

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Bicyclo[2.2.1]hept-2-ene
Product Number : N32407
Brand : Aldrich
Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 2-Norbornene
Norbornylene
Formula : C₇H₁₀
Molecular Weight : 94.15 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
8,9,10-trinorborn-2-ene			
498-66-8	207-866-0	-	-

3. HAZARDS IDENTIFICATION**Emergency Overview****OSHA Hazards**

Flammable Solid

HMIS Classification**Health Hazard:** 0**Flammability:** 0**Physical hazards:** 3**NFPA Rating****Health Hazard:** 0**Reactivity Hazard:** 3**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.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point -14 °C (7 °F) - closed cup

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.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid dust formation. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Storage

Keep container tightly closed in a dry and well-ventilated place. Store in cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. 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

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	crystalline
Colour	colourless

Safety data

pH	no data available
Melting point	44 - 46 °C (111 - 115 °F)
Boiling point	96 °C (205 °F)
Flash point	-14 °C (7 °F) - closed cup
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.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 11,300 mg/kg

LD50 Dermal - rabbit - > 5,000 mg/kg

Irritation and corrosion

no data available

Sensitisation

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.

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

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.

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.

Additional Information

RTECS: RB7900000

12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

no data available

Ecotoxicity effects

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 10 mg/l - 96 h

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN-Number: 1325 Class: 4.1 Packing group: II
Proper shipping name: Flammable solids, organic, n.o.s. (8,9,10-trinorborn-2-ene)
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

UN-Number: 1325 Class: 4.1 Packing group: II EMS-No: F-A, S-G
Proper shipping name: FLAMMABLE SOLID, ORGANIC, N.O.S. (8,9,10-trinorborn-2-ene)
Marine pollutant: No

IATA

UN-Number: 1325 Class: 4.1 Packing group: II
Proper shipping name: Flammable solid, organic n.o.s. (8,9,10-trinorborn-2-ene)

15. REGULATORY INFORMATION**OSHA Hazards**

Flammable Solid

DSL Status

This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

8,9,10-trinorborn-2-ene	CAS-No. 498-66-8
-------------------------	---------------------

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

Fire Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

8,9,10-trinorborn-2-ene	CAS-No. 498-66-8	Revision Date
-------------------------	---------------------	---------------

New Jersey Right To Know Components

8,9,10-trinorborn-2-ene	CAS-No. 498-66-8	Revision Date
-------------------------	---------------------	---------------

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**

Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.