



Safety Data Sheet

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

Revision Date 2021-02-06
Revision Number 8

1. Identification

Product Name Biotinylated Heparan Sulfate
Product Code SD3313
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	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 2A
Respiratory sensitization	Classification not possible
Skin sensitization	Category 1
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	Category 1
Chronic aquatic toxicity	Not classified chronic
Ozone	Classification not possible

GHS label elements



Signal word

Danger

Hazard Statements

Harmful if inhaled
 Causes severe skin burns and eye damage
 Causes serious eye irritation
 May cause an allergic skin reaction
 Very toxic to aquatic life

Prevention

- Use only outdoors or in a well-ventilated area
- Do not breathe dust/fume/gas/mist/vapors/spray
- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection
- Contaminated work clothing should not be allowed out of the workplace
- Avoid release to the environment

Response

- Immediately call a POISON CENTER or doctor
- Specific treatment (see .? on this label)
- Immediately call a POISON CENTER or doctor
- 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
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
- Wash contaminated clothing before reuse
- IF ON SKIN: Wash with plenty of water and soap
- If skin irritation or rash occurs: Get medical advice/attention
- Take off contaminated clothing and wash it before reuse
- IF INHALED: Remove person to fresh air and keep comfortable for breathing
- Call a POISON CENTER or doctor if you feel unwell
- Immediately call a POISON CENTER or doctor
- Collect spillage

Storage

- Store locked up

Disposal

- Dispose of contents/container to an approved waste disposal plant

Other hazards

May be harmful if swallowed. May be harmful in contact with skin.

3. Composition/information on ingredients

Pure substance/mixture

Mixture

Chemical name	CAS No	Weight-%	ENCS Inventory	ENCS Number	ISHL Inventory	ISHL No
ProClin 300	55965-84-9	1 - 5	Existing	(5)-5235,(9)-378	Existing	(5)-5235,(9)-378

Pollutant Release and Transfer Registry (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

In case of inhalation	Remove to fresh air.
In case of skin contact	Wash skin with soap and water.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
In case of ingestion	Clean mouth with water and drink afterwards plenty of water.
Most important symptoms/effects, acute and delayed	No information available.
Note to physicians	Treat symptomatically.

5. Fire-fighting measures

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

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation.
For emergency responders	Use personal protection recommended in Section 8.
Environmental precautions	See Section 12 for additional Ecological Information.
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

Handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice.

Storage

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Exposure guidelines

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

Biological occupational exposure limits

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

Environmental exposure controls

No information available.

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/face protection

No special protective equipment required.

Skin and body protection

No special protective equipment required.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Lyophilized cake

Physical state

Solid

Color

No information available

Odor

Odorless

Odor Threshold

No information available

Property

Values

Remarks • Method

Melting point / freezing point

No information available

Boiling point/boiling range (°C)

No information available

Flammability (solid, gas)

No information available

Upper/lower flammability or explosive limits

Upper flammability limit:

Lower flammability limit:

Flash point

ASTM D 56

Evaporation Rate

No information available

Autoignition temperature

No information available

Decomposition temperature

No information available

pH

No information available

Viscosity

Kinematic viscosity

No information available

Dynamic Viscosity

No information available

Water solubility

No information available

Solubility in other solvents

No information available

Partition Coefficient

No information available

(n-octanol/water)

Vapor pressure

No information available

Vapor density

No information available

Relative density

No information available

Particle characteristics

Particle Size	Not applicable
Particle Size Distribution	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.
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)	3,003.50 mg/kg
ATEmix (dermal)	3,623.90 mg/kg
ATEmix (inhalation-dust/mist)	3.630 mg/l

- 20.18 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 100.27 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 101.65 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
- 101.65 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 100.27 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
ProClin 300	= 53 mg/kg (Rat)	-	-

Abbreviations and acronyms

Rat: Rat

Symptoms	No information available.
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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.
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.

Germ cell mutagenicity	Based on available data, the classification criteria are not met. Classification not possible.
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Carcinogenicity Based on available data, the classification criteria are not met. Classification not possible.

Reproductive toxicity Based on available data, the classification criteria are not met. Classification not possible.

STOT - single exposure Based on available data, the classification criteria are not met. Classification not possible.

STOT - repeated exposure Based on available data, the classification criteria are not met. Classification not possible.

Aspiration hazard Based on available data, the classification criteria are not met. Classification not possible.

12. Ecological information

Ecotoxicity Classification not possible. Based on available data, the classification criteria are not met.

Percentage for unknown hazards 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Crustacea
ProClin 300	0.03 - 0.13: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 0.11 - 0.16: 72 h Pseudokirchneriella subcapitata mg/L EC50 static	1.6: 96 h Oncorhynchus mykiss mg/L LC50 semi-static	0.12 - 0.3: 48 h Daphnia magna mg/L EC50 Flow through 0.71 - 0.99: 48 h Daphnia magna mg/L EC50 Static 4.71: 48 h Daphnia magna mg/L EC50

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
ProClin 300 55965-84-9	0.75

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

UN number or ID number UN3077
UN proper shipping name Environmentally hazardous substance, solid, n.o.s.

Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (ProClin 300), 9, III, Marine Pollutant
Transport hazard class(es)	9
Packing group	III
Marine pollutant	P
EmS-No	F-A, S-F
Special Provisions	274, 335, 966, 967, 969

ADR

UN number or ID number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (ProClin 300), 9, III, (-)
Transport hazard class(es)	9
Packing group	III
Environmental hazards	Yes
ERG Code	9L
Special Provisions	274, 335, 601, 375

IATA

UN number or ID number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (ProClin 300), 9, III
Transport hazard class(es)	9
Packing group	III
Special Provisions	A158, A179, A97, A197
ERG Code	9L

Japan

UN number or ID number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (ProClin 300), 9, III
Transport hazard class(es)	9
Packing group	III
Environmental Hazard	Yes
Special Provisions	BK2, 274, 335

15. Regulatory information

National regulations**Pollutant Release and Transfer Registry (PRTR)**

Not applicable

Industrial Safety and Health Law

Not applicable

ISHL Notifiable Substances

Not applicable

Poisonous and Deleterious Substances Control Law

Not applicable

Fire Service Law:

Not applicable

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

Not applicable

Ship (Marine Transportation) Safety Act

See section 14 for more information

Civil Aeronautics Act

See section 14 for more information

Act on Prevention of Marine Pollution and Maritime Disaster

Not applicable

Act on Port Regulation Law

See section 14 for more information

International Regulations**The Stockholm Convention on Persistent Organic Pollutants** Not applicable**The Rotterdam Convention** Not applicable**International Inventories****IECSC** -**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****Revision Date** 2021-02-06**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

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End of Safety Data Sheet