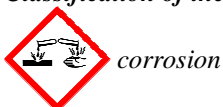


## 1 Identifikasi Senyawa (Tunggal atau Campuran)

- **Product identifier**
- **Trade name:** Malonic Acid
- **Article number:** 102238
- **CAS Number:**  
141-82-2
- **EC number:**  
205-503-0
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Research use only.
- **Details of the supplier of the safety data sheet**
- **Further information obtainable from:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

## 2 Identifikasi Bahaya

- **Classification of the substance or mixture**



*Eye Dam. 1 H318 Causes serious eye damage.*



*Acute Tox. 4 H302 Harmful if swallowed.*

*Skin Irrit. 2 H315 Causes skin irritation.*

- **Label elements**
- **GHS label elements**  
*The substance is classified and labelled according to the Globally Harmonised System (GHS).*
- **Hazard pictograms**



- **Signal word** *Danger*
- **Hazard-determining components of labelling:**  
*malonic acid*
- **Hazard statements**  
*Harmful if swallowed.*  
*Causes skin irritation.*  
*Causes serious eye damage.*
- **Precautionary statements**  
*If medical advice is needed, have product container or label at hand.*  
*Keep out of reach of children.*  
*Read label before use.*  
*Wear protective gloves / eye protection / face protection.*

**Lembar Data Keselamatan**  
**menurut Peraturan Menteri Perindustrian RI No. 87/M-IND/**  
**PER/9/2009**

Printing date 28.06.2018

Revision: 28.06.2018

**Trade name: Malonic Acid**

(Contd. of page 1)

- IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*  
*Rinse mouth.*  
*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*  
*Continue rinsing.*  
*Immediately call a POISON CENTER/doctor.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Other hazards**
  - **Results of PBT and vPvB assessment**
  - **PBT: Not applicable.**
  - **vPvB: Not applicable.**

### 3 Komposisi /Informasi tentang Bahan Penyusun Senyawa Tunggal

- **Chemical characterisation: Substances**
- **CAS No. Description**  
141-82-2 malonic acid
- **Identification number(s)**
- **EC number: 205-503-0**

### 4 Tindakan Pertolongan Pertama pada Kecelakaan

- **Description of first aid measures**
- **After inhalation: In case of unconsciousness place patient stably in side position for transportation.**
- **After skin contact: Immediately wash with water and soap and rinse thoroughly.**
- **After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.**
- **After swallowing: Call for a doctor immediately.**
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed No further relevant information available.**
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Tindakan pemadaman kebakaran

- **Extinguishing media**
- **Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.**
- **Special hazards arising from the substance or mixture No further relevant information available.**
- **Advice for firefighters**
- **Protective equipment: No special measures required.**

### 6 Tindakan Penanggulangan jika terjadi Tumpahan dan Kebocoran

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions: Do not allow to enter sewers/ surface or ground water.**
- **Methods and material for containment and cleaning up:**  
Use neutralising agent.  
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**  
See Section 7 for information on safe handling.

(Contd. on page 3)

ID

**Lembar Data Keselamatan**  
**menurut Peraturan Menteri Perindustrian RI No. 87/M-IND/**  
**PER/9/2009**

Printing date 28.06.2018

Revision: 28.06.2018

**Trade name: Malonic Acid**

(Contd. of page 2)

See Section 8 for information on personal protection equipment.  
 See Section 13 for disposal information.

### 7 Penanganan dan Penyimpanan

- **Handling:**
- **Precautions for safe handling** Thorough dedusting.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15-30°C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:**
- **Specific end use(s)** No further relevant information available.

### 8 Kontrol Paparan/ Perlindungan Diri

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
 Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing  
 Wash hands before breaks and at the end of work.  
 Avoid contact with the skin.  
 Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 4)

**Lembar Data Keselamatan**  
 menurut Peraturan Menteri Perindustrian RI No. 87/M-IND/  
 PER/9/2009

Printing date 28.06.2018

Revision: 28.06.2018

Trade name: Malonic Acid

(Contd. of page 3)

· Eye protection:



Tightly sealed goggles

### 9 Sifat fisika dan kimia

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Powder
Colour:	White
Odour:	Indeterminate
Odour threshold:	Not determined.

· pH-value: Not applicable.

· Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gas): Product is not flammable.

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Not determined.

· Explosive properties: Product does not present an explosion hazard.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure: Not applicable.

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with  
 · water: Soluble.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic:	Not applicable.
Kinematic:	Not applicable.

· Solvent content:

VOC (EC) 0.00 %

Solids content: 100.0 %

(Contd. on page 5)

ID

**Lembar Data Keselamatan**  
**menurut Peraturan Menteri Perindustrian RI No. 87/M-IND/**  
**PER/9/2009**

Printing date 28.06.2018

Revision: 28.06.2018

Trade name: Malonic Acid

(Contd. of page 4)

· **Other information** No further relevant information available.

### 10 Stabilitas dan Reaktivitas

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Informasi Toksikologi

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

**ATE (Acute Toxicity Estimates)**

Oral	LD50	1,310 mg/kg (rat)
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**141-82-2 malonic acid**

Oral	LD50	1,310 mg/kg (rat)
------	------	-------------------

Inhalative	LC50/4 h	8,989 mg/L (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation** No sensitising effects known.

### 12 Informasi Ekologi

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
 Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water  
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
 Must not reach sewage water or drainage ditch undiluted or unneutralised.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

ID  
(Contd. on page 6)

**Lembar Data Keselamatan**  
menurut Peraturan Menteri Perindustrian RI No. 87/M-IND/  
PER/9/2009

Printing date 28.06.2018

Revision: 28.06.2018

Trade name: Malonic Acid

(Contd. of page 5)

### 13 Pembuangan Limbah

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Informasi Transpor/Pengangkutan

· <b>UN-Number</b> · <b>ADR, IMDG, IATA</b>	Not regulated
· <b>UN proper shipping name</b> · <b>ADR, IMDG, IATA</b>	Not regulated
· <b>Transport hazard class(es)</b> · <b>ADR, IMDG, IATA</b> · <b>Class</b>	Not regulated
· <b>Packing group</b> · <b>ADR, IMDG, IATA</b>	Not regulated
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	Not regulated

### 15 Informasi yang Berkaitan dengan Regulasi

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **GHS label elements**  
The substance is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS05 GHS07

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
malonic acid
- **Hazard statements**  
Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye damage.

(Contd. on page 7)

**Lembar Data Keselamatan**  
**menurut Peraturan Menteri Perindustrian RI No. 87/M-IND/**  
**PER/9/2009**

Printing date 28.06.2018

Revision: 28.06.2018

**Trade name: Malonic Acid**

(Contd. of page 6)

- **Precautionary statements**

*If medical advice is needed, have product container or label at hand.*

*Keep out of reach of children.*

*Read label before use.*

*Wear protective gloves / eye protection / face protection.*

*IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*

*Rinse mouth.*

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

*Continue rinsing.*

*Immediately call a POISON CENTER/doctor.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** Substance is not listed.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Informasi Lain

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Department issuing SDS:** Quality Control Dept.

- **Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*VOC: Volatile Organic Compounds (USA, EU)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Acute Tox. 4: Acute toxicity – Category 4*

*Skin Irrit. 2: Skin corrosion/irritation – Category 2*

*Eye Dam. 1: Serious eye damage/eye irritation – Category 1*