

## Chemical Safety Data Sheet MSDS / SDS

**DIETHYL BROMOMALONATE**Revision Date:2026-03-21 Revision Number:1

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name : DIETHYL BROMOMALONATE  
CBnumber : CB9294925  
CAS : 685-87-0  
EINECS Number : 211-683-1  
Synonyms : Diethyl 2-bromomalonate;DIETHYL BROMOMALONATE

**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

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**SECTION 2: Hazards identification****GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Danger

**Precautionary statements**

P405 Store locked up.

P363 Wash contaminated clothing before reuse.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Hazard statements**

H314 Causes severe skin burns and eye damage

**SECTION 3: Composition/information on ingredients**

## Substance

Product name	: DIETHYL BROMOMALONATE
Synonyms	: Diethyl 2-bromomalonate;DIETHYL BROMOMALONATE
CAS	: 685-87-0
EC number	: 211-683-1
MF	: C7H11BrO4
MW	: 239.06

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## SECTION 4: First aid measures

### General advice

First aiders need to protect themselves. Show this safety data sheet to the doctor in attendance.

### If inhaled

After inhalation: fresh air. Call in physician.

### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

### If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

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

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

### Protection of first-aiders

For personal protection see section 8.

### Notes to physician

No data available

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## SECTION 5: Firefighting measures

### Suitable extinguishing media

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

## Specific hazards during fire fighting

Combustible. Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

## Hazardous combustion products

Carbon oxides Hydrogen bromide gas

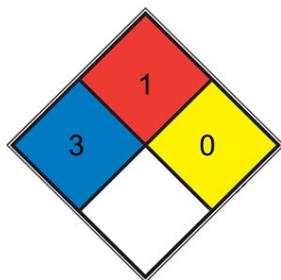
## Specific extinguishing methods

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

## NFPA 704



■ HEALTH 3 Short exposure could cause serious temporary or moderate residual injury (e.g. [liquid hydrogen](#), [sulfuric acid](#), [calcium hypochlorite](#), hexafluorosilicic acid)

■ FIRE 1 Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. [mineral oil](#), ammonia)

■ REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N2](#))

□ SPEC.  
□ HAZ.

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

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## SECTION 7: Handling and storage

### Handling

#### Avoidance of contact

Strong oxidizing agents Strong bases

### Storage

#### Further information on storage conditions

Tightly closed. Keep locked up or in an area accessible only to qualified or authorised persons.

#### Storage class

8A, Combustible, corrosive hazardous materials

#### Recommended storage temperature

Recommended storage temperature see product label.

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## SECTION 8: Exposure controls/personal protection

### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

### Engineering measures

No data available

### Personal protective equipment

#### Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### Recommended Filter type

Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Tightly fitting safety goggles

#### Skin and body protection

protective clothing

#### Hand protection

#### Remarks

required

## Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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# SECTION 9: Physical and chemical properties

## Information on basic physicochemical properties

liquid

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### Color

light brown

### Odor

No data available

### Odor Threshold

No data available

### pH

No data available

### Melting point/ range

No data available

### Boiling point/boiling range

233 - 235 °C

Method: lit.

### Flash point

111 °C

Method: closed cup

### Evaporation rate

No data available

### Flammability (solid, gas)

No data available

### Flammability (liquids)

No data available

### Burning rate

No data available

### Upper explosion limit / Upper flammability limit

No data available

**Lower explosion limit / Lower flammability limit**

No data available

**Vapor pressure**

No data available

**Relative vapor density**

No data available

**Relative density**

1.402 g/mL at 25 °C (lit.)

**Density**

1.402 g/cm<sup>3</sup> (25 °C)

Method: lit.

**Water solubility**

Does not mix well with water.

**Partition coefficient: n-octanol/water**

No data available

**Autoignition temperature**

No data available

**Decomposition temperature**

No data available

**Viscosity, dynamic**

No data available

**Viscosity, kinematic**

No data available

**Flow time**

No data available

**Explosive properties**

No data available

**Oxidizing properties**

No data available

**Molecular weight**

239.06 g/mol

**Particle characteristics Particle size**

No data available

**Solubility**

Chloroform, Hexanes

**Physical state**

Liquid

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**SECTION 10: Stability and reactivity****Reactivity**

Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.

**Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

**Possibility of hazardous reactions**

No data available

**Conditions to avoid**

Strong heating.

**Incompatible materials**

Strong oxidizing agents Strong bases

**Hazardous decomposition products**

In the event of fire: see section 5

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**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

**Skin corrosion/irritation**

Remarks: No data available

**Serious eye damage/eye irritation**

Remarks: No data available

**Respiratory or skin sensitization**

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

**Germ cell mutagenicity**

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

#### **Carcinogenicity**

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

#### **Reproductive toxicity**

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

#### **Specific target organ toxicity - single exposure**

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

#### **Specific target organ toxicity - repeated exposure**

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

#### **Aspiration hazard**

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

### **11.2 Additional Information**

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

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## **SECTION 12: Ecological information**

### **Ecotoxicity**

#### **Components:**

#### **Diethyl bromomalonate:**

##### **Toxicity to fish**

Remarks: No data available

#### **Persistence and degradability**

#### **Components:**

#### **Diethyl bromomalonate:**

##### **Biodegradability**

Remarks: No data available

#### **Bioaccumulative potential**

#### **Components:**

#### **Diethyl bromomalonate:**

##### **Bioaccumulation**

Remarks: No data available

#### **Mobility in soil**

#### **Components:**

**Diethyl bromomalonate:****Stability in soil**

Remarks: No data available

**Other adverse effects****Components:****Diethyl bromomalonate:****Additional ecological information**

No data available

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**SECTION 13: Disposal considerations****Disposal methods****Waste from residues**

Offer surplus and non-recyclable solutions to a licensed disposal company.

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**SECTION 14: Transport information****International Regulations****IATA-DGR**

UN/ID No. : UN 3265

Proper shipping name : Corrosive liquid, acidic, organic, n.o.s.

(Diethyl bromomalonate)

Class : 8

Packing group : II

Labels : Class 8 - Corrosive substances

Packing instruction (cargo aircraft) : 855

Packing instruction (passenger aircraft) : 851

**IMDG-Code**

UN number : UN 3265

Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.

(Diethyl bromomalonate)

Class : 8

Packing group : II

Labels : 8

EmS Code : F-A, S-B

Marine pollutant : no

## Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

#### JT/T 617

UN number : UN 3265

Proper shipping name : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.

(Diethyl bromomalonate)

Class : 8

Packing group : II

Labels : 8

Environmentally hazardous : no

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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## SECTION 15: Regulatory information

Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk management measures identified on the SDS as well as the local/national regulations concerning the chemical.

### National regulatory information

#### Regulations on Safety Management of Hazardous Chemicals

#### Catalogue of Hazardous Chemicals

#### Hazardous Chemicals for Priority Management

Not applicable under SAWS

#### Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

#### China Severely Restricted Toxic Chemicals for Import and Export

Not applicable

#### Measures on the Environmental Administration of New Chemical Substances Registration

#### Registration/Notification number

B1A22223476

#### Regulation on the Administration of Precursor Chemicals

## Catalogue and Classification of Precursor Chemicals

Not listed

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## SECTION 16: Other information

### Full text of other abbreviations

AIIIC - Australian Inventory of Industrial Chemicals

ANTT - National Agency for Transport by Land of Brazil

ASTM - American Society for the Testing of Materials

bw - Body weight

CMR - Carcinogen, Mutagen or Reproductive Toxicant

DIN - Standard of the German Institute for Standardisation

DSL - Domestic Substances List (Canada)

EC<sub>x</sub> - Concentration associated with x% response

EL<sub>x</sub> - Loading rate associated with x% response

EmS - Emergency Schedule

ENCS - Existing and New Chemical Substances (Japan)

ErC<sub>x</sub> - Concentration associated with x% growth rate response

ERG - Emergency Response Guide

GHS - Globally Harmonised System

GLP - Good Laboratory Practice

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

IC<sub>50</sub> - Half maximal inhibitory concentration

ICAO - International Civil Aviation Organization

IECSC - Inventory of Existing Chemical Substances in China

IMDG - International Maritime Dangerous Goods

IMO - International Maritime Organisation

ISHL - Industrial Safety and Health Law (Japan)

ISO - International Organisation for Standardisation

KECI - Korea Existing Chemicals Inventory

LC<sub>50</sub> - Lethal Concentration to 50 % of a test population

LD<sub>50</sub> - Lethal Dose to 50% of a test population (Median Lethal Dose)

MARPOL - International Convention for the Prevention of Pollution from Ships

MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods

n.o.s. - Not Otherwise Specified

Nch - Chilean Norm

NO(A)EC - No Observed (Adverse) Effect Concentration

NO(A)EL - No Observed (Adverse) Effect Level

NOELR - No Observable Effect Loading Rate

NOM - Official Mexican Norm

NTP - National Toxicology Program

NZIoC - New Zealand Inventory of Chemicals

OECD - Organisation for Economic Co-operation and Development

OPPTS - Office of Chemical Safety and Pollution Prevention

PBT - Persistent, Bioaccumulative and Toxic substance

PICCS - Philippines Inventory of Chemicals and Chemical Substances

(Q)SAR - (Quantitative) Structure Activity Relationship

REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

SADT - Self-Accelerating Decomposition Temperature

SDS - Safety Data Sheet

TCSI - Taiwan Chemical Substance Inventory

TDG - Transportation of Dangerous Goods

TECI - Thailand Existing Chemicals Inventory

TSCA - Toxic Substances Control Act (United States)

UN - United Nations

UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods

vPvB - Very Persistent and Very Bioaccumulative

WHMIS - Workplace Hazardous Materials Information System

**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.