



SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 10/20/2005
Date Updated: 01/10/2005
Version 1.30

Section 1 - Product and Company Information

Product Name 2,3-Dimethylmaleic anhydride, 98%
Product Number D167800
Brand Aldrich Chemical

Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS, MO 63103 US
Technical Phone: 314 771 5765
Fax: 800 325 5052

Emergency Phone: 414 273 3850 Ext. 5996

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
2,3-DIMETHYLMALEIC ANHYDRIDE	766-39-2	No	212-165-8	

Formula C₆H₆O₃
Synonyms alpha,beta-Dimethylmaleic anhydride

Section 3 - Hazards Identification

Emergency Overview

Harmful.
Harmful if swallowed.

HMIS Rating

Health: 1 Flammability: 0 Reactivity: 0

NFPA Rating

Health: 1 Flammability: 0 Reactivity: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A

Extinguishing Media

Suitable

Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s)

Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill

Evacuate area.

Procedure(s) of Personal Precaution(s)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling

User Exposure

Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage

Suitable

Keep tightly closed.

Section 8 - Exposure Controls / PPE

Engineering Controls

Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment

Respiratory

Government approved respirator.

Hand

Compatible chemical-resistant gloves.

Eye

Chemical safety goggles.

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General Hygiene Measures
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	Color	Form
Physical State Solid	White	Fine plates
Molecular Weight:	126.11 AMU	
<u>Property</u>	<u>Value</u>	<u>At Temperature or Pressure</u>
pH	N/A	
BP/BP Range	223 °C	760 mmHg
MP/MP Range	93 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	N/A	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Partition Coefficient	Log Kow: 0.201	
Decomposition Temp.	N/A	
Flash Point °F	N/A	
Flash Point °C	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Solubility	N/A	

N/A = not available

Section 10 - Stability and Reactivity

Stability
Stable
Stable.
Conditions of Instability
May decompose on exposure to moist air or water.
Materials to Avoid
Strong oxidizing agents, Strong acids, Strong bases.

Hazardous Decomposition Products
Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide.

Hazardous Polymerization
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure
Skin Contact
May cause skin irritation.
Skin Absorption
May be harmful if absorbed through the skin.
Eye Contact
May cause eye irritation.
Inhalation
May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion
Harmful if swallowed.

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

RTECS Number: ON4025000

Chronic Exposure - Carcinogen

Rat - Subcutaneous: 2600 MG/KG 65W I
Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Tumors at site of application.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation
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.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

EU Additional Classification
Symbol of Danger: Xn
Indication of Danger
Harmful.
Risk Statements R: 22
Harmful if swallowed.

US Classification and Label Text
Indication of Danger
Harmful.

Risk Statements

Harmful if swallowed.

United States Regulatory Information

SARA Listed: No

TSCA Inventory Item: Yes

Canada Regulatory Information**WHMIS Classification**

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: Yes

Section 16 - Other Information

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

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 Inc., 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. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.



SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 02/11/2006
Date Updated: 02/05/2006
Version 1.30

Section 1 - Product and Company Information

Product Name (Dimethylaminomethyl)ferrocene, 96%
Product Number 119342
Brand Aldrich Chemical
Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS, MO 63103 US
Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

<u>Substance Name</u>	<u>CAS #</u>	<u>SARA 313</u>	<u>EC no</u>	<u>Annex I Index Number</u>
(DIMETHYLAMINOMETHYL)FERROCENE, 96%	1271-86-9	No	215-044-8	

Formula C₁₃H₁₇FeN
Synonyms

Section 3 - Hazards Identification

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

Flash Point: 235 °F 113 °C
Autoignition Temp: N/A

Extinguishing Media

Suitable
Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting

Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s)
Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling

User Exposure

Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage

Suitable

Keep tightly closed. Store in a cool dry place.

Section 8 - Exposure Controls / PPE

Engineering Controls

Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment

Respiratory

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges.

Hand

Compatible chemical-resistant gloves.

Eye

Chemical safety goggles.

General Hygiene Measures

Wash thoroughly after handling. Wash contaminated clothing before reuse.

Molecular Weight: 243.13 AMU

<u>Property</u>	<u>Value</u>	<u>At Temperature or Pressure</u>
pH	N/A	
BP/BP Range	124 - 128 °C	2.5 mmHg
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	1.228 g/cm ³	
Bulk Density	N/A	

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Safety and Environmental
Health

Odor Threshold N/A
Volatile% N/A
VOC Content N/A
Water Content N/A
Solvent Content N/A
Evaporation Rate N/A
Viscosity N/A
Partition Coefficient N/A
Decomposition Temp. N/A
Flash Point °F 235 °F
Flash Point °C 113 °C

Method: closed cup
Method: closed cup

Explosion Limits N/A

Flammability N/A
Autoignition Temp N/A
Refractive Index 1.59
Solubility N/A

N/A = not available

Section 10 - Stability and Reactivity

Stability

Materials to Avoid
Strong oxidizing agents.

Hazardous Decomposition Products

Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide, Nitrogen oxides.

Section 11 - Toxicological Information

Route of Exposure

Skin Contact
May cause skin irritation.

Eye Contact
May cause eye irritation.

Multiple Routes
May be harmful by inhalation, ingestion, or skin absorption.

Signs and Symptoms of Exposure

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

RTECS Number: N/A

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: None

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

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IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

United States Regulatory Information

SARA Listed: No

Canada Regulatory Information

WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

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