

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

**1.1 Product identifiers**

Product name: **BENZALDEHYDE**

CAS-No.: **100-52-7**

Product Number: **A66138**

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

Identified uses: Laboratory chemicals, Manufacture of substances

**1.3 Details of the supplier of the safety data sheet**

Company : Philip Harris Ltd., 2 Gregory Street, Hyde, Cheshire, SK14 4HR,  
UNITED KINGDOM

Telephone: +44 (0)845 1200 506 Fax: +44 (0)161 367 2140

Email: enquiries@philipharris.co.uk

**1.4 Emergency telephone number**

Emergency Phone #: **+44 (0)845 1200 506**

**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

**According to Regulation (EC) No1272/2008**

Acute toxicity (Category 4)

**According to European Directive 67/548/EEC as amended.**

Harmful if swallowed.

**2.2 Label elements**

Pictogram 

Signal word Warning

Hazard statement(s)

H302 Harmful if swallowed.

Precautionary statement(s) none

Hazard symbol(s)

Xn Harmful

R-phrase(s)

R22 Harmful if swallowed.

S-phrase(s)

S24 Avoid contact with skin.

**2.3 Other hazards** – Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

**Benzaldehyde** (*Synonyms : Artificial essential oil of almond*)

Formula: **C<sub>6</sub>H<sub>5</sub>CHO**  
Molecular Weight: **106.12g/mol**  
CAS-No.: **100-52-7**  
EC-No.: **202-860-4**  
Index-No.: **605-012-00-5**

### 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.

**In case of skin contact:**

Wash off with soap and plenty of water.

**In case of eye contact:**

Rinse thoroughly with plenty of water for at least 15 minutes

**If swallowed:**

Never give anything by mouth to an unconscious person. Rinse mouth with water.

#### 4.2 Most important symptoms and effects, both acute and delayed

no data available

#### 4.3 Indication of 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

no data available

#### 5.3 Precautions for fire-fighters

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.

## **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.

### **6.2 *Environmental precautions***

Do not let product enter drains.

### **6.3 *Methods and materials for containment and cleaning up***

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### **6.4 *Reference to other sections***

For disposal see section 13.

## **7. HANDLING AND STORAGE**

### **7.1 *Precautions for safe handling***

Avoid inhalation of vapour or mist. Keep away from sources of ignition. Take measures to prevent the build up of electrostatic charge.

### **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. Air, light, and moisture sensitive.

### **7.3 *Specific end uses***

no data available

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1 Control parameters**

#### **Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

### **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

##### **Skin protection**

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

##### **Body Protection**

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., 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).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |  |   |                           |
|--|---|---------------------------|
| a) Appearance:                                   | <b>Form:</b> Liquid                           | <b>Colour:</b> Colourless |
| b) Odour:  | no data available                             |                           |
| c) Odour Threshold:                              | no data available                             |                           |
| d) pH:   | 5.9 at 20 °C                                  |                           |
| e) Melting/freezing point:                       | -26 °C Melting point/range: no data available |                           |
| f) Initial boiling point and boiling range:      | 178 - 179 °C                                  |                           |
| g) Flash point:                                  | 64 °C - closed cup                            |                           |
| h) Evaporation rate:                             | no data available                             |                           |
| i) Flammability (solid, gas):                    | no data available                             |                           |
| j) Upper/lower flammability or explosive limits: | 1.4-8.5%(V)                                   |                           |
| k) Vapour pressure:                              | 5 hPa at 45 °C                                |                           |
| l) Vapour density:                               | 3.66 - (Air = 1.0)                            |                           |
| m) Relative density:                             | 1.045 g/mL at 25 °C                           |                           |
| n) Water solubility:                             | slightly soluble                              |                           |
| o) Partition coefficient: n-octanol/water:       | 1.5   |                           |
| p) Autoignition temperature:                     | 190 °C  |                           |
| 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

no data available

## 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

Air Exposure to moisture. Light. Heat.

### 10.5 Incompatible materials

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

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - rat - 1,300 mg/kg: Remarks: Behavioural: Somnolence (general depressed activity).  
Behavioural: Coma.

LD50 Dermal - rabbit - 1,250 mg/kg

#### Skin corrosion/irritation

Skin - rabbit - Skin irritation - 24 h

#### Serious eye damage/eye irritation

Eyes - rabbit - Mild eye irritation

#### Respiratory or skin sensitization

May cause allergic respiratory and skin reactions

#### 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

#### Potential health effects

<b>Inhalation</b>	May be harmful if inhaled. May cause respiratory tract irritation.
<b>Ingestion</b>	Harmful if swallowed.
<b>Skin</b>	May be harmful if absorbed through skin. May cause skin irritation.
<b>Eyes</b>	May cause eye irritation.

#### Signs and Symptoms of Exposure

Central nervous system depression, Prolonged or repeated exposure to skin causes defatting and dermatitis.

#### Additional Information

RTECS: CU4375000

## **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

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**

no data available

### **12.6 Other adverse effects**

no data available

## **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. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

#### **Contaminated packaging**

Dispose of as unused product.

#### 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 IMDG: 9 IATA: 9

##### 14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

##### 14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

##### 14.6 Special precautions for users

EMS-No: F-A, S-A

#### 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

no data available

#### 16. OTHER INFORMATION

Acute Tox. Acute toxicity

H302 Harmful if swallowed.

Xn Harmful

R22 Harmful if swallowed.