

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : *cis,cis*-Muconic acid
 Product Number : 15992
 Brand : Aldrich
 Company : Sigma-Aldrich Canada, Ltd
 2149 Winston Park Drive
 OAKVILLE ON L6H 6J8
 CANADA
 Telephone : +1 9058299500
 Fax : +1 9058299292
 Emergency Phone # : 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C₆H₈O₄
 Molecular Weight : 142.11 g/mol

| CAS-No. | EC-No. | Index-No. | Concentration |
|-----------------------------|--------|-----------|---------------|
| cis,cis-Muconic acid | | | |
| 1119-72-8 | - | - | - |

3. HAZARDS IDENTIFICATION**WHMS Classification**

D1B Toxic Material Causing Immediate and Serious Toxic Effects
 D2B Serious Toxic Effects
 Toxic by ingestion
 Moderate skin irritant
 Moderate respiratory irritant
 Moderate eye irritant

HMS Classification

Health Hazard: 2
Flammability: 0
Physical hazards: 0

Potential Health Effects

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

4. FIRST AID MEASURES**General advice**

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

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Page 1 of 9

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

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES**Flammable properties**

Flash point no data available
 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.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage

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

Store under inert gas. Air sensitive. Keep in a dry 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 dust mask type N95 (US) or type P1 (EN 143) 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

Safety glasses

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Page 2 of 9

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 powder
 Colour light brown

Safety data

pH no data available
 Melting point 194 - 195 °C (381 - 383 °F)
 Boiling point no data available
 Flash point no data available
 Ignition temperature no data available
 Lower explosion limit no data available
 Upper explosion limit no data available
 Water solubility no data available
 Partition coefficient: log Pow: 0.776
 n-octanol/water

10. STABILITY AND REACTIVITY**Storage stability**

Stable under recommended storage conditions.

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.

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Page 3 of 9

Ingestion Toxic if swallowed.

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**

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

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

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION**DSL Status**

This product contains the following components that are not on the Canadian DSL nor NDSL lists.

| | |
|------------------------------|----------------------|
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16. OTHER INFORMATION**Further information**

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Page 4 of 9