

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifiers**Product name: **PHENOL**CAS-No.: **108-95-2**Product Number: **A70014****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 numberEmergency 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, Oral (Category 3), Acute toxicity, Inhalation (Category 3), Acute toxicity, Dermal (Category 3), Skin corrosion (Category 1B), Germ cell mutagenicity (Category 2), Specific target organ toxicity - repeated exposure (Category 2).

According to European Directive 67/548/EEC as amended: Possible risk of irreversible effects. Toxic by inhalation, in contact with skin and if swallowed. Causes burns. Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

2.2 Label elements

Pictogram



Signal word

Danger

Hazard statement(s): H301 Toxic if swallowed. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H331 Toxic if inhaled. H341 Suspected of causing genetic defects. H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statement(s): P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. P305 + P351 + P338 IF IN

EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor/ physician.



Hazard symbol(s):

R-phrase(s): R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R34 Causes burns. R48/20/21/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. R68 Possible risk of irreversible effects.

S-phrase(s): S24/25 Avoid contact with skin and eyes. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28 After contact with skin, wash immediately with plenty of polyethylene glycol. S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other hazards – Vesicant. Rapidly absorbed through skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Phenol (Synonyms : Hydroxybenzene)

Formula: **C₆H₅OH**
Molecular Weight: **94.11**
CAS-No.: **108-95-2**
EC-No.: **203-632-7**
Index-No.: **604-001-00-2**

Phosphinic acid

CAS-No.: **6303-21-5**
EC-No.: **228-601-5**

3.2 Mixtures

Component	Classification	Concentration
Phenol	Muta. 2; Acute Tox. 3; STOT RE 2; Skin Corr. 1B; H301,	<= 100 %
	H311, H314, H331, H341, H373 T, C, Mut.Cat.3, R23/24/25-R34-R48/20/21/22- R68	
Phosphinic acid	Skin Corr. 1B; H314 C, R34	>= 0.15 %

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: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes.

If swallowed: Do NOT induce vomiting. 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: Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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: Pick up and arrange disposal without creating dust. Sweep up and shovel. 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 formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities: Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Hygroscopic. Light sensitive. Store under inert gas.

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
Phenol	108-95-2	TWA	2ppm	2005-04-06
Phenol	108-95-2	TWA	2ppm 7.8mg/m ³	2000-06-16

UK. EH40 WEL - Workplace Exposure Limits. Remarks Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values Identifies the possibility of significant uptake through the skin Indicative.

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

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 particle respirator type N100 (US) or type P3 (EN 143) 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: Crystalline | Colour: no data available |
| b) Odour: | no data available | |
| c) Odour Threshold: | no data available | |
| d) pH: | pH 6.0 | |
| e) Melting/freezing point: | 40 - 42 °C | Melting point/range: no data available |
| f) Initial boiling point and boiling range: | 182 °C | |
| g) Flash point: | 79.0 °C - closed cup | |
| h) Evaporation rate: | no data available | |

- i) Flammability (solid, gas): no data available
j) Upper/lower flammability or explosive limits: 1.7 – 8.6% (V)
k) Vapour pressure: 6.3 hPa at 55.0 °C; 0.5 hPa at 20.0 °C
l) Vapour density: no data available
m) Relative density: 1.071 g/mL at 25 °C
n) Water solubility: no data available
o) Partition coefficient: n-octanol/water: n-octanol/water log Pow: 1.46
p) Autoignition temperature: 715 °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: Strong oxidizing agents, Strong bases, Strong acids

10.6 Hazardous decomposition products: Hazardous decomposition products formed under fire conditions. - Carbon oxides. Contains the following stabiliser(s): Phosphinic acid (0.15 %)

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity: LD50 Oral - rat - 410.0 - 650.0 mg/kg

LD50 Oral - rat - 317.0 mg/kg Remarks: Behavioural: Convulsions or effect on seizure threshold.

LC50 Inhalation - rat - 8 h - 900 mg/m³

LD50 Dermal - rabbit - 630.0 mg/kg

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: Eyes - rabbit - Severe eye irritation

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: In vitro tests showed mutagenic effects

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

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

Specific target organ toxicity - repeated exposure: May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard: no data available

Potential health effects

Inhalation Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion Harmful if swallowed. Causes burns.

Skin Toxic if absorbed through skin. Causes skin burns.

Eyes Causes eye burns.

Signs and Symptoms of Exposure: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Circulatory collapse, tachypnea, paralysis, Convulsions, Coma., necrosis of mouth and G.I. Tract, Jaundice, respiratory failure, cardiac arrest

Additional Information: RTECS: Not available

12. ECOLOGICAL INFORMATION

12.1 Toxicity: Toxicity to fish LC50 - *Leuciscus idus* (Golden orfe) - 14.00 - 25.00 mg/l - 48 h

LC50 - *Carassius auratus* (goldfish) - 36.10 - 68.80 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates.

EC50 - *Daphnia magna* (Water flea) - 12.00 mg/l - 24 h

EC100 - *Daphnia magna* (Water flea) - 100.00 mg/l - 24 h

Toxicity to algae EC50 - *Chlorella vulgaris* (Fresh water algae) - 370.00 mg/l - 96 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: Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN-Number

ADR/RID: 1671 IMDG: 1671 IATA: 1671

14.2 UN proper shipping name

ADR/RID: PHENOL, SOLID

IMDG: PHENOL, SOLID

IATA: PHENOL, SOLID

14.3 Transport hazard class(es)

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

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 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

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H331 Toxic if inhaled.

H341 Suspected of causing genetic defects.

H373 May cause damage to organs through prolonged or repeated exposure.

Muta. Germ cell mutagenicity

Skin Corr. Skin corrosion

STOT RE Specific target organ toxicity - repeated exposure

C Corrosive

T Toxic

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R34 Causes burns.

R48/20/21/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

R68 Possible risk of irreversible effects.