# SAFETY DATA SHEET

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

**1.1 *Product identifiers***

Product name: **CYCLOHEXANOL**

CAS-No.: **108-93-0**

Product Number: **A67439**

**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); Acute toxicity (Category 4); Specific target organ toxicity - single exposure (Category 3); Skin irritation (Category 2)

**According to European Directive 67/548/EEC as amended:** Harmful by inhalation and if swallowed. Irritating to respiratory system and skin.

**2.2 *Label elements***

Pictogram 

Signal word Warning

**Hazard statement(s):** H315 Causes skin irritation. H302 Harmful if swallowed. H332 Harmful if inhaled. H335 May cause respiratory irritation.

**Precautionary statement(s):** P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

**Hazard symbol(s):** Xn Harmful

**R-phrase(s):** R20/22 Harmful by inhalation and if swallowed. R37/38 Irritating to respiratory system and skin.

**S-phrase(s):** S24/25 Avoid contact with skin and eyes.

**2.3 *Other hazards*** – no data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 *Substances***

**Cyclohexanol**

| | |
|---|---|
| Formula: | $C_6H_{12}O$ |
| Molecular Weight: | **100.16g/mol** |
| CAS-No.: | **108-93-0** |
| EC-No.: | **203-630-6** |
| Index-No.: | **603-009-00-3** |

## 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:*** no data available

## 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 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.

**7.2** ***Conditions for safe storage, including any incompatibilities:*** Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Moisture sensitive.

**7.3** ***Specific end uses:*** no data available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1** ***Control parameters:***

**Components with workplace control parameters**

| Component | CAS No. | Value | Control Parameters | Update |
|---|---|---|---|---|
| Cyclohexanol | 108-93-0 | TWA | 50ppm 208mg/$m^3$ | 2005-04-06 |

UK EH40 Occupational Exposure Limits. Remarks Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used

**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:** The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

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

**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: **Form**: Liquid **Colour**: Colourless

b) Odour: no data available

c) Odour Threshold: no data available

d) pH: pH 6.5 at 40 g/l at 20 °C

e) Melting/freezing point: no data available Melting point/range: 20 - 22 °C

f) Initial boiling point and boiling range: 160 - 161 °C

g) Flash point: 68 °C - closed cup

h) Evaporation rate: no data available

i) Flammability (solid, gas): no data available

j) Upper/lower flammability or explosive limits: 1.25-12.25%(V)

k) Vapour pressure: 1.31 hPa at 25 °C

l) Vapour density: 4.01

m) Relative density: 0.948 g/mL at 25 °C

n) Water solubility: no data available

o) Partition coefficient: n-octanol/water: 1.25 at 25 °C

p) Autoignition temperature: 300 °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:*** no data available

**10.5 *Incompatible materials:*** no data available

**10.6 *Hazardous decomposition products:*** Hazardous decomposition products formed under fire conditions. - no data available

## 11. TOXICOLOGICAL INFORMATION

**11.1 *Information on toxicological effects***

**Acute toxicity:** LD50 Oral - rat - 1,400 mg/kg Remarks: Behavioural: Somnolence (general depressed activity). Lungs, Thorax, or Respiration: Other changes. Nutritional and Gross Metabolic: Weight loss or decreased weight gain.

LD50 Dermal - rabbit - > 1,000 mg/kg

**Skin corrosion/irritation:** Skin - rabbit - Skin irritation

**Serious eye damage/eye irritation:** Eyes - rabbit - Moderate eye irritation

**Respiratory or skin sensitization:** no data available

**Germ cell mutagenicity:** Genotoxicity in vitro - Human – leukocyte: Cytogenetic analysis

Genotoxicity in vitro - Mammal – lymphocyte: DNA damage

**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:** *Rat* – Subcutaneous. Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count). Testes, epididymis, sperm duct. Prostate, seminal vessicle, Cowper's gland, accessory glands.

*Gerbil* – Subcutaneous. Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count). Testes, epididymis, sperm duct. Prostate, seminal vessicle, Cowper's gland, accessory glands.

**Specific target organ toxicity - single exposure:** May cause damage to organs.

**Specific target organ toxicity - repeated exposure:** no data available

**Aspiration hazard:** no data available

**Potential health effects**

| | |
|---|---|
| **Inhalation** | Harmful if inhaled. Causes respiratory tract irritation. |
| **Ingestion** | Harmful if swallowed. |
| **Skin** | May be harmful if absorbed through skin. Causes skin irritation. |
| **Eyes** | May cause eye irritation. |

**Signs and Symptoms of Exposure:** prolonged or repeated exposure can cause:, Headache, Nausea, Tremors, Incoordination., burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Vomiting.

**Additional Information:** RTECS: GV7875000

## 12. ECOLOGICAL INFORMATION

**12.1 *Toxicity:*** Toxicity to fish LC50 - *Pimephales promelas* (fathead minnow) - 705 mg/L - 96 h

Toxicity to daphnia and other aquatic invertebrates.

EC50 - *Daphnia magna* (Water flea) - > 500 mg/L - 48 h

Toxicity to algae EC50 - *Desmodesmus subspicatus* (green algae) - 29.2 mg/L - 72 h

**12.2 *Persistence and degradability:*** no data available

**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: - IMDG: - IATA: -

**14.2 *UN proper shipping name***

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

**14.3 *Transport hazard class(es)***

ADR/RID: - IMDG: - IATA: -

**14.4 *Packaging group***

ADR/RID: - IMDG: - IATA: -

**14.5 *Environmental hazards***

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

**14.6 *Special precautions for users:*** -

## 15. REGULATORY INFORMATION

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

## 16. OTHER INFORMATION

Acute Tox. Acute toxicity

H302 Harmful if swallowed.

H315 Causes skin irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

Skin Irrit. Skin irritation

STOT SE Specific target organ toxicity - single exposure

Xn Harmful

R20/22 Harmful by inhalation and if swallowed.

R37/38 Irritating to respiratory system and skin.