Benzaldehyde  
CAS No 100-52-7

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

1.1 Product identifiers
   Product name : Benzaldehyde
   CAS-No. : 100-52-7

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Identified uses : Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet
   Company : Central Drug House (P) Ltd
             7/28 Vardaan House
             New Delhi-10002
             INDIA
   Telephone : +91 11 49404040
   Email : care@cdhfinechemical.com

1.4 Emergency telephone number
   Emergency Phone #: +91 11 49404040 (9:00 am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
   Classification according to Regulation (EC) No 1272/2008
   Acute toxicity, Oral (Category 4), H302
   For the full text of the H-Statements mentioned in this Section, see Section 16.

   Classification according to EU Directives 67/548/EEC or 1999/45/EC
   Xn Harmful R22
   For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements
   Labelling according Regulation (EC) No 1272/2008
   Pictogram
   ! Skin Irritator

   Signal word : Warning
   Hazard statement(s) : H302 Harmful if swallowed.
   Precautionary statement(s) : none
   Supplemental Hazard : none
2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms: Artificial essential oil of almond

Formula: C\textsubscript{7}H\textsubscript{6}O

Molecular Weight: 106.12 g/mol

CAS-No.: 100-52-7

EC-No.: 202-860-4

Index-No.: 605-012-00-5

Hazardous ingredients according to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzaldehyde</td>
<td>Acute Tox. 4; H302</td>
<td>&lt;= 100 %</td>
</tr>
<tr>
<td>CAS-No.</td>
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Hazardous ingredients according to Directive 1999/45/EC

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</table>

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 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. 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
SECTION 5: Firefighting 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

no data available

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

Under fire conditions, material may decompose to form flammable and/or explosive mixtures in air. Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. 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 wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 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 under nitrogen. 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.
Air, light, and moisture sensitive.

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment

Eye/face protection
Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate, use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance
   Form: liquid
   Colour: colourless

b) Odour
   no data available

c) Odour Threshold
   no data available

d) pH
   5.9 at 20 °C

e) Melting point/freezing point
   Melting point/range: -26 °C - lit.

f) Initial boiling point and boiling range
   178 - 179 °C - lit.

g) Flash point
   no data available

h) Evaporation rate
   no data available

i) Flammability (solid, gas)
   no data available

j) Upper/lower flammability or explosive limits
   Upper explosion limit: 8.5 % (V)
   Lower explosion limit: 1.4 % (V)

k) Vapour pressure
   5 hPa at 45 °C

l) Vapour density
   3.66 - (Air = 1.0)

m) Relative density
   1.045 g/cm³ at 25 °C

n) Water solubility
   slightly soluble

o) Partition coefficient: n-octanol/water
   log Pow: 1.5

p) Auto-ignition temperature
   no data available

q) Decomposition
   no data available
9.2 Other safety information

Relative vapour density 3.66 - (Air = 1.0)

SECTION 10: Stability and reactivity

10.1 Reactivity
no data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
no data available

10.4 Conditions to avoid

10.5 Incompatible materials
Strong oxidizing agents, Strong reducing agents, Strong bases, Alkali metals, Aluminium, Iron, phenols, Oxygen

10.6 Hazardous decomposition products
Other decomposition products - no data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - rat - 1.300 mg/kg

LD50 Dermal - rabbit - 1.250 mg/kg

Skin corrosion/irritation
Skin - rabbit
Result: Skin irritation - 24 h

Serious eye damage/eye irritation
Eyes - rabbit
Result: Mild eye irritation

Respiratory or skin sensitisation
Germ cell mutagenicity
Laboratory experiments have shown mutagenic effects.

Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

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: CU4375000

Central nervous system depression, Prolonged or repeated exposure to skin causes defatting and dermatitis.
Liver - Irregularities - Based on Human Evidence

SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish
LC50 - Lepomis macrochirus - 1,07 mg/l - 96 h
mortality
LOEC - Pimephales promelas (fathead minnow) - 0,45 mg/l - 7 d
mortality
NOEC - Pimephales promelas (fathead minnow) - 0,22 mg/l - 7 d

LC50 - Leuciscus idus (Golden orfe) - 62 mg/l - 48 h

Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) - 50 mg/l - 24 h

12.2 Persistence and degradability
Biodegradability
Biotic/Aerobic - Exposure time 28 d
Result: 95 % - Readily biodegradable.

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
Toxic to aquatic life.
no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.
SECTION 14: Transport information

14.1 UN number
ADR/RID: 1990  
IMDG: 1990  
IATA: 1990

14.2 UN proper shipping name
ADR/RID: BENZALDEHYDE  
IMDG: BENZALDEHYDE  
IATA: Benzaldehyde

14.3 Transport hazard class(es)
ADR/RID: 9

14.4 Packaging group
ADR/RID: III

14.5 Environmental hazards
ADR/RID: no

14.6 Special precautions for user
no data available

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-statements referred to under sections 2 and 3.
Acute Tox.  Acute toxicity
H302  Harmful if swallowed.

Full text of R-phrases referred to under sections 2 and 3
Xn  Harmful
R22  Harmful if swallowed.

Further 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. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.