1 Identification

Product identifier

Product name: **1,8-Diazabicyclo[5.4.0]undec-7-ene**

Stock number: A12449, L08972

CAS Number: 6674-22-2

EC number: 229-713-7

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

Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency telephone number:

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
<th>GHS05 Corrosion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corr. 1B</td>
<td>H314 Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>H318 Causes serious eye damage.</td>
</tr>
</tbody>
</table>

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Hazards not otherwise classified No information known

Label elements

GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Signal word Danger

Hazard statements

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P353 If on skin (or hair). Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

D2B - Toxic material causing other toxic effects
E - Corrosive material

3 Composition/information on ingredients

Chemical characterization: Substances

CAS# Description: 6674-22-2 1,8-Diazabicyclo[5.4.0]undec-7-ene

Identification number(s):

EC number: 229-713-7

4 First-aid measures

Description of first aid measures

General information Immediately remove any clothing soiled by the product.
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.

After skin contact
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing
Seek medical treatment.

Information for doctor

Most important symptoms and effects, both acute and delayed
Causes severe skin burns.
Causes serious eye damage.

Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures

Extinguishing media
Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Suitable extinguishing agents
Carbon oxide and carbon dioxide
Nitrogen oxides (NOx)

Advice for firefighters
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

6 Accidental release measures

Person precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.

Environmental precautions:
Do not allow product to reach sewage system or any water course.

Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.

Prevention of secondary hazards:
No special measures required.

Reference to other sections
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.

7 Handling and storage

Handling
Precautions for safe handling
Handle under dry protective gas.
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.

Information about protection against explosions and fires:
No information known.

Conditions for safe storage, including any incompatibilities

Storage
Requirements to be met by storerooms and receptacles:
No special requirements.

Information about storage in one common storage facility:
Store away from air.
Store away from oxidizing agents.

Further information about storage conditions:
Store under dry inert gas.
This product is air sensitive.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

Specific end use(s):
No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information:
No data

Exposure controls

Personal protective equipment

General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Do not inhale dust / smoke / mist.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.

Breathing equipment:
Use suitable respirator when high concentrations are present.

Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Penetration time of glove material (in minutes):
Not determined

Eye protection:
Tightly sealed goggles

Full face protection
9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance: Liquid
Color: Colorless to pale yellow
Odor: Amines-like
Odor threshold: Not determined.

pH-value (10 g/l) at 20 °C (68 °F): 12.8

Change in condition
Melting point/Melting range: -70 °C (-94 °F)
Boiling point/Boiling range: 261 °C (502 °F)
Sublimation temperature / start: Not determined

Flash point: 116 °C (241 °F)
Flammability (solid, gaseous) Not determined.
Ignition temperature: 260 °C (500 °F)
Decomposition temperature: Not determined
Auto igniting: Not determined.
Danger of explosion: Not determined.
Exlosion limits:
Lower: 1.1 Vol %
Upper: 6.5 Vol %

Vapor pressure at 25 °C (77 °F): 0.02 hPa
Density at 20 °C (68 °F): 1.02 g/cm³ (8.512 lbs/gal)
Relative density: Not determined.
Vapor density: Not determined.
Evaporation rate: Not determined.
Solubility in / Miscibility with Water: Fully miscible
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
dynamic at 20 °C (68 °F): 11.76 mPas
kinematic: Not determined.
Other information: No further relevant information available.

10 Stability and reactivity

Reactivity: No information known.
Chemical stability: Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions: Reacts with strong oxidizing agents
Conditions to avoid: No further relevant information available.
Incompatible materials: Air
Oxidizing agents
Hazardous decomposition products:
Carbon monoxide and carbon dioxide
Nitrogen oxides

11 Toxicological information

Information on toxicological effects

Acute toxicity: Harmful if swallowed. Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.
LD/LC50 values that are relevant for classification: No data
Skin irritation or corrosion: Causes severe skin burns.
Eye irritation or corrosion: Causes serious eye damage.
Sensitization: No sensitizing effects known.
Germ cell mutagenicity: No effects known.
Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity: No effects known.
Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: No effects known.
Subacute to chronic toxicity: No effects known.
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

12 Ecological information

Toxicity: Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Ecotoxical effects: Remark: Harmful to aquatic organisms
Additional ecological information: General notes: Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground. May cause long lasting harmful effects to aquatic life.
Avoid transfer into the environment.
Harmful to aquatic organisms
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
Results of PBT and vPvB assessment
PBT: Not applicable.
Product name: 1,8-Diazabicyclo[5.4.0]undec-7-ene

13 Disposal considerations

Waste treatment methods
Recommendation Consult state, local or national regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

UN-Number
DOT, IMDG, IATA UN3267

UN proper shipping name
DOT Corrosive liquid, basic, organic, n.o.s. (1,8-Diazabicyclo[5.4.0]undec-7-ene)
IMDG, IATA CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (1,8-Diazabicyclo[5.4.0]undec-7-
ene)

Transport hazard class(es)

DOT

<table>
<thead>
<tr>
<th>Class</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>8 (C7) Corrosive substances</td>
</tr>
</tbody>
</table>

IMDG, IATA

<table>
<thead>
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</tbody>
</table>

Packing group
DOT, IMDG, IATA II

Environmental hazards:
Not applicable.

Special precautions for user
EMS Number: Warning, Corrosive substances F-A,S-B Alkalis

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

Transport/Additional information:
DOT Marine Pollutant (DOT): No
UN "Model Regulation": UN3267, Corrosive liquid, basic, organic, n.o.s. (1,8-Diazabicyclo[5.4.0]undec-7-
ene), 8, II

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Signal word Danger

Hazard statements
H302 Harmful if swallowed.
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Precautionary statements
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P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
All components of this product are listed on the Canadian Domestic Substances List (DSL).
SARA Section 313 (specific toxic chemical listings) Substance is not listed.
California Proposition 65
Prop 65 - Chemicals known to cause cancer Substance is not listed.
Prop 65 - Developmental toxicity Substance is not listed.
Prop 65 - Developmental toxicity, female Substance is not listed.
Prop 65 - Developmental toxicity, male Substance is not listed.
Information about limitation of use: For use only by technically qualified individuals.
Other regulations, limitations and prohibitive regulations
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.
Substance is not listed.
Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.
**Product name:** 1,8-Diazabicyclo[5.4.0]undec-7-ene  

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing SDS:** Global Marketing Department  

**Date of preparation / last revision:** 11/23/2015 / -

**Abbreviations and acronyms:**
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- HMIS: Hazardous Materials Identification System (USA)
- WHMIS: Workplace Hazardous Materials Information System (Canada)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- vPvB: very Persistent and very Bioaccumulative
- ACGIH: American Conference of Governmental Industrial Hygienists (USA)
- OSHA: Occupational Safety and Health Administration (USA)
- IARC: International Agency for Research on Cancer
- EPA: Environmental Protection Agency (USA)