

Revision Date 2022-11-20

Revision Number 2

1. Identification

A. Product identifier

Product Name RNase H
Product Code SD0322

B. Relevant identified uses of the substance or mixture and uses advised against

Identified uses For research use only. Not for use in diagnostic procedures
Uses advised against No information available

C. Supplier's details

Supplier

Japan:

Takara Bio Inc.
Nojihigashi 7-4-38
Kusatsu, Shiga 525-0058, Japan
Phone: +81.77.565.6972
Web: www.takara-bio.com

Korea:

Takara Korea Biomedical Inc.
601, New T Castle, 108, Gasan Digital 2-ro, Geumcheon-gu
Seoul 08506, Korea
Phone: +82.2.2081.2525
Web: www.takara.co.kr

For further information, please contact: _____

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

2. Hazard(s) identification

A. Classification of the substance or mixture

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
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B. GHS Label elements, including precautionary statements

Hazard symbols



Signal word Warning

Hazard Statements

H332 - Harmful if inhaled

Precautionary Statements - Prevention

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P271 - Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

P321 - Specific treatment (see supplemental first aid instructions on this label)

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P312 - Call a POISON CENTER or doctor/physician if you feel unwell

C. Other hazards which do not result in classification

No information available.

3. Composition/information on ingredients**Substance**

Not applicable

Mixture

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. First-aid measures**A. In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

B. In case of skin contact

Wash skin with soap and water.

C. In case of inhalation

Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.

D. In case of ingestion

Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

E. Indication of immediate medical attention and special treatment needed, if necessary**General advice** Show this safety data sheet to the doctor in attendance.**Note to physicians** Treat symptomatically.**Symptoms** Coughing and/ or wheezing. Difficulty in breathing.**Self-protection of the first aider** 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.**5. Fire-fighting measures****A. Suitable (and unsuitable) extinguishing media****Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

B. Specific hazards arising from the chemical

No information available.

C. Special Protective Equipment for Firefighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid breathing vapors or mists. Use personal protective equipment as required.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

B. Environmental precautions

See Section 12 for additional Ecological Information.

C. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

A. Precautions for safe handling

Advice on safe handling 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. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

General hygiene considerations Do not eat, drink or smoke when using this product.

8. Exposure controls/personal protection

A. Control Parameters

Occupational exposure limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

B. Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
Environmental exposure controls	No information available.

C. Personal Protective Equipment

Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Eye protection	No special protective equipment required.
Hand protection	No special protective equipment required.
Body protection	No special protective equipment required.

9. Physical and chemical properties**Information on basic physical and chemical properties**

A. Appearance	Clear, colorless
Physical State	Liquid
Color	Clear
B. Odor	Unpleasant
C. Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
D. pH	No data available	None known
E. Melting point / freezing point	No information available	None known
F. Initial boiling point and boiling range	No information available	None known
G. Flash point	No information available	Open cup
H. Evaporation Rate	No information available	None known
I. Flammability (solid, gas)	No information available	None known
J. Upper/lower flammability or explosive limits		
Upper flammability limit:		No information available
Lower flammability limit:		No information available
K. Vapor pressure	No information available	None known
L. Solubility(ies)		
Water solubility	No information available	None known
Solubility in other solvents	No information available	None known
M. Vapor density	No information available	None known
N. Specific Gravity	No information available	None known
O. Partition coefficient: n-octanol/water	No information available	None known
P. Autoignition Point	392.8 °C / 739 °F	None known
Q. Decomposition temperature		None known
R. Viscosity		
Kinematic viscosity	No information available	None known
Dynamic Viscosity	No information available	None known
S. Molecular weight	No information available	
<u>Other information</u>		
Explosive properties	No information available	
Oxidizing properties	No information available	
Softening point	No information available	
VOC content	No information available	

Liquid Density No information available

10. Stability and reactivity

A. Chemical stability and possibility of hazardous reactions

Stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Explosion Data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

B. Conditions to avoid

Excessive heat.

C. Incompatible materials

None known based on information supplied.

D. Hazardous Decomposition Products None known based on information supplied

11. Toxicological information

A. Information on the likely routes of exposure

Product Information

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

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

Symptoms Coughing and/ or wheezing.

B. Health hazards information

Acute toxicity

Numerical measures of toxicity

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

ATEmix (dermal) 15,847.90 mg/kg

ATEmix (inhalation-dust/mist) 4.36 mg/l

Unknown acute toxicity

1.38779 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Skin corrosion/irritation No information available.

Serious eye damage/irritation No information available.

Respiratory or skin sensitization No information available.

Carcinogenicity No information available.

Germ cell mutagenicity No information available.

Reproductive toxicity No information available.

Specific target organ toxicity (STOT) – single exposure No information available.

Specific target organ toxicity (STOT) – repeated exposure No information available.

Target organ effects Kidney. Respiratory system. Eyes. Skin.

Aspiration hazard No information available.

12. Ecological information

A. Ecotoxicity

Percentage for unknown hazards 0.38779 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

B. Persistence and degradability No information available.

C. Bioaccumulative potential There is no data for this product.

D. Mobility in soil No information available.

Mobility No information available.

E. Other adverse effects No information available.

13. Disposal considerations

A. Waste treatment methods

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

B. Disposal considerations

Contaminated packaging Do not reuse empty containers.

14. Transport information

A. UN number or ID number	Not regulated
B. UN proper shipping name	Not regulated
C. Transport hazard class(es)	Not regulated
D. Packing group	Not regulated
E. Marine pollutant	Not applicable
F. Special precautions for user	Not regulated

15. Regulatory information

A. Industrial Safety and Health Law Not applicable

Prohibited substance Not applicable

Substances Requiring Permission Not applicable

Harmful substances subject to control Not applicable

Harmful agents subject to work environment monitoring Not applicable

Harmful agents subject to workers requiring health examination Not applicable

Harmful or dangerous substances subject to submission of process safety reports Not applicable

Control parameters

See section 8 for national exposure control parameters

B. Chemicals Control Act Not applicable

Chemicals Control Act (CCA) - Accident Precaution Chemicals Not applicable

Act on Registration, Evaluation, etc. of Chemicals (K-REACH) Not applicable

C. Safety Control of Dangerous Substances Act Not applicable

D. Wastes Management Dispose of waste in accordance with environmental legislation.

E. Other Regulations No information available

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*

16. Other information

A. Information source and references

Prepared By No information available.

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

ACGIH ACGIH (American Conference of Governmental Industrial Hygienists)

IMDG International Maritime Dangerous Goods (IMDG)

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	Time weighted average	STEL	Short term exposure limit
Ceiling	Maximum limit value	*	Skin designation
**	Hazard 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 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

B Revision number and date

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C. Other**Disclaimer**

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