

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 16 Aug 2022

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product name:

Crotonaldehyde

### 1.1. Catalog No.:

685697

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

HPC Standards GmbH  
Am Wieseneck 7

04451 Cunnersdorf  
Deutschland

Tel. +49 34291 3372-36  
Fax. +49 34291 3372-39  
contact@hpc-standards.com

### 1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36  
This number is only available during office hours.

## 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture  
Classification according to Regulation (EC) No 1272/2008  
Flammable liquids (Category 2), H225  
Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Inhalation (Category 1), H330  
Acute toxicity, Dermal (Category 3), H311  
Skin irritation (Category 2), H315  
Serious eye damage (Category 1), H318  
Germ cell mutagenicity (Category 2), H341  
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335  
Specific target organ toxicity - repeated exposure (Category 2), H373  
Short-term (acute) aquatic hazard (Category 1), H400

### 2.2. Label elements

#### 2.2.1. Pictogram



## 2.2.2.

### 2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram Signal word Danger

Hazard statement(s)

H225 Highly flammable liquid and vapour.

H301 + H311 Toxic if swallowed or in contact with skin.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H330 Fatal if inhaled.

H335 May cause respiratory irritation.

H341 Suspected of causing genetic defects.

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

H400 Very toxic to aquatic life.

Precautionary statement(s)

P201 Obtain special instructions before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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

P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

Rinse mouth.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 +

P310

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.

Supplemental Hazard

Statements

none

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Lachrymator.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Formula : C<sub>4</sub>H<sub>6</sub>O

Molecular weight : 70,09 g/mol

CAS-No. : 123-73-9

Component Classification Concentration

(2E)-2-Butenal

Flam. Liq. 2; Acute Tox. 3;

Acute Tox. 1; Acute Tox.

<= 100 % 3; Skin Irrit. 2; Eye Dam.

1; Muta. 2; STOT SE 3;

STOT RE 2; Aquatic Acute

1; H225, H301, H330,

H311, H315, H318, H341,

H335, H373, H400

M-Factor - Aquatic Acute:

10

2,6-di-tert-Butyl-p-cresol

Aquatic Chronic 1; H410

M-Factor - Aquatic Acute:

1

M-Factor - Aquatic

Chronic: 1

>= 0,1 - <

0,25 %

### 3.1.1. Formula

C<sub>4</sub>H<sub>6</sub>O

### 3.1.2. Molecular Weight (g/mol)

70.09

### 3.1.3. CAS-No.

123-73-9

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

#### Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. 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

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

No data available

## 5. FIRE-FIGHTING 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  
Use water spray to cool unopened containers.

## 6. ACCIDENTAL RELEASE MEASURES

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

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

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

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

### 6.4 Reference to other sections

For disposal see section 13.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

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

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

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature 2 - 8 °C

### 7.3 Specific end use(s)

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

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- a) Appearance Form: liquid
- Colour: colourless
- b) Odour pungent
- c) Odour Threshold No data available d) pH No data available
- e) Melting point/freezing point
- Melting point/range: -76 °C - lit.
- f) Initial boiling point and boiling range
- 104 °C - lit.
- g) Flash point 9 °C - closed cup
- h) Evaporation rate No data available
- i) Flammability (solid, gas)
- No data available
- j) Upper/lower flammability or explosive limits
- Upper explosion limit: 19,5 %(V)
- Lower explosion limit: 2,15 %(V)
- k) Vapour pressure 43 hPa at 20 °C
- 193 hPa at 55 °C
- l) Vapour density 2,42 - (Air = 1.0)
- m) Relative density 0,846 g/mL at 25 °C
- n) Water solubility 425,4 g/l at 20 °C
- o) Partition coefficient: n-octanol/water
- No data available
- p) Auto-ignition temperature
- No data available
- q) Decomposition temperature
- No data available
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available
- 9.2 Other safety information
- Relative vapour density
- 2,42 - (Air = 1.0)

## 10. STABILITY AND REACTIVITY

- 10.1 Reactivity
- No data available
- 10.2 Chemical stability
- Stable under recommended storage conditions.
- Contains the following stabiliser(s):
- Water (1 %)
- 2,6-di-tert-Butyl-p-cresol ( $\geq 0,1$  -  $\leq 0,2$  %)
- 10.3 Possibility of hazardous reactions
- No data available
- 10.4 Conditions to avoid
- Heat, flames and sparks. 10.5 Incompatible materials
- Oxidizing agents
- 10.6 Hazardous decomposition products
- Hazardous decomposition products formed under fire conditions. - Carbon oxides
- Other decomposition products - No data available
- In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Mouse - 240 mg/kg

LC50 Inhalation - Rat - 4 h - 0,3 mg/l

Dermal: No data available

LD50 Subcutaneous - Rat - 140 mg/kg

Remarks: Behavioral:Excitement. Behavioral:Convulsions or effect on seizure threshold.

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

In vitro tests showed mutagenic effects

Carcinogenicity

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.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

No data available

### 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

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

Very toxic to aquatic life.

No data available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

14.1 UN number  
ADR/RID: 1143 IMDG: 1143 IATA: 1143  
14.2 UN proper shipping name  
ADR/RID: CROTONALDEHYDE, STABILIZED  
IMDG: CROTONALDEHYDE, STABILIZED  
IATA: Crotonaldehyde  
Passenger Aircraft: Not permitted for transport  
Cargo Aircraft: Not permitted for transport  
14.3 Transport hazard class(es)  
ADR/RID: 6.1 (3) IMDG: 6.1 (3) IATA: 6.1 (3)  
14.4 Packaging group  
ADR/RID: I IMDG: I IATA: -  
14.5 Environmental hazards  
ADR/RID: yes IMDG Marine pollutant: yes IATA: no  
14.6 Special precautions for user  
No data available

## 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.  
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)  
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:  
15.2 Chemical safety assessment  
For this product a chemical safety assessment was not carried out

## 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!