SIGMA-ALDRICH

Material Safety Data Sheet

Version 2.1
Revision Date 06/18/2009
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Heparin disaccharide I-S sodium salt
Product Number: H9267
Brand: Sigma
Company: Sigma-Aldrich
3300 Spruce Street
SAINT LOUIS MO 63113
USA
Telephone: +1 800-325-8832
Fax: +1 800-325-5652
Emergency Phone #: (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: \(\alpha\)-AUA-2S-1-\(-1\)-GlcNS-6S
Formula: \(\text{C}_{12}\text{H}_{15}\text{N}_{4}\text{O}_{15}\text{S}_{3}\)
Molecular Weight: 665.4 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
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<td>Heparin disaccharide I-S sodium salt</td>
<td>T39058-10-7</td>
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3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Target Organ Effect
Target Organs
Heparin and its salts act as anticoagulants subcutaneously or intravenously, Blood

NFPA Rating

NFPA: Health Hazard: 0
Fire: 0
Reactivity Hazard: 0
Potential Health Effects

4. FIRST AID MEASURES

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed.

In case of skin contact: Wash off with soap and plenty of water.
In case of eye contact: Flush eyes with water as a precaution.
If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water.

5. FIRE-FIGHTING MEASURES

Flammable properties: no data available
Flash point: no data available
Ignition temperature: no data available
Suitable extinguishing media: Use water spray. Alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid dust formation.
Environmental precautions: Do not let product enter drains.
Methods for cleaning up: Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling: Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage: Keep container tightly closed in a dry and well-ventilated place.
Recommended storage temperature: \(-20\) °C

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment
Respiratory protection
Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 149) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN-EU.

Hand protection
For prolonged or repeated contact use protective gloves.

Eye protection
Safety glasses

Hygiene measures
General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form solid

Safety data
pH no data available
Melting point no data available
Boiling point no data available
Flash point no data available
Ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Water solubility no data available

10. STABILITY AND REACTIVITY

Storage stability
Stable under recommended storage conditions.

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Sodium oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity
no data available

Irritation and corrosion
no data available

Sensitisation
no data available

12. ECOLOGICAL INFORMATION

Elimination information (persistance and degradability)
no data available

Ecotoxicity effects
no data available

Further information on ecology
no data available

13. DISPOSAL CONSIDERATIONS

Product
Observe all federal, state, and local environmental regulations.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

no data available

Chronic exposure
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

AGBHI: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by AGBHI.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs and Symptoms of Exposure
Heparin and its salts act as anticoagulants subcutaneously or intravenously.

Potential Health Effects
Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion May be harmful if swallowed.
Target Organs Heparin and its salts act as anticoagulants subcutaneously or intravenously.
Blood

15. REGULATORY INFORMATION

OSHA Hazards
Target Organ Effect

DSL Status
This product contains the following components that are not on the Canadian DSL nor NDSL lists.

Heparin disaccharide I-S sodium salt
CAS-No. 136096-10-7

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Chronic Health Hazard
Massachusetts Right To Know Components
No components are subject to the Massachusetts Right To Know Act.

Pennsylvania Right To Know Components

Heparin disaccharide I-S sodium salt
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New Jersey Right To Know Components

Heparin disaccharide I-S sodium salt
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California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION

Further Information
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