

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Diketene
Product Number : 422363
Brand : Aldrich
Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +18003255832
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Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C₄H₄O₂
Molecular Weight : 84.07 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Diketene			
674-82-8	211-617-1	606-017-00-5	-

3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Flammable Liquid, Toxic by inhalation., Harmful by ingestion., Irritant

HMIS Classification

Health Hazard: 3
Flammability: 3
Physical hazards: 0

NFPA Rating

Health Hazard: 3
Fire: 3
Reactivity Hazard: 0

Potential Health Effects

Inhalation Toxic if inhaled. Causes respiratory tract irritation.
Skin May be harmful if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.
Ingestion 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

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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 34 °C (93 °F) - closed cup

Ignition temperature 310 °C (590 °F)

Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

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**

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Handling**

Avoid inhalation of vapour or mist.

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.

Recommended storage temperature: 2 - 8 °C

Handle and open container with care. Reacts violently with water.

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 respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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

Handle with gloves.

Eye protection

Face shield and 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	clear, liquid
Colour	yellow

Safety data

pH	no data available
Melting point	no data available
Boiling point	69 - 70 °C (156 - 158 °F) at 133 hPa (100 mmHg) - lit.
Flash point	34 °C (93 °F) - closed cup
Ignition temperature	310 °C (590 °F)
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	10.5 hPa (7.9 mmHg) at 20 °C (68 °F) 68 hPa (51 mmHg) at 55 °C (131 °F)
Density	1.09 g/mL at 25 °C (77 °F)
Water solubility	no data available
Relative vapour density	2.9 - (Air = 1.0)

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Do not allow water to enter container because of violent reaction.
Heat, flames and sparks.

Materials to avoid

Strong oxidizing agents, acids, Bases, Amines, glass, Soda glass, Oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Hazardous reactions

Vapours may form explosive mixture with air.

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 614 mg/kg

LC50 Inhalation - guinea pig - 2 h - 3,000 mg/m³

LD50 Dermal - rabbit - 3,105 mg/kg

Irritation and corrosion

Skin - rabbit -

Skin - rabbit -

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	Toxic if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	Harmful if swallowed.

Additional Information

RTECS: RQ8225000

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

no data available

Ecotoxicity effects

no data available

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. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. 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: 2521 Class: 6.1 (3) Packing group: I
Proper shipping name: Diketene, stabilized
Marine pollutant: No
Poison Inhalation Hazard: Hazard zone B

IMDG

UN-Number: 2521 Class: 6.1 (3) Packing group: I EMS-No: F-E, S-D
Proper shipping name: DIKETENE, STABILIZED
Marine pollutant: No

IATA

UN-Number: 2521 Class: 6.1 (3)
Proper shipping name: Diketene, stabilized
IATA Passenger: Not permitted for transport
IATA Cargo: Not permitted for transport

15. REGULATORY INFORMATION**OSHA Hazards**

Flammable Liquid, Toxic by inhalation., Harmful by ingestion., Irritant

DSL Status

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

Diketene

CAS-No.
674-82-8

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, Acute Health Hazard

Massachusetts Right To Know Components

Diketene

CAS-No. Revision Date
674-82-8 1993-04-24

Pennsylvania Right To Know Components

CAS-No. Revision Date

Diketene

674-82-8

1993-04-24

New Jersey Right To Know Components

Diketene

CAS-No.

Revision Date

674-82-8

1993-04-24

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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