



# Safety Data Sheet

This safety data sheet complies with the requirements of:  
JIS Z 7253:2019

Revision Date 2023-09-18  
Revision Number 1

## 1. Identification

**Product Name** T7 RNA Polymerase ver.2.0  
**Product Code** SD8140  
**Registration number** No information available  
**Details of the supplier of the safety data sheet**

### Supplier

Japan:

Takara Bio Inc.

Nojihigashi 7-4-38

Kusatsu, Shiga 525-0058, Japan

Phone: +81.77.565.6972

Web: www.takara-bio.com

China:

Takara Biomedical Technology (Beijing) Co., Ltd.

Life Science Park, 22 KeXueYuan Road, Changping District,

Beijing 102206, China

Phone: +86.10.8072.0980

Web: www.takarabiomed.com.cn

**Emergency telephone number** In case of emergency, call PERS (Professional Emergency Resource Services)  
1-800-633-8253 (US) or 801-629-0667 (international).

### Recommended use of the chemical and restrictions on use

**Identified uses** For research use only. Not for use in diagnostic procedures

**Restrictions on use** No information available

## 2. Hazard(s) identification

### GHS Classification

Acute toxicity - Oral	Classification not possible
Acute toxicity - Dermal	Classification not possible
Acute toxicity - Inhalation (Gases)	Classification not applicable
Acute toxicity - Inhalation (Vapors)	Classification not possible
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Classification not possible
Serious eye damage/eye irritation	Classification not possible
Respiratory sensitization	Classification not possible
Skin sensitization	Classification not possible
Germ cell mutagenicity	Classification not possible
Carcinogenicity	Classification not possible
Reproductive toxicity	Classification not possible
Effects on or via lactation	No effects on or via lactation
Specific target organ toxicity (single exposure)	Classification not possible
Specific target organ toxicity (repeated exposure)	Classification not possible
Aspiration hazard	Classification not possible
Acute aquatic toxicity	Classification not possible
Chronic aquatic toxicity	Classification not possible
Ozone	Classification not possible

### GHS label elements



**Signal word** Warning

**Hazard Statements**

Harmful if inhaled

**Precautionary statements**

**Prevention**

- Avoid breathing dust/fume/gas/mist/vapors/spray
- Use only outdoors or in a well-ventilated area

**Response**

- IF INHALED: Remove person to fresh air and keep comfortable for breathing
- Call a doctor if you feel unwell

**Storage**

- Not applicable

**Disposal**

- Not applicable

**Other hazards**

No information available.

### 3. Composition/information on ingredients

**Pure substance/mixture**

Mixture

Chemical name	CAS No	Weight-%	ENCS Inventory	ENCS Number	ISHL Inventory	ISHL No
Tween 20	9005-64-5	0.1 - 1	Existing	(8)-55	Existing	-
Ethylenediaminetetraacetic acid disodium salt	139-33-3	< 0.1	Existing	(2)-1265	Existing	-

**Until March 31, 2023 Pollutant Release and Transfer Register (PRTR)**

Not applicable

**After April 1, 2023 Pollutant Release and Transfer Register (PRTR)**

Not applicable

**Industrial Safety and Health Law**

ISHL Notifiable Substances

Not applicable

Harmful Substances Whose Names Are to be Indicated on the Label

Not applicable

**Poisonous and Deleterious Substances Control Law**

Not applicable

### 4. First-aid measures

**General advice**

Show this safety data sheet to the doctor in attendance.

<b>In case of inhalation</b>	Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.
<b>In case of skin contact</b>	Wash skin with soap and water.
<b>In case of eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>In case of ingestion</b>	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.
<b>Most important symptoms/effects, acute and delayed</b>	Coughing and/ or wheezing. Difficulty in breathing.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.
<b>Note to physicians</b>	Treat symptomatically.

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	No information available.
<b>Special Extinguishing Media Large Fire</b>	Cool drums with water spray. CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Ensure adequate ventilation. Avoid breathing vapors or mists. Use personal protective equipment as required.
<b>For emergency responders</b>	Use personal protection recommended in Section 8.
<b>Environmental precautions</b>	See Section 12 for additional Ecological Information.
<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Pick up and transfer to properly labeled containers.
<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.
<b>Other information</b>	Refer to protective measures listed in Sections 7 and 8.

## 7. Handling and storage

### Handling

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product.
<b>Hygiene Measures</b>	Do not eat, drink or smoke when using this product.
<b>Storage</b>	
<b>Storage Conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

## 8. Exposure controls/personal protection

<b>Engineering controls</b>	Showers Eyewash stations Ventilation systems.
<b>Exposure guidelines</b>	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
<b>Biological occupational exposure limits</b>	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies
<b>Environmental exposure controls</b>	No information available.
<b>Personal Protective Equipment</b>	
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>Eye/face protection</b>	No special protective equipment required.
<b>Skin and body protection</b>	No special protective equipment required.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Clear, colorless
<b>Physical state</b>	Liquid
<b>Color</b>	Colorless
<b>Odor</b>	Unpleasant
<b>Odor Threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Melting point / freezing point</b>	No data available	No information available
<b>Boiling point/boiling range (°C)</b>	No data available	No information available
<b>Flammability (solid, gas)</b>	No data available	No information available
<b>Upper/lower flammability or explosive limits</b>		
<b>Upper flammability limit:</b>	No data available	
<b>Lower flammability limit:</b>	No data available	
<b>Flash point</b>	No data available	ASTM D 56
<b>Evaporation Rate</b>	No data available	No information available
<b>Autoignition temperature</b>	No data available	No information available
<b>Decomposition temperature</b>	No data available	No information available
<b>pH</b>	No data available	No information available
<b>Viscosity</b>		
<b>Kinematic viscosity</b>	No data available	No information available
<b>Dynamic Viscosity</b>	No data available	No information available
<b>Water solubility</b>	No data available	No information available
<b>Solubility in other solvents</b>	No data available	No information available
<b>Partition Coefficient (n-octanol/water)</b>	No data available	No information available
<b>Vapor pressure</b>	No data available	No information available
<b>Vapor density</b>	No data available	No information available
<b>Relative density</b>	No data available	No information available
<b>Particle characteristics</b>		
<b>Particle Size</b>	No data available	Not applicable
<b>Particle Size Distribution</b>	No data available	Not applicable

**Other information**

**Explosive properties** No information available  
**Oxidizing properties** No information available

## 10. Stability and reactivity

**Reactivity** No information available.  
**Chemical stability** Stable under normal conditions.  
**Possibility of hazardous reactions** None under normal processing.  
**Conditions to avoid** Excessive heat.  
**Incompatible materials** None known based on information supplied.  
**Hazardous Decomposition Products** None known based on information supplied.  
**Explosion Data**  
**Sensitivity to static discharge** None.  
**Sensitivity to mechanical impact** None.

## 11. Toxicological information

**Acute toxicity****Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document

**ATEmix (oral)** 19,968.30 mg/kg  
**ATEmix (dermal)** 15,847.90 mg/kg  
**ATEmix (inhalation-dust/mist)** 4.36 mg/l

**Unknown acute toxicity**

1.00001 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Tween 20	= 37000 mg/kg ( Rat )	-	> 5.1 mg/L ( Rat ) 4 h
Ethylenediaminetetraacetic acid disodium salt	= 2 g/kg ( Rat )	-	-

*Abbreviations and acronyms*  
 .? Rat

**Symptoms** Coughing and/ or wheezing.

**Product Information**

**Ingestion** Specific test data for the substance or mixture is not available.

**Inhalation** Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components).

**Skin contact** Specific test data for the substance or mixture is not available.

**Eye contact** Specific test data for the substance or mixture is not available.

**Skin corrosion/irritation** Based on available data, the classification criteria are not met. Classification not possible.

**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met. Classification not possible.

**Respiratory or skin sensitization** Based on available data, the classification criteria are not met. Classification not possible.

<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met. Classification not possible.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met. Classification not possible.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met. Classification not possible.
<b>Target organ effects STOT - single exposure</b>	Kidney. Respiratory system. Eyes. Skin. Based on available data, the classification criteria are not met. Classification not possible.
<b>STOT - repeated exposure</b>	Based on available data, the classification criteria are not met. Classification not possible.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met. Classification not possible.

## 12. Ecological information

**Ecotoxicity** Classification not possible.

**Percentage for unknown hazards** 1E-05 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Ethylenediaminetetraacetic acid disodium salt	-	LC50: =320mg/L (96h, Poecilia reticulata)	-

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

### Component Information

Chemical name	Partition coefficient
Ethylenediaminetetraacetic acid disodium salt 139-33-3	-4.3

**Hazardous to the ozone layer** Classification not possible. Based on available data, the classification criteria are not met.  
**Other adverse effects** No information available.

## 13. Disposal considerations

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

## 14. Transport information

**IMDG** Not regulated

**ADR** Not regulated

**IATA** Not regulated

## 15. Regulatory information

### National regulations

**Until March 31, 2023** Pollutant Release and Transfer Register (PRTR)

Not applicable

**After April 1, 2023** Pollutant Release and Transfer Register (PRTR)

Not applicable

### **Industrial Safety and Health Law**

Not applicable

#### **ISHL Notifiable Substances**

Not applicable

### **Poisonous and Deleterious Substances Control Law**

Not applicable

### **Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL)**

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed

Chemical name	CAS No	Chemical Substances Control Law
Tween 20	9005-64-5	Priority assessment chemical substance
Ethylenediaminetetraacetic acid disodium salt	139-33-3	Priority assessment chemical substance

### **Act on Prevention of Marine Pollution and Maritime Disaster**

Not applicable

### International Regulations

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

### International Inventories

#### Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

## 16. Other information

**Revision Date** 2023-09-18

**Revision Note** No information available.

### **Key or legend to abbreviations and acronyms used in the safety data sheet**

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	Time weighted average	Ceiling	Maximum limit value
*	Skin designation	+	Sensitizers

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Chemicals Agency  
European Food Safety Authority (EFSA)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Disclaimer**

This SDS complies with the requirements of JIS Z 7253:2019 (Japan). The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**