

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 12/20/2007

Reviewed on 01/24/2007

1 Identification of substance:

Product details:

Product name: D-(+)-Camphor-10-sulfonic acid

Stock number:

A16179

L03761

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company

Johnson Matthey Catalog Company, Inc.

30 Bond Street

Ward Hill, MA 01835-8099

Emergency Phone: (978) 521-6300

CHEMTREC: (800) 424-9300

Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency information:

During normal hours the Health, Safety and Environmental Department.

After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization:

Description: (CAS#)

D-(+)-Camphor-10-sulfonic acid (CAS# 3144-16-9): 100%

Identification number(s):

EINECS Number: 221-554-1

3 Hazards identification

Hazard description:



C Corrosive

Information pertaining to particular dangers for man and environment

R 34 Causes burns.

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	1
FIRE	1
REACTIVITY	1

Health (acute effects) = 1

Flammability = 1

Reactivity = 1

4 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.

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After eye contact

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

After swallowing Seek immediate medical advice.

5 Fire fighting measures**Suitable extinguishing agents**

Use carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.

Special hazards caused by the material, its products of combustion or resulting gases:

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Sulfur oxides (SO_x)

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures**Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Measures for environmental protection:

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Additional information:

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage**Handling****Information for safe handling:**

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:

Keep ignition sources away.

Storage**Requirements to be met by storerooms and receptacles:**

No special requirements.

Information about storage in one common storage facility:

Store away from water/moisture.

Store away from oxidizing agents.

Store away from strong bases.

Further information about storage conditions:

This product is hygroscopic.

Keep container tightly sealed.

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Store in cool, dry conditions in well sealed containers.
Protect from humidity and water.

8 Exposure controls and 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.

Components with limit values that require monitoring at the workplace:

Not required.

Additional information: No data

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.

Avoid contact with the eyes and skin.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Protection of hands: Impervious gloves

Eye protection:

Safety glasses

Tightly sealed goggles

Full face protection

Body protection: Protective work clothing.

9 Physical and chemical properties:**General Information**

Form:	Powder
Color:	White
Odor:	Not determined

Change in condition

Melting point/Melting range:	196-200°C (385-392°F) (dec)
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined

Flash point:	Not applicable
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Ignition temperature:	Not determined
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Decomposition temperature:	Not determined
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Danger of explosion:	Product does not present an explosion hazard.
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Explosion limits:

Lower:	Not determined
Upper:	Not determined

Vapor pressure:	Not determined
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Density:	Not determined
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10 Stability and reactivity**Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

Materials to be avoided:

Water/moisture

Oxidizing agents

Bases

Dangerous reactions No dangerous reactions known**Dangerous products of decomposition:**

Carbon monoxide and carbon dioxide

Sulfur oxides (SO_x)**11 Toxicological information****Acute toxicity:****Primary irritant effect:****on the skin:**

Corrosive effect on skin and mucous membranes.

Irritant to skin and mucous membranes.

on the eye:

Strong corrosive effect.

Irritating effect.

Sensitization: No sensitizing effects known.**Subacute to chronic toxicity:**

Corrosive materials are acutely destructive to the respiratory tract, eyes, skin and digestive tract. Eye contact may result in permanent damage and complete vision loss. Inhalation may result in respiratory effects such as inflammation, edema, and chemical pneumonitis. May cause coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Ingestion may cause damage to the mouth, throat and esophagus.

May cause skin burns or irritation depending on the severity of the exposure.

Organic sulfonic acid salts have little reported toxic effects. They may have some irritating effect on the eyes and possibly the skin.

Additional toxicological information:

Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:**General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

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13 Disposal considerations

Product:**Recommendation**

Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.

14 Transport information

DOT regulations:

Hazard class: 8
Identification number: UN3261
Packing group: III
Proper shipping name (technical name): CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (D-(+)-Camphor-10-sulfonic acid)
Label: 8

Land transport ADR/RID (cross-border)

ADR/RID class: 8 (C4) Corrosive substances
Danger code (Kemler): 80
UN-Number: 3261
Packaging group: III
Description of goods: 3261 CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (D-(+)-Camphor-10-sulfonic acid)

Maritime transport IMDG:

IMDG Class: 8
UN Number: 3261
Label: 8
Packaging group: III
Proper shipping name: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (D-(+)-Camphor-10-sulfonic acid)

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 8
UN/ID Number: 3261

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Label	8
Packaging group:	III
Proper shipping name:	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (D-(+)-Camphor-10-sulfonic acid)

15 Regulations**Product related hazard informations:****Hazard symbols:**

C Corrosive

Risk phrases:

34 Causes burns.

Safety phrases:

- 20 When using do not eat or drink.
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
- 45 In case of accident or if you feel unwell, seek medical advice immediately.
- 60 This material and its container must be disposed of as hazardous waste.

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).

Information about limitation of use:

For use only by technically qualified individuals.

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 MSDS: Health, Safety and Environmental Department.

Contact: Paul V. Connolly