

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Fumaric acid, 50 g**

Print date: 14.04.2015

Product code: 9991357

Page 1 of 7

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Fumaric acid, 50 g

CAS No: 110-17-8  
Index No: 607-146-00-X  
EC No: 203-743-0

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Laboratory chemicals

**1.3. Details of the supplier of the safety data sheet****Seller**

Company name: CONATEX-DIDACTIC Lehrmittel GmbH  
Street: Im Forstgarten 1  
Place: D-66459 Kirkel  
Internet: www.conatex.com

**Supplier**

Company name: Carbolution Chemicals GmbH  
Street: Im Stadtwald, Gebäude A1.2  
Place: D-66123 Saarbrücken  
Contact person: Dr. Michael Bauer Telephone: +49 (0)681 302-71232  
e-mail: michael.bauer@carbolution-chemicals.de  
Internet: www.carbolution-chemicals.de

**1.4. Emergency telephone number:** +49 (0)681 302-71232**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Indications of danger: Xi - Irritant  
R phrases:  
Irritating to eyes.

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard categories:  
Serious eye damage/eye irritation: Eye Irrit. 2  
Hazard Statements:  
Causes serious eye irritation.

**2.2. Label elements**

Signal word: Warning  
Pictograms: GHS07

**Hazard statements**

H319 Causes serious eye irritation.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Fumaric acid, 50 g

Print date: 14.04.2015

Product code: 9991357

Page 2 of 7

#### Precautionary statements

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

 Sum formula: C<sub>4</sub>H<sub>4</sub>O<sub>4</sub>

Molecular weight: 116,07

#### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
203-743-0	fumaric acid	100 %
110-17-8	Xi - Irritant R36	
607-146-00-X	Eye Irrit. 2; H319	

Full text of R-, H- and EUH-phrases: see section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

##### After inhalation

Provide fresh air.

##### After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

##### After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

##### After ingestion

Rinse mouth immediately and drink plenty of water.

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

No data available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

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

The product itself does not burn.

#### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

#### Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

### SECTION 6: Accidental release measures

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Fumaric acid, 50 g

Print date: 14.04.2015

Product code: 9991357

Page 3 of 7

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

Provide adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

#### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

#### 6.3. Methods and material for containment and cleaning up

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used.

##### Advice on protection against fire and explosion

Only use the material in places where open light, fire and other flammable sources can be kept away.

#### 7.2. Conditions for safe storage, including any incompatibilities

##### Requirements for storage rooms and vessels

Keep container tightly closed.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

#### 8.2. Exposure controls

##### Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

##### Eye/face protection

Eye protection: Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

##### Hand protection

Hand protection: Single-use gloves. Before using check leak tightness / impermeability. Use gloves only once. German Industry Norms (DIN) / European Norms (EN): DIN EN 374

##### Skin protection

Body protection: Lab apron. Only wear fitting, comfortable and clean protective clothing.

##### Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state:	solid
Colour:	colourless
Odour:	No data available

##### Test method

pH-Value (at 20 °C):	2,1 4,9 g/l
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##### Changes in the physical state

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Fumaric acid, 50 g

Print date: 14.04.2015

Product code: 9991357

Page 4 of 7

Melting point:	298 °C
Initial boiling point and boiling range:	290 °C
Sublimation point:	No data available
Softening point:	No data available
Flash point:	230 °C

#### Flammability

Solid:	No data available
Gas:	No data available

Lower explosion limits:	3 vol. %
Upper explosion limits:	40 vol. %
Ignition temperature:	No data available

#### Auto-ignition temperature

Solid:	No data available
Gas:	No data available

Vapour pressure: (at 165 °C)	2,2 hPa
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Vapour pressure:	No data available
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Density (at 20 °C):	1,635 g/cm <sup>3</sup>
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Water solubility: (at 20 °C)	4,9 g/L
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Partition coefficient:	0,3
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Viscosity / dynamic:	No data available
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Viscosity / kinematic:	No data available
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Flow time:	No data available
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Vapour density:	No data available
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Evaporation rate:	No data available
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Solvent separation test:	No data available
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Solvent content:	No data available
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#### 9.2. Other information

Solid content:	No data available
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No data available

#### 10.3. Possibility of hazardous reactions

No data available

#### 10.4. Conditions to avoid

No data available

#### 10.5. Incompatible materials

Oxidizing agents, strong.

#### 10.6. Hazardous decomposition products

No data available

### SECTION 11: Toxicological information

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Fumaric acid, 50 g

Print date: 14.04.2015

Product code: 9991357

Page 5 of 7

#### 11.1. Information on toxicological effects

##### **Toxicokinetics, metabolism and distribution**

Toxicological data are not available.

##### **Acute toxicity**

Toxicological data are not available.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
110-17-8	fumaric acid				
	oral	LD50	9300 mg/kg	Ratte	

##### **Irritation and corrosivity**

Causes eye irritation.

##### **Sensitising effects**

No data available

##### **Severe effects after repeated or prolonged exposure**

No data available

##### **Carcinogenic/mutagenic/toxic effects for reproduction**

Due to missing data no statement can be made whether the substance fulfills the criteria of CMR categories 1 or 2. Practical experiences do not give any evidence for CMR activity of categories 1 or 2.

##### **Specific effects in experiment on an animal**

No data available

##### **Additional information on tests**

This mixture is classified as hazardous according to 1999/45/EC.

##### Practical experience

##### **Observations relevant to classification**

No data available

## SECTION 12: Ecological information

#### 12.1. Toxicity

No data available

#### 12.2. Persistence and degradability

No data available

#### 12.3. Bioaccumulative potential

No data available

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

CAS No	Chemical name	Log Pow
110-17-8	fumaric acid	0,46

#### 12.4. Mobility in soil

No data available

#### 12.5. Results of PBT and vPvB assessment

No data available

#### 12.6. Other adverse effects

No data available

#### **Further information**

According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment".

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Fumaric acid, 50 g**

Print date: 14.04.2015

Product code: 9991357

Page 6 of 7

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances  
Classified as hazardous waste.

**Contaminated packaging**

Wash with plenty of water. Completely emptied packages can be recycled.

**SECTION 14: Transport information****Land transport (ADR/RID)****Other applicable information (land transport)**

No dangerous good in sense of these transport regulations.

**Inland waterways transport (ADN)****Other applicable information (inland waterways transport)**

No dangerous good in sense of these transport regulations.

**Marine transport (IMDG)****Other applicable information (marine transport)**

No dangerous good in sense of these transport regulations.

**Air transport (ICAO)****Other applicable information (air transport)**

No dangerous good in sense of these transport regulations.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information****Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

**National regulatory information**

Water contaminating class (D): 1 - slightly water contaminating

## Safety Data Sheet

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### Fumaric acid, 50 g

Print date: 14.04.2015

Product code: 9991357

Page 7 of 7

#### SECTION 16: Other information

**Relevant R-phrases (Number and full text)**

36 Irritating to eyes.

**Relevant H- and EUH-phrases (Number and full text)**

H319 Causes serious eye irritation.