

Safety data sheet

acc. to Safe Work Australia - Code of Practice



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

article number: **4372**
Version: **GHS 3.0 en**
Replaces version of: 2022-08-02
Version: (GHS 2)

date of compilation: 2020-01-30
Revision: 2024-05-03

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
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). Food, drink and animal feeding-stuffs.

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 |
|--|-----------------|--------------------|-----------|---------|
| NSW Poisons Information Centre Childrens Hospital | Hawkesbury Road | 2145 Westmead, NSW | 131126 | |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

| Section | Hazard class | Category | Hazard class and category | Hazard statement |
|---------|---------------------------|----------|---------------------------|------------------|
| 2.6 | Flammable liquid | 4 | Flam. Liq. 4 | H227 |
| 3.10 | Acute toxicity (oral) | 4 | Acute Tox. 4 | H302 |
| 3.11 | Acute toxicity (inhal.) | 4 | Acute Tox. 4 | H332 |
| 3.2 | Skin corrosion/irritation | 2 | Skin Irrit. 2 | H315 |

Safety data sheet

acc. to Safe Work Australia - Code of Practice



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 | 2A | Eye Irrit. 2A | H319 |
| 3.7 | Reproductive toxicity | 1B | Repr. 1B | H360Df |
| 3.8R | Specific target organ toxicity - single exposure (respiratory tract irritation) | 3 | STOT SE 3 | H335 |

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources.

2.2 Label elements

Labelling

Signal word

Danger

Pictograms

GHS07, GHS08



Hazard statements

| | |
|-----------|--|
| H227 | Combustible liquid |
| H302+H332 | Harmful if swallowed or if inhaled |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |
| H360Df | May damage the unborn child. Suspected of damaging fertility |

Precautionary statements

Precautionary statements - prevention

| | |
|------|---|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. - No smoking |
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray |
| P280 | Wear protective gloves |

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 CENTER or doctor/physician if you feel unwell |
| P370+P378 | In case of fire: Use sand, carbon dioxide or powder extinguisher for extinction |

Precautionary statements - storage

| | |
|-----------|---|
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed |
|-----------|---|

Precautionary statements - disposal

| | |
|------|--|
| P501 | Dispose of contents/container to industrial combustion plant |
|------|--|

For professional users only

Safety data sheet

acc. to Safe Work Australia - Code of Practice



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

article number: 4372

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.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

| | |
|-------------------|-----------------------|
| Name of substance | Benzaldehyde |
| Molecular formula | C_7H_6O |
| Molar mass | 106.1 g/mol |
| CAS No | 100-52-7 |

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). In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). 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 Safe Work Australia - Code of Practice



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. In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may 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. 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

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray. Avoidance of ignition sources.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

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.

Safety data sheet

acc. to Safe Work Australia - Code of Practice



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

article number: 4372

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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation. Avoid exposure.

Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge.

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. Use local and general ventilation.

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.

Safety data sheet

acc. to Safe Work Australia - Code of Practice



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

article number: 4372

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 |

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.

Safety data sheet

acc. to Safe Work Australia - Code of Practice



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

article number: 4372

- **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.

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 °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 °C (ECHA) |
| Boiling point or initial boiling point and boiling range | 179 °C (ECHA) |
| Flammability | flammable liquid in accordance with GHS criteria |
| Lower and upper explosion limit | 1.4 vol% (LEL) - 8.5 vol% (UEL) |
| Flash point | 64 °C |
| Auto-ignition temperature | 190 °C |
| Decomposition temperature | not relevant |
| pH (value) | 5.9 (20 °C) |
| Kinematic viscosity | not determined |
| Dynamic viscosity | 1.3 – 1.4 mPa s at 25 °C |
| <u>Solubility(ies)</u> | |
| Water solubility | 6.95 g/l at 25 °C |
| <u>Partition coefficient</u> | |
| Partition coefficient n-octanol/water (log value): | 1.4 (25 °C) (ECHA) |

Safety data sheet

acc. to Safe Work Australia - Code of Practice



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

article number: 4372

| | |
|--|---------------------------------|
| Vapour pressure | 1.3 hPa at 20 °C |
| <u>Density and/or relative density</u> | |
| Density | 1.05 g/cm ³ at 20 °C |
| Relative vapour density | 3.66 at 20 °C (air = 1) |

Particle characteristics not relevant (liquid)

Other safety parameters

Oxidising properties none

9.2 Other information

Information with regard to physical hazard classes: There is no additional information.

Other safety characteristics:

Surface tension 70.5 mN/m (20 °C) (ECHA)

SECTION 10: Stability and reactivity

10.1 Reactivity

It's a reactive substance. Risk of ignition.

If heated

Risk of ignition. 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

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

Safety data sheet

acc. to Safe Work Australia - Code of Practice



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

article number: **4372**

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to GHS

Acute toxicity

Harmful if swallowed. Harmful if inhaled.

GHS of the United Nations, annex 4. May be harmful in contact with skin.

| Acute toxicity | | | | | |
|---------------------------|----------|---------------|---------|--------|--------|
| Exposure route | Endpoint | Value | Species | Method | Source |
| oral | LD50 | 1,430 mg/kg | rat | | ECHA |
| dermal | LD50 | >2,000 mg/kg | rabbit | | ECHA |
| inhalation: dust/ mist | LC50 | 1 – 5 mg/l/4h | rat | | ECHA |

Skin corrosion/irritation

Causes skin irritation.

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

May damage the unborn child. Suspected of damaging fertility.

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

Safety data sheet

acc. to Safe Work Australia - Code of Practice



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

article number: 4372

- **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

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

SECTION 12: Ecological information

12.1 Toxicity

Toxic 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 |

12.2 Persistence and degradability

Theoretical Oxygen Demand: 2.412 mg/mg
Theoretical Carbon Dioxide: 2.903 mg/mg

Biodegradation

The substance is readily biodegradable.

| Process of degradability | | |
|---------------------------|------------------|------|
| Process | Degradation rate | Time |
| biotic/abiotic | 95 % | 28 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

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

Safety data sheet

acc. to Safe Work Australia - Code of Practice



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

article number: **4372**

12.7 Other adverse effects

Data are not available.

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.

Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

Relevant provisions relating to waste(Basel Convention)

Properties of waste which render it hazardous

H11 Toxic (Delayed or chronic)

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. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number

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

14.2 UN proper shipping name

| | |
|----------------|--------------|
| UN RTDG | BENZALDEHYDE |
| IMDG-Code | BENZALDEHYDE |
| ICAO-TI | Benzaldehyde |

14.3 Transport hazard class(es)

| | |
|----------------|---|
| UN RTDG | 9 |
| IMDG-Code | 9 |
| ICAO-TI | 9 |

14.4 Packing group

| | |
|----------------|-----|
| UN RTDG | III |
| IMDG-Code | III |
| ICAO-TI | III |

Safety data sheet

acc. to Safe Work Australia - Code of Practice



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

article number: 4372

14.5 Environmental hazards hazardous to the aquatic environment

14.6 Special precautions for user

There is no additional information.

14.7 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 information National regulations Additional information (UN RTDG)

| | |
|------------------------------|---|
| UN number | 1990 |
| Class | 9 |
| Environmental hazards | Yes Hazardous to the aquatic environment |
| Packing group | III |
| Danger label(s) | 9 Fish and tree |



Special provisions (SP) -
UN RTDG

Excepted quantities (EQ) E1
UN RTDG

Limited quantities (LQ) 5 L
UN RTDG

Emergency Action Code 3Z

International Maritime Dangerous Goods Code (IMDG) - Additional information

| | |
|--|--|
| Proper shipping name | BENZALDEHYDE |
| Particulars in the shipper's declaration | UN1990, BENZALDEHYDE, 9, III, MARINE POLLUTANT |
| Marine pollutant | yes (hazardous to the aquatic environment) |
| Danger label(s) | 9, "Fish and tree" |



| | |
|--------------------------|----------|
| Special provisions (SP) | - |
| Excepted quantities (EQ) | E1 |
| Limited quantities (LQ) | 5 L |
| EmS | F-A, S-A |
| Stowage category | A |

Safety data sheet

acc. to Safe Work Australia - Code of Practice



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

article number: 4372

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

| | |
|--|--|
| Proper shipping name | Benzaldehyde |
| Particulars in the shipper's declaration | UN1990, Benzaldehyde, 9, III |
| Environmental hazards | yes (hazardous to the aquatic environment) |
| 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

There is no additional information.

National regulations(Australia)

Australian Inventory of Chemical Substances(AICS)

Substance is listed.

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 (ACTIVE) |
| VN | NCI | 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) |

Safety data sheet

acc. to Safe Work Australia - Code of Practice



Benzaldehyde ≥99,5 %, for synthesis

article number: 4372

Legend

| | |
|------------|---|
| 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 |
| NCI | National Chemical Inventory |
| NZIoC | New Zealand Inventory of Chemicals |
| 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)

| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---------|---|---|-----------------|
| 2.1 | | Classification acc. to GHS: change in the listing (table) | yes |
| 2.2 | Signal word: Warning | Signal word: Danger | yes |
| 2.2 | | Pictograms: change in the listing (table) | yes |
| 2.2 | | Hazard statements: change in the listing (table) | yes |
| 2.2 | | Precautionary statements - disposal: change in the listing (table) | yes |
| 2.3 | | Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%. | yes |
| 14.5 | Environmental hazards: not assigned | Environmental hazards: hazardous to the aquatic environment | yes |
| 14.8 | | Environmental hazards: Yes Hazardous to the aquatic environment | yes |
| 14.8 | Danger label(s): 9 | Danger label(s): 9 Fish and tree | yes |
| 14.8 | | Danger label(s): change in the listing (table) | yes |
| 14.8 | | Emergency Action Code: 3Z | yes |
| 14.8 | Particulars in the shipper's declaration: UN1990, BENZALDEHYDE, 9, III | Particulars in the shipper's declaration: UN1990, BENZALDEHYDE, 9, III, MARINE POLLUTANT | yes |
| 14.8 | Marine pollutant: - | Marine pollutant: yes (hazardous to the aquatic environment) | yes |
| 14.8 | Danger label(s): 9 | Danger label(s): 9, "Fish and tree" | yes |
| 14.8 | | Danger label(s): change in the listing (table) | yes |

Safety data sheet

acc. to Safe Work Australia - Code of Practice



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

article number: 4372

| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---------|---------------------------|--|-----------------|
| 14.8 | | Environmental hazards: yes (hazardous to the aquatic environment) | yes |
| 15.1 | | National inventories: change in the listing (table) | yes |

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|-----------|--|
| 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 |
| ED | Endocrine disruptor |
| 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 |
| 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 |
| UEL | Upper explosion limit (UEL) |
| UN RTDG | UN Recommendations on the Transport of Dangerous Good |
| vPvB | Very Persistent and very Bioaccumulative |

Safety data sheet

acc. to Safe Work Australia - Code of Practice



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

article number: 4372

Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. 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 |
|--------|---|
| H227 | Combustible liquid. |
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H360Df | May damage the unborn child. Suspected of damaging fertility. |

Disclaimer

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