]
CAS No.	9005-64-5

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 plenty of clean water, immediately.
Eye Contact	Rinse cautiously with water several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists, seek medical attention.
Ingestion	Induce vomiting. If indisposition continues, seek medical attention.



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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.

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 with clean water.
Safe Handling Advice	Good laboratory technique should be used when handling this product.

STORAGE

Technical Measures	Store in the laboratory bottle
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		Glycerol	Poly(oxyethylene) Nonylphenylether
JSOH	OEL	Not established	Not established
ACGIH	TLV	10mg/m ³	Not established
OSHA	PEL	total dust:15mg/m ³ TWA respirable fr.: 5mg/m ³ TWA	Not established

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. 10x PCR Buffer and 2mM dNTPs freeze at -20°C
Colour	None
Odour	None
pH	7.0-8.0
Flash Point	No flammability due to aqueous solution, but glycerol whose flash point 160°C may stay behind after volatilization rTaq DNA Polymerase.
Boiling Point	Not available
Melting Point	Not available
Decomposition Temperature	Not available
Density	1.0-1.2(g/cm ³)
Solubility	Soluble in water



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10 STABILITY AND REACTIVITY

Stability	Stable at below -20°C
Possible Hazardous Reactions	None
Conditions to Avoid	Strong heat
Material to Avoid	Direct sunlight, strong oxidizers and strong reducers
Hazardous Decomposition Product	Not available

11 TOXICOLOGICAL INFORMATION

Acute Toxicity	Not available	
Local Effects	May cause eye and skin irritation. May cause respiratory and digestive tract irritation.	
Toxicological information on the component of this product		
	Glycerol	Poly(oxyethylene)nonylphenyl ether
Acute toxicity (LD50)	Oral-mouse: 4090mg/kg Oral-rat: 12.6g/kg	Oral-mouse: 3500mg/kg Oral-rat: 4190mg/kg
Skin corrosion/Irritation	rabbit:500mg/24hr:Mild	
Serious eye damage/Eye irritation	rabbit:126mg/24hr:Mild	

12 ECOLOGICAL INFORMATION

Ecotoxicity	Rainboultrout:LC50(96hr) 54g/L Gold fish:LC50(24hr) > 5g/L Daphnia magna:EC50(24hr) > 10g/L Red algae:EC50(28hr) 4.6g/L
Mobility	Soluble in water and diffusible into water environment.
Persistence/Degradability	Rapidly degradable BOD
Bioaccumulation	Not bioaccumulative (LogPow=-2.3)
Mobility in Soil	Not available
Hazard to the ozone layer	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 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.

15 REGULATORY INFORMATION

Follow all of the laws and regulations in your country.

rTaq DNA Polymerase

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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 SDS is subject to revision as new information becomes available.