

<b>n-Butyraldehyde</b> <b>CAS No 123-72-8</b>	<b>MATERIAL SAFETY DATA SHEET</b> <b>SDS/MSDS</b>
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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifiers**

Product name : **n-Butyraldehyde**

CAS-No. : 123-72-8

**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  
 Ansari Road Daryaganj  
 New Delhi-110002  
 INDIA

Telephone : +91 11 49404040

Email : [care@cdhfinechemical.com](mailto:care@cdhfinechemical.com)

**1.4 Emergency telephone number**

Emergency Phone # : +91 11 49404040 (9:00am - 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**

Flammable liquids (Category 2), H225

Eye irritation (Category 2), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 Label elements**

**Labelling according Regulation (EC) No 1272/2008**

Pictogram



Signal word

Danger

Hazard statement(s)

H225

Highly flammable liquid and vapour.

H319

Causes serious eye irritation.

Precautionary statement(s)

P210

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms : Butanal

Formula : C<sub>4</sub>H<sub>8</sub>O

Molecular weight : 72.11 g/mol

CAS-No. : 123-72-8

EC-No. : 204-646-6

Index-No. : 605-006-00-2

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

Component		Classification	Concentration
<b>Butyraldehyde</b>			
CAS-No.	123-72-8	Flam. Liq. 2; Eye Irrit. 2; H225, H319	<= 100 %
EC-No.	204-646-6		
Index-No.	605-006-00-2		

For the full text of the H-Statements 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**  
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.

#### **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).
- 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 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.  
  
Stench. Dry residue is explosive.  
Storage class (TRGS 510): Flammable Liquids
- 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**

##### **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

Impervious clothing, Flame retardant antistatic protective clothing., 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 (US) or type ABEK (EN 14387) respirator cartridges as a backup to engine 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: clear, liquid<br>Colour: colourless                        |
| b) Odour  | pungent  |
| c) Odour Threshold                              | No data available  |
| d) pH   | 6.0 - 7.0 at 71 g/l at 20 °C                                     |
| e) Melting point/freezing point                 | Melting point/range: -96 °C - lit.                               |
| f) Initial boiling point and boiling range      | 75 °C - lit.   |
| g) Flash point                                  | -5 °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: 8 %(V)<br>Lower explosion limit: 1.8 %(V) |
| k) Vapour pressure                              | 90 mmHg at 20 °C   |
| l) Vapour density                               | 2.49 - (Air = 1.0)   |
| m) Relative density                             | 0.802-0.804 g/cm <sup>3</sup> at 20 °C                           |
| n) Water solubility                             | 50 g/l at 20 °C - OECD Test Guideline 105 - soluble              |
| o) Partition coefficient: n-octanol/water       | log Pow: 0.79  |
| p) Auto-ignition temperature                    | 190 °C<br>at 1013.0 hPa  |
| 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

- |                         |                    |
|-------------------------|--------------------|
| Surface tension         | 70 mN/m at 20 °C   |
| Relative vapour density | 2.49 - (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

Heat, flames and sparks. Extremes of temperature and direct sunlight.

### 10.5 Incompatible materials

Oxidizing agents, Strong bases, Strong reducing agents, Strong acids

### 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

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - 5,890 mg/kg(Butyraldehyde)  
(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - > 5.46 mg/l(Butyraldehyde)  
(OECD Test Guideline 403)

LD50 Dermal - Rabbit - 3,560 mg/kg(Butyraldehyde)

#### Skin corrosion/irritation

Skin - Rabbit(Butyraldehyde)

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - Rabbit(Butyraldehyde)

Result: Irritating to eyes. - 24 h

(Directive 67/548/EEC, Annex V, B.5.)

#### Respiratory or skin sensitisation

Buehler Test - Guinea pig(Butyraldehyde)

Result: Does not cause skin sensitisation.

(OECD Test Guideline 406)

#### Germ cell mutagenicity

No data available(Butyraldehyde)

Ames test(Butyraldehyde)

S. typhimurium

Result: negative

(Butyraldehyde)

Drosophila melanogaster - male

Result: negative

#### 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(Butyraldehyde)

**Specific target organ toxicity - single exposure**

No data available(Butyraldehyde)

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available(Butyraldehyde)

**Additional Information**

RTECS: ES2275000

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

**SECTION 12: Ecological information****12.1 Toxicity**

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - 25.8 mg/l - 96 h(Butyraldehyde)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 195 mg/l - 24 h(Butyraldehyde) (DIN 38412)
Toxicity to bacteria	EC50 - Photobacterium phosphoreum - 99.1 mg/l - 25 min(Butyraldehyde)

**12.2 Persistence and degradability**

Biodegradability aerobic - Exposure time 5 d(Butyraldehyde)  
Result: 46 - 57 % - Readily biodegradable (OECD Test Guideline 301C)

Ratio BOD/ThBOD 28 - 43 %(Butyraldehyde)

**12.3 Bioaccumulative potential**

No bioaccumulation is to be expected (log Pow <= 4).

**12.4 Mobility in soil**

No data available(Butyraldehyde)

**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**

Harmful to aquatic life.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. 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: 1129

IMDG: 1129

IATA: 1129

### 14.2 UN proper shipping name

ADR/RID: BUTYRALDEHYDE

IMDG: BUTYRALDEHYDE

IATA: Butyraldehyde

### 14.3 Transport hazard class(es)

ADR/RID: 3

IMDG: 3

IATA: 3

### 14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

### 14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

### 14.6 Special precautions for user

No data available

## SECTION 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.

### 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.

H225

Highly flammable liquid and vapour.

H319

Causes serious eye irritation.

### 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](http://www.cdhfinechemical.com) for additional terms and conditions of sale.