



Material Safety Data Sheet

Supplier

**TCI America
9211 N. Harborage St.
Portland, OR 97203
1-800-423-8616**

In case of Emergency Call

**Chemtrec®
(800) 424-9300 (U.S.)
(703) 527-3887 (International)**



SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name: Hyaluronate Tetrasaccharide
Product code: H1284
Company: TOKYO CHEMICAL INDUSTRY CO., LTD.
Address: 4-10-2, Nihonbashi-honcho, Chuo-ku, Tokyo 103-0023, Japan
Responsible Department: Global Business Department
Telephone: +81-3-5640-8872
Fax: +81-3-5640-8902
e-mail: globalbusiness@tokyokasei.co.jp
Revision number: 4

2. HAZARDS IDENTIFICATION

Classification of the GHS

PHYSICAL HAZARDS	Not classified
HEALTH HAZARDS	Not classified
ENVIRONMENTAL HAZARDS	Not classified

GHS label elements

Pictograms or hazard symbols	None
Signal word	No signal word
Hazard statement	None
Precautionary statements	None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture: Substance
Component(s): Hyaluronate Tetrasaccharide
Percent:
CAS Number: 57282-61-8
Chemical Formula: $C_{28}H_{44}N_2O_{23}$
Notice Through Official Gazettes Reference Number
ENCS: Not Listed

4. FIRST-AID MEASURES

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

Skin contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.

Eye contact: 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.

Ingestion: Get medical advice/attention if you feel unwell. Rinse mouth.

Protection of first-aiders: A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, foam, water spray, carbon dioxide.

Specific hazards: Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.

5. FIRE-FIGHTING MEASURES

Specific methods:

Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Remove movable containers if safe to do so.

Special protective**equipment for firefighters:**

When extinguishing fire, be sure to wear personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

**Personal precautions,
protective equipment and
emergency procedures:**

Use personal protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

Environmental precautions:

Prevent product from entering drains.

**Methods and materials for
containment and cleaning
up:**

Sweep dust to collect it into an airtight container, taking care not to disperse it.

Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7. HANDLING AND STORAGE

Handling

Technical measures:

Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent dispersion of dust. Wash hands and face thoroughly after handling. Use a local exhaust if dust or aerosol will be generated.

Advice on safe handling:

Avoid contact with skin, eyes and clothing.

Storage

Storage conditions:

Keep container tightly closed. Store in a freezer.
Store away from incompatible materials such as oxidizing agents.

Packaging material:

Law is followed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:

Install a closed system or local exhaust as possible so that workers should not be exposed directly. Also install safety shower and eye bath.

Control parameters:

Not set up

Personal protective equipment**Respiratory protection:**

Dust respirator. Follow local and national regulations.

Hand protection:

Protective gloves.

Eye protection:

Safety glasses. A face-shield, if the situation requires.

Skin and body protection:

Protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C):

Solid

Form:

crystal - powder

Color:

White - Almost white

Odor:

No data available

pH:

No data available

Melting point/freezing point:

No data available

Boiling Point/Range:

No data available

Flash Point:

No data available

Explosive limits**Lower:**

No data available

Upper:

No data available

Density:

No data available

Solubility:

No data available

10. STABILITY AND REACTIVITY

Stability:

Stable under proper conditions.

Reactivity:

No special reactivity has been reported.

Conditions to avoid:

Heat-sensitive

Incompatible materials:

oxidizing agents

10. STABILITY AND REACTIVITY**Hazardous Decomposition** Carbon monoxide, Carbon dioxide, Nitrogen oxides (NOx)**Products:****11. TOXICOLOGICAL INFORMATION****Acute Toxicity:** No data available**Skin corrosion/irritation:** No data available**Serious eye** No data available**damage/irritation:****Germ cell mutagenicity:** No data available**Carcinogenicity:****IARC =** No data available**NTP =** No data available**Reproductive toxicity:** No data available**12. ECOLOGICAL INFORMATION****Ecotoxicity:****Fish:** No data available**Crustacea:** No data available**Algae:** No data available**Persistence / degradability:** No data available**Bioaccumulative** No data available**potential(BCF):****Mobility in soil****log Pow:** No data available**Soil adsorption (Koc):** No data available**Henry's Law** No data available**constant(PaM³/mol):****13. DISPOSAL CONSIDERATIONS**

Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION**Hazards Class:** Does not correspond to the classification standard of the United Nations**UN-No:** Not Listed**15. JAPANESE REGULATORY INFORMATION**

- Not applicable

16. OTHER INFORMATION**The reference company name of written contents****Company:** TOKYO CHEMICAL INDUSTRY CO., LTD.**Address:** 4-10-2, Nihonbashi-honcho, Chuo-ku, Tokyo 103-0023, Japan**Department:** Global Business Department**Telephone:** +81-3-5640-8872**Fax:** +81-3-5640-8902

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.