

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde $\geq 99,5\%$, for synthesis

article number: **4372**
Version: **2.0 en**
Replaces version of: 2020-01-30
Version: (1)

date of compilation: 2020-01-30
Revision: 2022-08-02

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

1.1 Product identifier

| | |
|---------------------------------|---|
| Identification of the substance | Benzaldehyde $\geq 99,5\%$, for synthesis |
| Article number | 4372 |
| EC number | 202-860-4 |
| CAS number | 100-52-7 |

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

| | |
|---------------------------|---|
| Relevant identified uses: | Laboratory chemical Laboratory and analytical use |
| Uses advised against: | Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). |

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0
Telefax: +49 (0) 721 - 56 06 149
e-mail: sicherheit@carlroth.de
Website: www.carlroth.de

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

e-mail (competent person): sicherheit@carlroth.de

1.4 Emergency telephone number

| Name | Street | Postal code/city | Telephone | Website |
|---|-----------|----------------------|--------------|---------|
| National Poisons Information Service City Hospital | Dudley Rd | B187QH Birmingham | 844 892 0111 | |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

| Section | Hazard class | Cat-egory | Hazard class and category | Hazard statement |
|---------|---------------------------|-----------|---------------------------|------------------|
| 3.10 | Acute toxicity (oral) | 4 | Acute Tox. 4 | H302 |
| 3.1I | Acute toxicity (inhal.) | 4 | Acute Tox. 4 | H332 |
| 3.2 | Skin corrosion/irritation | 2 | Skin Irrit. 2 | H315 |

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde $\geq 99,5\%$, for synthesis

article number: **4372**

| Section | Hazard class | Cat-egory | Hazard class and category | Hazard statement |
|---------|---|-----------|---------------------------|------------------|
| 3.3 | Serious eye damage/eye irritation | 2 | Eye Irrit. 2 | H319 |
| 3.8R | Specific target organ toxicity - single exposure (respiratory tract irritation) | 3 | STOT SE 3 | H335 |
| 4.1C | Hazardous to the aquatic environment - chronic hazard | 3 | Aquatic Chronic 3 | H412 |

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling

Signal word

Warning

Pictograms

GHS07



Hazard statements

| | |
|-----------|---|
| H302+H332 | Harmful if swallowed or if inhaled |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |
| H412 | Harmful to aquatic life with long lasting effects |

Precautionary statements

Precautionary statements - prevention

P280 Wear protective gloves/eye protection/face protection

Precautionary statements - response

| | |
|----------------|---|
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing |
| P312 | Call a POISON CENTRE/doctor if you feel unwell |

2.3 Other hazards

This material is combustible, but will not ignite readily.

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde ≥99,5 %, for synthesis

article number: **4372**

SECTION 3: Composition/information on ingredients

3.1 Substances

| | |
|-------------------|---------------------------------|
| Name of substance | Benzaldehyde |
| Molecular formula | C ₇ H ₆ O |
| Molar mass | 106,1 g/mol |
| CAS No | 100-52-7 |
| EC No | 202-860-4 |

Substance, Specific Conc. Limits, M-factors, ATE

| Specific Conc. Limits | M-Factors | ATE | Exposure route |
|-----------------------|-----------|----------------------------|----------------------------|
| - | - | 1.300 mg/kg >10 mg/l/4h | oral inhalation: vapour |

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In case of skin irritation, consult a physician.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

Following ingestion

Rinse mouth with water (only if the person is conscious). Call a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Vomiting, Irritation, Cough, Dyspnoea

4.3 Indication of any immediate medical attention and special treatment needed

none

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde $\geq 99,5$ %, for synthesis

article number: **4372**

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings
water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible. Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Hazardous combustion products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde $\geq 99,5$ %, for synthesis

article number: **4372**

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation.

Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep under nitrogen.

Incompatible substances or mixtures

Observe hints for combined storage.

Protect against external exposure, such as

humidity, UV-radiation/sunlight, contact with air/oxygen

Consideration of other advice:

Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

Human health values

| Relevant DNELs and other threshold levels | | | | |
|---|-----------------------|------------------------------------|-------------------|----------------------------|
| Endpoint | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
| DNEL | 9,8 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| DNEL | 9,8 mg/m ³ | human, inhalatory | worker (industry) | chronic - local effects |
| DNEL | 1,14 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde $\geq 99,5\%$, for synthesis

article number: 4372

Environmental values

| Relevant PNECs and other threshold levels | | | | |
|---|-----------------|-----------------------|------------------------------|------------------------------|
| End-point | Threshold level | Organism | Environmental compartment | Exposure time |
| PNEC | 0 mg/l | aquatic organisms | freshwater | short-term (single instance) |
| PNEC | 0 mg/l | aquatic organisms | marine water | short-term (single instance) |
| PNEC | 7,59 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| PNEC | 0,004 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| PNEC | 0 mg/kg | aquatic organisms | marine sediment | short-term (single instance) |
| PNEC | 0,001 mg/kg | terrestrial organisms | soil | short-term (single instance) |

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection.

Skin protection



• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

Butyl caoutchouc (butyl rubber)

• material thickness

0,5 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde $\geq 99,5\%$, for synthesis

article number: 4372

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of $> 65\text{ }^{\circ}\text{C}$, colour code: Brown).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|---|
| Physical state | liquid |
| Colour | colourless - light yellow |
| Odour | like bitter almonds |
| Melting point/freezing point | $-26\text{ }^{\circ}\text{C}$ (ECHA) |
| Boiling point or initial boiling point and boiling range | $179\text{ }^{\circ}\text{C}$ (ECHA) |
| Flammability | this material is combustible, but will not ignite readily |
| Lower and upper explosion limit | 1,4 vol% (LEL) - 8,5 vol% (UEL) |
| Flash point | $64\text{ }^{\circ}\text{C}$ |
| Auto-ignition temperature | $190\text{ }^{\circ}\text{C}$ |
| Decomposition temperature | not relevant |
| pH (value) | 5,9 ($20\text{ }^{\circ}\text{C}$) |
| Kinematic viscosity | not determined |
| Dynamic viscosity | 1,3 - 1,4 mPa s at $25\text{ }^{\circ}\text{C}$ |
| <u>Solubility(ies)</u> | |
| Water solubility | 6,95 g/l at $25\text{ }^{\circ}\text{C}$ |
| <u>Partition coefficient</u> | |
| Partition coefficient n-octanol/water (log value): | 1,4 ($25\text{ }^{\circ}\text{C}$) (ECHA) |
| Vapour pressure | 1,3 hPa at $20\text{ }^{\circ}\text{C}$ |
| <u>Density and/or relative density</u> | |
| Density | $1,05\text{ g/cm}^3$ at $20\text{ }^{\circ}\text{C}$ |
| Relative vapour density | 3,66 at $20\text{ }^{\circ}\text{C}$ (air = 1) |
| Particle characteristics | not relevant (liquid) |

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde $\geq 99,5\%$, for synthesis

article number: 4372

Other safety parameters

Oxidising properties none

9.2 Other information

Information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics:

Surface tension 70,5 mN/m (20 °C) (ECHA)

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

If heated

Vapours may form explosive mixtures with air.

If exposed to air

Peroxide formation possible with air oxygen.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: strong oxidiser, Alkalis, Alkali metals, Aluminium, Iron, Phenol, Oxygen

10.4 Conditions to avoid

UV-radiation/sunlight. Humidity. Contact with air/oxygen. Keep away from heat.

10.5 Incompatible materials

aluminium, iron, copper, bronze, brass, Rubber articles, different plastics

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5. Peroxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to GHS

Acute toxicity

Harmful if swallowed. Harmful if inhaled.

| Acute toxicity | | | | | |
|----------------|----------|--------------|---------|--------|--------|
| Exposure route | Endpoint | Value | Species | Method | Source |
| oral | LD50 | 1.300 mg/kg | rat | | TOXNET |
| dermal | LD50 | >2.000 mg/kg | rabbit | | ECHA |

Skin corrosion/irritation

Causes skin irritation.

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde $\geq 99,5$ %, for synthesis

article number: 4372

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

vomiting, nausea

• If in eyes

Causes serious eye irritation

• If inhaled

Irritation to respiratory tract, cough, Dyspnoea

• If on skin

causes skin irritation

• Other information

Other adverse effects: Liver and kidney damage, Headache, Vertigo, Dyspnoea, Spasms, Dizziness, Unconsciousness

11.2 Endocrine disrupting properties

Not listed.

11.3 Information on other hazards

There is no additional information.

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde ≥99,5 %, for synthesis

article number: **4372**

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

| Aquatic toxicity (acute) | | | | |
|--------------------------|-----------|-----------------------|--------|---------------|
| Endpoint | Value | Species | Source | Exposure time |
| LC50 | 1,07 mg/l | fish | ECHA | 96 h |
| EC50 | 19,7 mg/l | aquatic invertebrates | ECHA | 48 h |
| ErC50 | 33,1 mg/l | algae | ECHA | 72 h |

Biodegradation

The substance is readily biodegradable.

12.2 Process of degradability

Theoretical Oxygen Demand: 2,412 mg/mg

Theoretical Carbon Dioxide: 2,903 mg/mg

Biochemical Oxygen Demand: >0,5 - <5 g/g at 5 d

| Process of degradability | | |
|---------------------------|------------------|------|
| Process | Degradation rate | Time |
| biotic/abiotic | 66 % | 16 d |
| DOC removal | 100 % | 19 d |
| oxygen depletion | >60 % | 28 d |
| carbon dioxide generation | 95 % | 28 d |

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

| | |
|---------------------------|--------------------|
| n-octanol/water (log KOW) | 1,4 (25 °C) (ECHA) |
|---------------------------|--------------------|

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Not listed.

12.7 Other adverse effects

Data are not available.

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde ≥99,5 %, for synthesis

article number: **4372**

SECTION 13: Disposal considerations

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Waste catalogue ordinance (Germany).

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number or ID number

| | |
|-----------|---------|
| ADRRID | UN 1990 |
| IMDG-Code | UN 1990 |
| ICAO-TI | UN 1990 |

14.2 UN proper shipping name

| | |
|-----------|--------------|
| ADRRID | BENZALDEHYDE |
| IMDG-Code | BENZALDEHYDE |
| ICAO-TI | Benzaldehyde |

14.3 Transport hazard class(es)

| | |
|-----------|---|
| ADRRID | 9 |
| IMDG-Code | 9 |
| ICAO-TI | 9 |

14.4 Packing group

| | |
|-----------|-----|
| ADRRID | III |
| IMDG-Code | III |
| ICAO-TI | III |

14.5 Environmental hazards

not assigned

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde $\geq 99,5$ %, for synthesis


article number: 4372

14.7 Maritime transport in bulk according to IMO instruments


The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations


Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information

| | |
|---|-----------------------------------|
| Proper shipping name | BENZALDEHYDE |
| Particulars in the transport document | UN1990, BENZALDEHYDE, 9, III, (E) |
| Classification code | M11 |
| Danger label(s) | 9 |
|  | |
| Excepted quantities (EQ) | E1 |
| Limited quantities (LQ) | 5 L |
| Transport category (TC) | 3 |
| Tunnel restriction code (TRC) | E |
| Hazard identification No | 90 |
| Emergency Action Code | 3Z |

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information

| | |
|---|-----|
| Classification code | M11 |
| Danger label(s) | 9 |
|  | |
| Excepted quantities (EQ) | E1 |
| Limited quantities (LQ) | 5 L |
| Transport category (TC) | 3 |
| Hazard identification No | 90 |

International Maritime Dangerous Goods Code (IMDG) - Additional information

| | |
|---|------------------------------|
| Proper shipping name | BENZALDEHYDE |
| Particulars in the shipper's declaration | UN1990, BENZALDEHYDE, 9, III |
| Marine pollutant | - |
| Danger label(s) | 9 |
|  | |
| Special provisions (SP) | - |
| Excepted quantities (EQ) | E1 |
| Limited quantities (LQ) | 5 L |

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde $\geq 99,5$ %, for synthesis

article number: 4372

EmS F-A, S-A

Stowage category A

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Proper shipping name Benzaldehyde

Particulars in the shipper's declaration UN1990, Benzaldehyde, 9, III

Danger label(s) 9



Excepted quantities (EQ) E1

Limited quantities (LQ) 30 kg

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant provisions of the European Union (EU)

Seveso Directive

| 2012/18/EU (Seveso III) | | | |
|-------------------------|---------------------------------------|---|-------|
| No | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes |
| | not assigned | | |

Deco-Paint Directive

| | |
|-------------|--------------------|
| VOC content | 100 % 1.050 g/l |
|-------------|--------------------|

Industrial Emissions Directive (IED)

| | |
|-------------|-----------|
| VOC content | 100 % |
| VOC content | 1.050 g/l |

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

Water Framework Directive (WFD)

not listed

Regulation on the marketing and use of explosives precursors

not listed

Regulation on drug precursors

not listed

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde ≥99,5 %, for synthesis

article number: 4372

Regulation on substances that deplete the ozone layer (ODS)

not listed

Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

Regulation on persistent organic pollutants (POP)

not listed

National regulations(GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

not listed

Restrictions according to GB REACH, Annex 17

| Dangerous substances with restrictions (GB REACH, Annex 17) | | | |
|---|--|--------|----|
| Name of substance | Name acc. to inventory | CAS No | No |
| Benzaldehyde | this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC | | 3 |

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

| Country | Inventory | Status |
|---------|------------|---------------------|
| AU | AIIC | substance is listed |
| CA | DSL | substance is listed |
| CN | IECSC | substance is listed |
| EU | ECSI | substance is listed |
| EU | REACH Reg. | substance is listed |
| JP | CSCL-ENCS | substance is listed |
| KR | KECI | substance is listed |
| MX | INSQ | substance is listed |
| NZ | NZIoC | substance is listed |
| PH | PICCS | substance is listed |
| TR | CICR | substance is listed |
| TW | TCSI | substance is listed |
| US | TSCA | substance is listed |

Legend

| | |
|-----------|---|
| AIIC | Australian Inventory of Industrial Chemicals |
| CICR | Chemical Inventory and Control Regulation |
| CSCL-ENCS | List of Existing and New Chemical Substances (CSCL-ENCS) |
| DSL | Domestic Substances List (DSL) |
| ECSI | EC Substance Inventory (EINECS, ELINCS, NLP) |
| IECSC | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ | National Inventory of Chemical Substances |
| KECI | Korea Existing Chemicals Inventory |
| NZIoC | New Zealand Inventory of Chemicals |

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde $\geq 99,5\%$, for synthesis

article number: 4372

Legend

PICCS Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg. REACH registered substances
TCSI Taiwan Chemical Substance Inventory
TSCA Toxic Substance Control Act

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Alignment to regulation:

Restructuring: section 9, section 14

| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---------|--|---|-----------------|
| 2.1 | | Classification acc. to GHS: change in the listing (table) | yes |
| 2.1 | | The most important adverse physicochemical, human health and environmental effects: Spillage and fire water can cause pollution of watercourses. | yes |
| 2.2 | | Hazard statements: change in the listing (table) | yes |
| 2.2 | | Precautionary statements - prevention: change in the listing (table) | yes |
| 2.2 | Labelling of packages where the contents do not exceed 125 ml: Signal word: Warning | | yes |
| 2.2 | | Labelling of packages where the contents do not exceed 125 ml: change in the listing (table) | yes |
| 2.2 | | Labelling of packages where the contents do not exceed 125 ml: change in the listing (table) | yes |
| 2.2 | | Precautionary statements - response | yes |
| 2.2 | | Precautionary statements - response: change in the listing (table) | yes |
| 2.3 | Other hazards: There is no additional information. | Other hazards: This material is combustible, but will not ignite readily. | yes |
| 2.3 | | Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB. | yes |

Abbreviations and acronyms

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde $\geq 99,5$ %, for synthesis

article number: **4372**

| Abbr. | Descriptions of used abbreviations |
|-----------|---|
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road) |
| ATE | Acute Toxicity Estimate |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DNEL | Derived No-Effect Level |
| EC50 | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval |
| EC No | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| ErC50 | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control |
| GB REACH | The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| ICAO-TI | Technical instructions for the safe transport of dangerous goods by air |
| IMDG | International Maritime Dangerous Goods Code |
| IMDG-Code | International Maritime Dangerous Goods Code |
| LC50 | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval |
| LD50 | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval |
| LEL | Lower explosion limit (LEL) |
| NLP | No-Longer Polymer |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| UEL | Upper explosion limit (UEL) |
| VOC | Volatile Organic Compounds |

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Benzaldehyde $\geq 99,5$ %, for synthesis

article number: 4372

| Abbr. | Descriptions of used abbreviations |
|-------|--|
| vPvB | Very Persistent and very Bioaccumulative |

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text |
|------|--|
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H412 | Harmful to aquatic life with long lasting effects. |

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.