

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

Catalogue Number	CS-ER-01642
Product Name	Phenol(Secondary Standards traceble to USP)
CAS No.	108-95-2
Category	Pesticide Standards
Synonyms	Not available
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email sales@clearsynth.com for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Acute toxicity (Category 4)

2.2 Label Elements

Signal Word: Warning



Hazard Statement(s)

Code	Statement
H301	Not available
H311	Not available
H314	Not available
H331	Not available

H341	Not available
H373	Not available
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.
H302	Harmful if swallowed.
H360	Not available
H370	Not available
H372	Not available
H401	Not available
H412	Not available
H340	Not available

Precautionary Statement(s)

Code	Statement
P203	Not available
P260	Not available
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P262	Not available
P264	Wash hands thoroughly after handling.
P270	Not available
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P316	Not available
P301+P330+P331	Not available
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P302+P361+P354	Not available
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P354+P338	Not available
P316	Not available
P318	Not available

P319	Get medical help if you feel unwell.
P321	Specific treatment (see ... on this label).
P330	Not available
P361+P364	Not available
P363	Not available
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation
P264+P265	Not available
P273	Not available
P317	Not available
P391	Not available
P301+P317	Not available
P308+P316	Not available

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Phenol(Secondary Standards traceble to USP)

CAS Number : 108-95-2

Molecular Formula : C₆H₆O

Molecular Weight : 94.11

Parent Chemical : -

Synonyms : Not available

Concentration : Not available

SECTION 4: First aid measures

SECTION 4: First-aid measures

4.1 Description of first aid measures

General advice:

- Seek medical attention if symptoms occur or persist.
- Show this Safety Data Sheet to the physician in attendance.
- Remove contaminated clothing and shoes; wash before reuse.

Inhalation:

- Move person to fresh air.
- If breathing is difficult, seek medical attention.

Skin contact:

- Immediately flush skin with plenty of water.
- Remove contaminated clothing.
- Seek medical attention.

Eye contact:

- Rinse cautiously with water for several minutes.
- Remove contact lenses if present and easy to do; continue rinsing.
- Seek medical attention.

Ingestion:

- Rinse mouth.
- Do NOT induce vomiting.
- Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

- Not available.

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically.
- No data available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media:

- Water spray, alcohol-resistant foam, dry chemical, carbon dioxide (CO₂).

Unsuitable extinguishing media:

- Not available.

5.2 Special hazards arising from the substance or mixture

- Hazardous combustion products: Not available.
- Vapors may form explosive mixtures with air: Not available.

5.3 Advice for firefighters

- Wear self-contained breathing apparatus (SCBA) and full protective gear.
- Cool containers with water spray.
- Prevent fire-fighting water from entering drains or waterways.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Evacuate unnecessary personnel.
- Provide adequate ventilation.
- Avoid breathing vapors/mist.
- Avoid contact with skin and eyes.
- Wear appropriate personal protective equipment (see Section 8).

6.2 Environmental precautions

- Prevent further leakage or spillage if safe to do so.
- Avoid release to the environment.
- Prevent entry into drains, sewers, or waterways.

6.3 Methods and material for containment and cleaning up

- Contain spill.
- Absorb with inert material (e.g., sand, earth, vermiculite).
- Collect in suitable, labeled containers for disposal.
- Clean contaminated area with water and detergent where appropriate.

6.4 Reference to other sections

- See Section 8 for exposure controls/personal protection.
- See Section 13 for disposal considerations.

SECTION-7: Handling and storage

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Use only with adequate ventilation.
- Avoid contact with skin, eyes, and clothing.
- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Keep container tightly closed when not in use.
- Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

- Store in a cool, dry, well-ventilated place.
- Keep container tightly closed.
- Protect from heat and direct sunlight.
- Incompatible materials: Not available.

7.3 Specific end use(s)

- Laboratory/research standard. No data available.

SECTION 8: Exposure controls / personal protection

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits:

- Not available.

Biological limit values:

- Not available.

8.2 Exposure controls

Engineering controls:

- Use local exhaust ventilation or general ventilation to maintain exposure below applicable limits.

Personal protective equipment (PPE):

Eye/face protection:

- Safety glasses with side shields or chemical splash goggles.
- Skin protection:
- Wear protective gloves and protective clothing.
- Respiratory protection:
- If ventilation is inadequate, use appropriate respiratory protection.
- Hygiene measures:
- Do not eat, drink, or smoke when using this product.
- Wash hands after handling.
- Environmental exposure controls:
- Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available

Property	Value
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

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, sparks.

- Other conditions: Not available.

10.5 Incompatible materials

- Not available.

10.6 Hazardous decomposition products

- Not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- Acute toxicity: HUMAN TOXICITY: Phenol is toxic with a probable oral lethal dose to humans of 50-500 mg/kg. Some individuals may be hypersensitive with lethality or serious effects at very low exposures. Rapid absorption and severe systemic toxicity can occur after any route of exposure including skin. Death and severe toxicity are usually due to effects on the CNS, heart, blood vessels, lung, and kidneys. However, toxic manifestations may vary somewhat with the route. Observed effects from acute exposure may include: shock, delirium, coma, pulmonary distress, phenolic breath, scanty/dark urine, and death. Protracted or chronic exposure usually results in major damage to the liver, kidneys and eyes. Pigmentary changes of the skin have been noted. Consumption of water contaminated with phenol resulted in diarrhea, mouth sores, burning of the mouth, and dark urine. Phenol is highly caustic to tissues. Skin exposure results in pain, then numbness, blanching, severe burns, and eschar formation. Ingestion leads to burning of throat and severe gastrointestinal inflammation. Inhalation can result in pulmonary irritation and edema. ANIMAL TOXICITY: Toxicity in animals is similar to that of humans, although additional effects have been observed. LD50's in animals range from 250-500 mg/kg, differing very little with route of exposure or species, except for the cat which is unusually susceptible with an oral lethal dose of 80 mg/kg. Additional reported toxic effects include irritation and corrosivity of skin and eyes in rabbits, induction of skin tumors in mice,

reproductive effects in rats, and mutagenicity with Salmonella, E coli and Drosophila. Phenol is also highly toxic to aquatic life and frogs. METABOLISM: Phenol is metabolized and excreted principally by the kidneys as the sulfate or glucuronide, although some phenol may be excreted unchanged, especially at high doses. Other reported metabolites include hydroquinone, other quinones and catechols. LC50 (rat) = 316 mg/m3 (duration not stated);

- Skin corrosion/irritation: Phenol is irritating and corrosive at high concentrations. Phenol impairs the stratum corneum and produces coagulation necrosis by denaturing and precipitating proteins. It is suggested that dermal application of phenol increases the formation of free radicals in the skin, and that the redox cycling of these radicals reduces antioxidant capacity, leading to significant oxidative damage of protein, DNA, and lipids. Phenol also act as a cyclooxygenase inhibitor. (A227, L624)

- Serious eye damage/eye irritation: No data available.

- Respiratory or skin sensitization: No data available.

- Germ cell mutagenicity: HUMAN TOXICITY: Phenol is toxic with a probable oral lethal dose to humans of 50-500 mg/kg. Some individuals may be hypersensitive with lethality or serious effects at very low exposures. Rapid absorption and severe systemic toxicity can occur after any route of exposure including skin. Death and severe toxicity are usually due to effects on the CNS, heart, blood vessels, lung, and kidneys. However, toxic manifestations may vary somewhat with the route. Observed effects from acute exposure may include: shock, delirium, coma, pulmonary distress, phenolic breath, scanty/dark urine, and death. Protracted or chronic exposure usually results in major damage to the liver, kidneys and eyes. Pigmentary changes of the skin have been noted. Consumption of water contaminated with phenol resulted in diarrhea, mouth sores, burning of the mouth, and dark urine. Phenol is highly caustic to tissues. Skin exposure results in pain, then numbness, blanching, severe burns, and eschar formation. Ingestion leads to burning of throat and severe gastrointestinal inflammation. Inhalation can result in pulmonary irritation and edema. ANIMAL TOXICITY: Toxicity in animals is similar to that of humans, although additional effects have been observed. LD50's in animals range from 250-500 mg/kg, differing very little with route of exposure or species, except for the cat which is unusually susceptible with an oral lethal dose of 80 mg/kg. Additional reported toxic effects include irritation and corrosivity of skin and eyes in rabbits, induction of skin tumors in mice, reproductive effects in rats, and mutagenicity with Salmonella, E coli and Drosophila. Phenol is also highly toxic to aquatic life and frogs. METABOLISM: Phenol is metabolized and excreted principally by the kidneys as the sulfate or glucuronide, although some phenol may be excreted unchanged, especially at high doses. Other reported metabolites include hydroquinone, other quinones and catechols.

- Carcinogenicity: HUMAN TOXICITY: Phenol is toxic with a probable oral lethal dose to humans of 50-500 mg/kg. Some individuals may be hypersensitive with lethality or serious effects at very low exposures. Rapid absorption and severe systemic toxicity can occur after any route of exposure including skin. Death and severe toxicity are usually due to effects on the CNS, heart, blood vessels, lung, and kidneys. However, toxic manifestations may vary somewhat with the route. Observed effects from acute exposure may include: shock, delirium, coma, pulmonary distress, phenolic breath, scanty/dark urine, and death. Protracted or chronic exposure usually results in major damage to the liver, kidneys and eyes. Pigmentary changes of the skin have been noted. Consumption of water contaminated with phenol resulted in diarrhea, mouth sores, burning of the mouth, and dark urine. Phenol is highly caustic to tissues. Skin exposure results in pain, then numbness, blanching, severe burns, and eschar formation. Ingestion leads to burning of throat and severe gastrointestinal inflammation. Inhalation can result in pulmonary irritation and edema. ANIMAL TOXICITY: Toxicity in animals is similar to that of humans, although additional effects have been observed. LD50's in animals range from 250-500 mg/kg, differing very little with route of exposure or species, except for the cat which is unusually susceptible with an oral lethal dose of 80 mg/kg. Additional reported toxic effects include irritation and corrosivity of skin and eyes in rabbits, induction of skin tumors in mice, reproductive effects in rats, and mutagenicity with Salmonella, E coli and Drosophila. Phenol is also highly toxic to aquatic life and frogs. METABOLISM: Phenol is metabolized and excreted principally by the kidneys as the sulfate or glucuronide, although some phenol may be excreted unchanged, especially at high doses. Other reported

metabolites include hydroquinone, other quinones and catechols. Evaluation: There is inadequate evidence in humans for the carcinogenicity of phenol. There is inadequate evidence in experimental animals for the carcinogenicity of phenol. Overall evaluation: Phenol is not classifiable as to its carcinogenicity to humans (Group 3).
 - Reproductive toxicity: HUMAN TOXICITY: Phenol is toxic with a probable oral lethal dose to humans of 50-500 mg/kg. Some individuals may be hypersensitive with lethality or serious effects at very low exposures. Rapid absorption and severe systemic toxicity can occur after any route of exposure including skin. Death and severe toxicity are usually due to effects on the CNS, heart, blood vessels, lung, and kidneys. However, toxic manifestations may vary somewhat with the route. Observed effects from acute exposure may include: shock, delirium, coma, pulmonary distress, phenolic breath, scanty/dark urine, and death. Protracted or chronic exposure usually results in major damage to the liver, kidneys and eyes. Pigmentary changes of the skin have been noted. Consumption of water contaminated with phenol resulted in diarrhea, mouth sores, burning of the mouth, and dark urine. Phenol is highly caustic to tissues. Skin exposure results in pain, then numbness, blanching, severe burns, and eschar formation. Ingestion leads to burning of throat and severe gastrointestinal inflammation. Inhalation can result in pulmonary irritation and edema. ANIMAL TOXICITY: Toxicity in animals is similar to that of humans, although additional effects have been observed. LD50's in animals range from 250-500 mg/kg, differing very little with route of exposure or species, except for the cat which is unusually susceptible with an oral lethal dose of 80 mg/kg. Additional reported toxic effects include irritation and corrosivity of skin and eyes in rabbits, induction of skin tumors in mice, reproductive effects in rats, and mutagenicity with Salmonella, E coli and Drosophila. Phenol is also highly toxic to aquatic life and frogs. METABOLISM: Phenol is metabolized and excreted principally by the kidneys as the sulfate or glucuronide, although some phenol may be excreted unchanged, especially at high doses. Other reported metabolites include hydroquinone, other quinones and catechols.

- STOT-single exposure: No data available.

- STOT-repeated exposure: HUMAN TOXICITY: Phenol is toxic with a probable oral lethal dose to humans of 50-500 mg/kg. Some individuals may be hypersensitive with lethality or serious effects at very low exposures. Rapid absorption and severe systemic toxicity can occur after any route of exposure including skin. Death and severe toxicity are usually due to effects on the CNS, heart, blood vessels, lung, and kidneys. However, toxic manifestations may vary somewhat with the route. Observed effects from acute exposure may include: shock, delirium, coma, pulmonary distress, phenolic breath, scanty/dark urine, and death. Protracted or chronic exposure usually results in major damage to the liver, kidneys and eyes. Pigmentary changes of the skin have been noted. Consumption of water contaminated with phenol resulted in diarrhea, mouth sores, burning of the mouth, and dark urine. Phenol is highly caustic to tissues. Skin exposure results in pain, then numbness, blanching, severe burns, and eschar formation. Ingestion leads to burning of throat and severe gastrointestinal inflammation. Inhalation can result in pulmonary irritation and edema. ANIMAL TOXICITY: Toxicity in animals is similar to that of humans, although additional effects have been observed. LD50's in animals range from 250-500 mg/kg, differing very little with route of exposure or species, except for the cat which is unusually susceptible with an oral lethal dose of 80 mg/kg. Additional reported toxic effects include irritation and corrosivity of skin and eyes in rabbits, induction of skin tumors in mice, reproductive effects in rats, and mutagenicity with Salmonella, E coli and Drosophila. Phenol is also highly toxic to aquatic life and frogs. METABOLISM: Phenol is metabolized and excreted principally by the kidneys as the sulfate or glucuronide, although some phenol may be excreted unchanged, especially at high doses. Other reported metabolites include hydroquinone, other quinones and catechols. Long-term exposure to phenol at work has been associated with cardiovascular disease, irritation of the respiratory tract and muscle twitching depending on the route of exposure. Ingestion of liquid products containing concentrated phenol can cause serious gastrointestinal damage and even death. Application of concentrated phenol to the skin can cause severe skin damage. Longer-term exposure to high levels of phenol caused damage to the heart, kidneys, liver, and lungs. Liver effects, as judged by increased serum activities of alanine aminotransferase (ALT) and aspartate amino transferase (AST), were also reported in a case of prolonged inhalation exposure to phenol. (L624)

- Aspiration hazard: No data available.

Likely routes of exposure

- Human poison by ingestion... Moderately toxic by skin contact. A severe eye and skin irritant.

Symptoms related to the physical, chemical and toxicological characteristics

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SECTION 12: Ecological information

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12.1 Toxicity

- No data available.

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

- Not available.

12.6 Endocrine disrupting properties

- No data available.

12.7 Other adverse effects

- No data available.

SECTION 13: Disposal considerations

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Dispose of contents/container in accordance with local/regional/national/international regulations.
- Do not discharge to drains.
- Incineration or disposal via a licensed waste contractor may be appropriate.
- Contaminated packaging: Dispose of as unused product unless cleaned according to applicable regulations.

SECTION 14: Transport information

SECTION 14: Transport information

14.1 UN number

- Not available.

14.2 UN proper shipping name

- Not available.

14.3 Transport hazard class(es)

- Not available.

14.4 Packing group

- Not available.

14.5 Environmental hazards

- Not available.

14.6 Special precautions for user

- Not available.

14.7 Maritime transport in bulk according to IMO instruments

- Not available.

SECTION 15: Regulatory information

SECTION 15: Regulatory information

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

- Not available.

15.2 Chemical safety assessment

- No data available.

SECTION 16: Other information

SECTION 16: Other information

Product identification:

- Product name: Phenol (Secondary Standards traceable to USP)
- Catalog No.: CS-ER-01642
- CAS No.: 108-95-2
- Molecular weight: 94.11

- Category: Pesticide Standards
- Supplier: Clearsynth Labs Ltd., Mumbai, India
- Emergency phone: +91-22-245045900

Revision information:

- Not available.

Disclaimer:

- The information provided is believed to be accurate based on available data, but no warranty is expressed or implied. Users are responsible for determining suitability for their particular application and for compliance with applicable regulations.

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