

# SAFETY DATA SHEET

## 1. PRODUCT

### 1.1 Product identifiers

Name: Bis-2-(ethylhexyl)maleate

CAS-No.: 142-16-5

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture


#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Specific target organ toxicity - repeated exposure, Oral (Category 2), Kidney, H373

Acute aquatic toxicity (Category 3), H402

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal word	Warning
Hazard statement(s)	H373 May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed. H402 Harmful to aquatic life.
Precautionary statement(s)	P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P273 Avoid release to the environment. P314 Get medical advice/ attention if you feel unwell. P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Formula:  $C_{20}H_{36}O_4$   
Molecular weight: 340.49 g/mol  
CAS-No.: 142-16-5  
EC-No.: 205-524-5

#### Hazardous components

Component	Classification	Concentration
Bis(2-ethylhexyl) maleate	STOT RE 2; Aquatic Acute 3; H373, H402	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

<b>General advice</b>
Consult a physician. Show this safety data sheet to the doctor in attendance.
<b>If inhaled</b>
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
<b>In case of skin contact</b>
Wash off with soap and plenty of water. Consult a physician.
<b>In case of eye contact</b>
Flush eyes with water as a precaution.
<b>If swallowed</b>
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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### 5. FIREFIGHTING MEASURES

#### 5.1 Extinguishing media

##### Suitable extinguishing media

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

#### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

No data available

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### 6. ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

#### 6.3 Methods and materials for containment and cleaning up

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

#### 6.4 Reference to other sections

For disposal see section 13.

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### 7. HANDLING AND STORAGE

## 7.1 Precautions for safe handling

Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

## 7.2 Conditions for safe storage, including any incompatibilities

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

Recommended storage temperature 2 - 8 °C

Storage class (TRGS 510): Non Combustible Solids

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

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

#### Personal protective equipment

Eye/face protection	Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body Protection	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	Form: solid Colour: colourless
Odour	ester-like
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	Melting point/freezing point: -59.99 °C (-75.98 °F)
Initial boiling point and boiling range	156 °C (313 °F) at 9 hPa (7 mmHg)
Flash point	185 °C (365 °F) - closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No data available

Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	0.944 g/cm <sup>3</sup>
Water solubility	0.00004 g/l at 20 °C (68 °F) - OECD Test Guideline 105 - insoluble
Partition coefficient: n-octanol/water	log Pow: ca.7.24 at 25 °C (77 °F)
Auto-ignition temperature	260 °C (500 °F) at 1,013 hPa (760 mmHg)
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

## 9.2 Other safety information

No data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

<b>Acute toxicity</b>
LD50 Oral - Rat - male and female - > 2,000 mg/kg (OECD Test Guideline 401) Inhalation: No data available LD50 Dermal - Rabbit - 14,000 mg/kg LD50 Intraperitoneal - Rat - > 5,000 mg/kg
<b>Skin corrosion/irritation</b>
Skin - Rabbit Result: Mild skin irritation - 4 h (OECD Test Guideline 404)
<b>Serious eye damage/eye irritation</b>
Eyes - Rabbit Result: No eye irritation - 24 h (OECD Test Guideline 405)
<b>Respiratory or skin sensitisation</b>
- Guinea pig Result: Does not cause skin sensitisation. (OECD Test Guideline 406)
<b>Germ cell mutagenicity</b>

Ames test S. typhimurium Result: negative
<b>Carcinogenicity</b>
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. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
<b>Reproductive toxicity</b>
No data available No data available
<b>Specific target organ toxicity -single exposure</b>
No data available
<b>Specific target organ toxicity -repeated exposure</b>
Ingestion - May cause damage to organs through prolonged or repeated exposure. - Kidney, Liver
<b>Aspiration hazard</b>
No data available
<b>Additional Information</b>
RTECS: Not available To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish	semi-static test LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h (Directive 67/548/EEC, Annex V, C.1.)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 59.5 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test EC50 - Pseudokirchneriella subcapitata (green algae) - > 0.619 mg/l - 72 h (OECD Test Guideline 201) static test NOEC - Pseudokirchneriella subcapitata (green algae) - 0.052 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	Respiration inhibition EC50 - Sludge Treatment - > 1,000 mg/l - 180 min (OECD Test Guideline 209)

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

<b>Product</b>
Offer surplus and non-recyclable solutions to a licensed disposal company.
<b>Contaminated packaging</b>
Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### DOT (US)

Not dangerous goods

### IMDG

Not dangerous goods

### IATA

Not dangerous goods

## 15. REGULATORY INFORMATION

### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

No SARA Hazards

### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

### Pennsylvania Right To Know Components

Component	CAS-No.	Revision Date
Bis(2-ethylhexyl) maleate	142-16-5	

### New Jersey Right To Know Components

Component	CAS-No.	Revision Date
Bis(2-ethylhexyl) maleate	142-16-5	

### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

Aquatic Acute Acute aquatic toxicity

H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

H402 Harmful to aquatic life.

STOT RE Specific target organ toxicity - repeated exposure

### HMIS Rating

Health hazard: 1

Chronic Health Hazard:

Flammability: 1

Physical Hazard 0

**NFPA Rating**

Health hazard: 0

Fire Hazard: 1

Reactivity Hazard: 0

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