

Material Safety Data Sheet

Version 3.0
Revision Date 08/19/2009
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 4-Methylcyclohexanol, mixture of *cis* and *trans*

Product Number : 153095
Brand : Aldrich

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Hexahydro-*p*-cresol

Formula : C₇H₁₄O
Molecular Weight : 114.19 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
4-Methylcyclohexanol, mixed isomers			
589-91-3	209-664-8	-	-

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

Combustible Liquid, Target Organ Effect

Target Organs

Liver, Kidney

HMIS Classification

Health Hazard: 0
Chronic Health Hazard: *
Flammability: 2
Physical hazards: 0

NFPA Rating

Health Hazard: 0
Fire: 2
Reactivity Hazard: 0

Potential Health Effects

Inhalation
Skin
Eyes
Ingestion

May be harmful if inhaled. May cause respiratory tract irritation.
May be harmful if absorbed through skin. May cause skin irritation.
May cause eye irritation.
May be harmful if swallowed.

4. FIRST AID MEASURES

General advice

Move out of dangerous area.

If inhaled

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

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

Flash point 70 °C (158 °F) - closed cup

Ignition temperature 295 °C (563 °F)

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 breathing vapors, mist or gas.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

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. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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 is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges. 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 with side-shields conforming to EN166

Hygiene measures

General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	clear, viscous liquid
Colour	light yellow

Safety data

pH	no data available
Melting point	no data available
Boiling point	171 - 173 °C (340 - 343 °F) - lit.
Flash point	70 °C (158 °F) - closed cup
Ignition temperature	295 °C (563 °F)
Lower explosion limit	1.1 %(V)
Vapour pressure	2.0 hPa (1.5 mmHg) at 30 °C (86 °F)
Density	0.914 g/mL at 25 °C (77 °F)
Water solubility	no data available
Relative vapour density	3.94 - (Air = 1.0)

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Materials to avoid

Strong oxidizing agents, Acid chlorides, Acid anhydrides

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

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.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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	Liver, Kidney,

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**

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)

NA-Number: 1993 Class: CBL Packing group: III
Proper shipping name: Combustible liquid, n.o.s. (4-Methylcyclohexanol, mixed isomers)
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION**OSHA Hazards**

Combustible Liquid, Target Organ Effect

DSL Status

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

4-Methylcyclohexanol, mixed isomers

CAS-No.
589-91-3

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, Chronic Health Hazard

Massachusetts Right To Know Components

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

Pennsylvania Right To Know Components

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New Jersey Right To Know Components

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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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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.