

## Chemical Safety Data Sheet MSDS / SDS

## Dimethyl difluoromalonate

Revision Date:2026-05-31 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

**Product identifier**

Product name : Dimethyl difluoromalonate  
CBnumber : CB0206444  
CAS : 379-95-3  
Synonyms : DIMETHYL DIFLUOROMALONATE,dimethyl 2,2-difluoromalonate

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

## SECTION 2: Hazards identification

**GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Warning

**Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

**Hazard statements**

H226 Flammable liquid and vapour  
H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation

## SECTION 3: Composition/information on ingredients

## Substance

Product name	: Dimethyl difluoromalonate
Synonyms	: DIMETHYL DIFLUOROMALONATE, dimethyl 2,2-difluoromalonate
CAS	: 379-95-3
MF	: C5H6F2O4
MW	: 168.1

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## SECTION 4: First aid measures

Remove all sources of ignition.

Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting.

Remove to fresh air Call a physician If breathing is irregular or stopped, administer artificial respiration Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation

Wash off immediately with plenty of water.

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

### Most important symptoms and effects, both acute and delayed

#### Symptoms

No information available.

### Indication of any immediate medical attention and special treatment needed

#### Note to physicians

Treat symptomatically.

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## SECTION 5: Firefighting measures

### Suitable Extinguishing Media

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Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable Extinguishing Media

None.

### Specific hazards arising from the chemical

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No information available.

#### Hazardous combustion products

Hydrogen fluoride. Carbon oxides.

### Explosion data

#### Sensitivity to Mechanical Impact

No information available.

#### Sensitivity to Static Discharge

No information available.

### **Protective equipment and precautions for firefighters**

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As in any fire, wear self contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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## SECTION 6: Accidental release measures

### **Personal precautions, protective equipment and emergency procedures**

#### **Personal precautions**

Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas.

#### **Environmental precautions**

##### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

See Section 12 for additional Ecological Information.

### **Methods and material for containment and cleaning up**

#### **Methods for containment**

Prevent further leakage or spillage if safe to do so.

#### **Methods for cleaning up**

Pick up and transfer to properly labeled containers. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

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## SECTION 7: Handling and storage

### **Precautions for safe handling**

#### **Advice on safe handling**

Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded.

### **Conditions for safe storage, including any incompatibilities**

#### **Storage Conditions**

Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Store at room temperature.

#### **Incompatible materials**

None known based on information supplied.

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## SECTION 8: Exposure controls/personal protection

## Control parameters

### Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### Appropriate engineering controls

#### Engineering Controls

Showers  
Eyewash stations  
Ventilation systems

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Tight sealing safety goggles.

#### Skin and Body Protection

Wear protective gloves and protective clothing.

#### Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

#### General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical State	liquid
Appearance	No information available
Odor	No information available
pH	No information available
Melting point/freezing point	No information available
Boiling point	167 °C
Flash point	35 °C
Density	1.3059 g/mL
Evaporation rate	No information available
Upper flammability limits	No information available
Lower flammability limit	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available

Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Colour	Clear, colourless

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## SECTION 10: Stability and reactivity

### Reactivity

Not applicable

### Chemical stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Hazardous polymerization

No information available.

### Conditions to avoid

Heat, flames and sparks.

### Incompatible materials

Strong oxidizing agents.

### Hazardous Decomposition Products

Hydrogen fluoride. Carbon oxides.

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## SECTION 11: Toxicological information

### Information on likely routes of exposure

#### Inhalation

Classified based on available data. For more details, see section 2.

#### Eye contact

Classified based on available data. For more details, see section 2.

#### Skin Contact

Classified based on available data. For more details, see section 2.

#### Ingestion

Classified based on available data. For more details, see section 2.

## Information on toxicological effects

### Symptoms

Classified based on available data. For more details, see section 2.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

### Chronic Toxicity

Classified based on available data. For more details, see section 2.

### Numerical measures of toxicity - Product Information

#### Unknown acute toxicity

Classified based on available data. For more details, see section 2

The following values are calculated based on chapter 3.1 of the GHS document

#### ATEmix (oral)

500 mg/kg

#### ATEmix (dermal)

1100 mg/kg

#### ATEmix (inhalation-dust/mist)

1.5 mg/l

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## SECTION 12: Ecological information

### Ecotoxicity

May cause long lasting harmful effects to aquatic life

100% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

### Persistence and degradability

No information available.

### Bioaccumulation

No information available.

### Mobility

No information available.

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## SECTION 13: Disposal considerations

### Disposal of wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

### Contaminated packaging

Do not reuse container.

### Other Information

Waste codes should be assigned by the user based on the application for which the product was used.

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## SECTION 14: Transport information

### DOT

**UN/ID no**

UN3272

**Hazard Class**

3

**Packing Group**

III

**Proper shipping name**

Esters, n.o.s.

**Description**

UN3272, Esters, n.o.s., 3, III

**Emergency Response Guide Number**

127

### IMDG

**UN/ID no**

UN3272

**Hazard Class**

3

**Packing Group**

III

**Proper shipping name**

Esters, n.o.s.

**Description**

UN3272, Esters, n.o.s., 3, III, (35°C c.c.)

**Special Provisions**

223, 274

**EmS-No**

F-E, S-D

### IATA

**UN/ID no**

UN3272

**Hazard Class**

3

**Packing Group**

III

**Proper shipping name**

Esters, n.o.s.

**Description**

UN3272, Esters, n.o.s., 3, III

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## SECTION 15: Regulatory information

**International Inventories**

All of the components in the product are on the following Inventory lists

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories****Acute health hazard**

Yes

**Chronic Health Hazard**

No

**Fire hazard**

Yes

**Sudden release of pressure hazard**

No

**Reactive hazard**

No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

#### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.