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Material Safety Data Sheet

Version 3.0 Revision Date 01/03/2009 Print Date 02/23/2009

Page 1 of

Page 2 of

Page 3 of

Page 4 of

Page 5 of

Product name : Itaconic acid

1. PRODUCT AND COMPANY IDENTIFICATION

59950 Product Number Brand : Fluka

Company : Sigma-Aldrich Canada, Ltd. 2149 Winston Park Drive

> OAKVILLE ON L6H 6J8 CANADA : +1 9058299500

: +1 9058299292

: 800-424-9300 2. COMPOSITION/INFORMATION ON INGREDIENTS

: Methylenesuccinic acid Synonyms

Formula : C₅H₆O₄ Molecular Weight : 130.1 g/mol

CAS-No. EC-No. Index-No. Concentration Itaconic acid 97-65-4 202-599-6 --

3. HAZARDS IDENTIFICATION

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WHMIS Classification Toxic Material Causing Other Toxic Effects Moderate skin irritant Moderate respiratory irritant Moderate eye irritant

HMIS Classification

Health Hazard: Flammability:

Physical hazards:

Potential Health Effects

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

Inhalation Ingestion

May be harmful if swallowed.

4. FIRST AID MEASURES

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

If inhaled

In case of skin contact Wash off with soap and plenty of water. Consult a physician.

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

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.

In case of eye contact

5. FIRE-FIGHTING MEASURES

no data available

Wear self contained breathing apparatus for fire fighting if necessary.

Special protective equipment for fire-fighters

800 °C (1,472 °F) -

Flash point Ignition temperature

Flammable properties

Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Methods for cleaning up

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions Do not let product enter drains.

protection.

Handling

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

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

Moisture sensitive.

7. HANDLING AND STORAGE

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).

Contains no substances with occupational exposure limit values.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Hand protection Handle with gloves. Sigma-Aldrich Corporation Fluka - 59950 www.sigma-aldrich.com

Skin and body protection

Hygiene measures

Personal protective equipment

Eye protection Safety glasses

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

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

9. PHYSICAL AND CHEMICAL PROPERTIES Appearance

of workday.

crystalline Form Colour beige

Safety data рΗ no data available 165 - 168 °C (329 - 334 °F) Melting point

165 - 167 °C (329 - 333 °F)

no data available

no data available

no data available

800 °C (1,472 °F) -

Boiling point Flash point Ignition temperature

Lower explosion limit

10. STABILITY AND REACTIVITY

11. TOXICOLOGICAL INFORMATION

Irritation and corrosion

Upper explosion limit no data available Density 1.573 g/mL at 25 °C (77 °F) Water solubility no data available

Acute toxicity no data available

no data available Sensitisation

no data available Chronic exposure

Inhalation

Ingestion

no data available

Skin

Eyes

no data available Ecotoxicity effects

Further information on ecology

Contaminated packaging Dispose of as unused product.

14. TRANSPORT INFORMATION

Not dangerous goods

12. ECOLOGICAL INFORMATION

DOT (US) Not dangerous goods

D2B

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IMDG

Further information

15. REGULATORY INFORMATION DSL Status

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.

Storage stability Stable under recommended storage conditions. Materials to avoid Bases, Oxidizing agents, Reducing agents Hazardous decomposition products Hazardous decomposition products formed under fire conditions. - Carbon oxides

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May be harmful if inhaled. Causes respiratory tract irritation.

May be harmful if absorbed through skin. Causes skin irritation.

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No component of this product present at levels greater than or equal to 0.1% is identified as IARC: probable, possible or confirmed human carcinogen by IARC.

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

Causes eye irritation.

Elimination information (persistence and degradability)

May be harmful if swallowed.

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.

Not dangerous goods

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

All components of this product are on the Canadian DSL list. WHMIS Classification Toxic Material Causing Other Toxic Effects Moderate skin irritant Moderate respiratory irritant Moderate eye irritant

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