

**Safety data sheet as per COMMISSION REGULATION (EU) No 453/2010  
of 20 May 2010 amending Regulation (EC) No 1907/2006  
Product: Phenol**



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

**1.1 Product identifier**

**Trade name: Phenol**

**CAS No.:** 108-95-2

**EC No.:** 203-632-7

**Pre-Registration number** 17-2119643026-46-0000

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

**Relevant identified uses:** Precursor to a large collection of drugs, most notably aspirin but also many herbicides and pharmaceuticals.

**Sector of use:** SU 3 industrial uses

**Environmental release category:** Manufacture (ERC1) and formulations (ERC2)

**Uses identified against:** Dependent on relevant national regulations

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

**Manufacturer/Supplier:**

Prasol Chemicals Ltd.,  
Prasol House, Plot No.A-17/2/3,  
T.T.C. Indl. Area, Khairne M.I.D.C.,  
Navi Mumbai - 400 710.  
Maharashtra, India.  
Tel: +91-22-27782555  
Fax: +91-22-27782430

**Further information obtainable from:**

Mr. Dhaval Parikh

e-mail:sales@prasolchem.com; inquiry@prasolchem.com

**1.4 Information in case of emergency:**

Product safety department Tel: +91-22- 27782555; Fax:+91-22- 27782430

Other Comments (e.g. language(s) of the phone service): English

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP)**



GHS05

Corrosion



GHS06

skull and crossbones



GHS08

health hazard

Acute Tox. 3

H301 Toxic if swallowed

Acute Tox. 3

H311 Toxic in contact with skin.

Skin Corr. 1B

H314 Causes severe skin burns and eye damage

Acute Tox. 3

H331 Toxic if inhaled

Muta. 2

H341 Suspected of causing genetic defects

STOT RE 2

H373 May cause damage to organs through prolonged or repeated exposure

**2.1.2 Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



T; Toxic



C; Corrosive



Xn; Harmful

Muta. Cat. 3

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

R34- Causes burns

R48/20/21/22-68- Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. Possible risk of irreversible effects

**Information concerning particular hazards for human and environment:** Not applicable

**2.2 Label elements**

**Labeling according to Regulation (EC) No 1272/2008 (CLP)**

The substance is classified and labeled according to the CLP regulation.

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**Hazard pictograms**



GHS05

Corrosion



GHS06

skull and crossbones



GHS08

health hazard

**Signal word** Danger

**Hazard-determining components of labeling:** Void

**Hazard statements**

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H331 Toxic if inhaled.

H314 Causes severe skin burns and eye damage.

H341 Suspected of causing genetic defects.

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

**Precautionary statements**

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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. P361 Remove/Take off immediately all contaminated clothing.

P405 Store locked up

P501 Dispose of contents/container in accordance with local/ regional/ national/international regulations

**2.3 Other hazards**

**Results of PBT and vPvB assessment:** Not applicable

**SECTION 3: Composition/information on ingredients**

**Chemical characterization:**

CAS No. Description  
108-95-2 Phenol

**Identification number(s)**

**EC Number:** 203-632-7

**Index number:** 604-001-00-2

**Additional information:**

**Molecular Formula:** C<sub>6</sub>H<sub>6</sub>O

**Molecular Weight:** 94.11 g/mol

**SECTION 4: First aid measures**

**4.1 General information:**

Immediately remove any clothing soiled by the product.

Remove breathing equipment only after contaminated clothing have been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration.

**After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness, place patient stably in side position for transportation.

**After skin contact:**

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

**After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Information for doctor:** Treat symptomatically and supportively.

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

*Pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea*

**4.3 Indication of any immediate medical attention and special treatment needed** *No further relevant information available.*

**SECTION 5: Firefighting measures**

**5.1 Suitable extinguishing agents:** *For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective.*

*Cool all affected containers with flooding quantities of water.*

**5.2 Special hazards arising from the substance or mixture** *Combustible. Vapours are heavier than air and will spread at floor level. In case of warming, development of explosive gases/vapours. Hazardous vapours may form during fires. Carbon monoxide and carbon dioxide may be liberated in case of fire*

**5.3 Protective equipment:** *Wear self-contained breathing apparatus for fire-fighting if necessary.*

**Additional information** *Additional information: Hazchem-Code: 2X*

*Do not expose to high temperature. Danger of bursting and explosion. Move container away or cool with water from a protected position. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.*

**SECTION 6: Accidental release measures**

**6.1 Person-related safety precautions:**

*Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition.*

*Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations.*

**6.2 Measures for environmental protection:**

*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 Measures for cleaning/collecting:**

*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. Keep in suitable, closed containers for disposal.*

**6.4 Reference to other sections**

*See Section 7 for information on safe handling.*

*See Section 8 for information on personal protection equipment.*

*See Section 13 for disposal information*

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling:**

*Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Normal measures for preventive fire protection.*

**Information about fire - and explosion protection:** *Keep ignition sources away. Do not smoke.*

**7.2 Conditions for safe storage, including any incompatibilities:**

*Store in a cool, dry, well-ventilated area.*

*Containers which are opened must be carefully resealed and kept upright to prevent leakage.*

**Information about storage in one common storage facility:** *Store away from incompatible materials.*

**Further information about storage conditions:** *Store at room temperature. Handle and store under inert gas. Light sensitive.*

**7.3 Specific end use(s)** *No further relevant information available*

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Ingredients with limit values that require monitoring at the workplace:**

*Phenol IOELV (EU) 7.8 mg/m<sup>3</sup>, 2 ppm Skin*

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**Additional information:** The lists valid during the making were used as basis.

**8.2 Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Store protective clothing separately. Avoid contact with the eyes and skin.

**Respiratory protection:**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose 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).

**Protection of hands:** Protective gloves

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

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Tightly sealed goggles

Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

**Body protection:** Complete suit protecting against chemical., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Risk management measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

<b>Appearance</b>	: Colorless to light pink liquid
<b>Odour</b>	: sweetish
<b>Odour threshold</b>	: 0.048 ppm
<b>pH</b>	: 6.0
<b>Melting point/Melting range</b>	: 40-42°C
<b>Boiling point/Boiling range</b>	: 181.8°C
<b>Flash point</b>	: 79°C (closed cup)
<b>Evaporation rate</b>	: <0.01 (butyl acetate=1)
<b>Flammability (solid, gas)</b>	: Product is not flammable
<b>Upper/lower flammability or explosive limits:</b>	
<b>Lower:</b>	1.7 Vol %
<b>Upper:</b>	8.6 Vol %
<b>Vapour pressure at 20°C</b>	: 0.48 hPa
<b>Vapour density</b>	: 3.25 (Air = 1) at boiling point
<b>Density at 25°C</b>	: 1.07 g/cm <sup>3</sup>
<b>Solubility in / Miscibility with water</b>	: 87.5 g/l at 25°C pH 5.0
<b>Partition coefficient (n-octanol/water) at 23°C:</b>	1.47 log POWat 30°C
<b>Auto-ignition temperature</b>	: 595 °C at 101.3 kPa
<b>Decomposition temperature</b>	: no data available
<b>Viscosity</b>	: 3.437mPa s (dynamic)at 50°C
<b>Explosive properties</b>	: no data available
<b>Oxidising properties</b>	: no data available
<b>9.2 Other information</b>	
<b>Surface tension at 20°C</b>	: 38.2mN/m at 50oC



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**SECTION 10: Stability and reactivity**

**10.1 Reactivity:** hygroscopic

**10.2 Chemical stability:** Product is stable under normal storage conditions

**10.3 Possibility of hazardous reactions:** Exothermic reaction with aldehyde, halogens, hydrogen peroxide, oxidising agent, strong acids and bases, formaldehyde; risk of explosion with nitrites, nitrates, peroxy compound.

**10.4 Conditions to avoid:** Heat, ignition sources (flames, sparks), light, incompatible materials

**10.5 Incompatible materials:** Oxidizing agents, aldehydes, isocyanates, nitrites, nitrides, Friedel-Crafts catalysts. Avoid ignitable vapour-air-mixtures. Unsuitable materials Metals, Rubber, various plastics, alloys

**10.6 Hazardous decomposition products :** Carbon monoxide and carbon dioxide

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity:**

LD50	Oral	rat	317 mg/kg
LC50	Inhalation	rat	900mg/m <sup>3</sup> (8h)
LD50	Dermal	rabbit	850 mg/kg

**Skin corrosion/irritation:** Toxic if absorbed through skin. Causes skin burns.

**Serious eye damage/irritation:** Causes eye burns

**Respiratory or skin sensitization:** No sensitizing effects known

**Germ cell mutagenicity:** in vitro tests showed mutagenic effects (Muta. Cat. 3)

**Carcinogenicity:** 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

**STOT-single exposure:** no data available

**STOT-repeated exposure:** no data available

**Aspiration hazard:** no data available

**Additional toxicological information:**

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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

**SECTION 12: Ecological information**

**12.1 Toxicity**

**Aquatic toxicity:**

LC50	14d	21.93mg/L	(Poecilia reticulata)
EC10	16d	0.46mg/L	(Daphnia magna)
LC50	24Hrs	125 mg/l	(Fish)
LC50	1Hr	>50 mg/l	(Fathead Minnow)
EC50	96h	61.1mg/L	(Pseudokirchneriella subcapitata/ green algae)

**12.2 Persistence and degradability**

**Biodegradation:** Readily biodegradable

**12.3 Bio accumulative potential** BCF 17.5, does not bioaccumulate.

**12.4 Mobility in soil:** no data available

**12.5 Results of PBT and vPvB assessment** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted. To be provided after the REACH registration

**12.6 Other adverse effects** toxic to aquatic life with long lasting effects

**SECTION 13: Disposal considerations**

**Waste treatment methods**

**Product:** This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

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**Un-cleaned packaging:**  
**Contaminated packaging:** Dispose of as unused product

#### **SECTION 14: Transport information**

**Land Transport (ADR/RID) Marine Transport (IMDG) Air Transport (ICAO/ IATA)**

**14.1 UN/ID Number:** 1671

**14.2 UN proper shipping name:** PHENOL, SOLID (Phenol at temperatures below melting point (<40,9 °C))

**14.3 Transport hazard class:** 6.1 Code T2

**14.4 Packaging group:** II

**14.5 Environmental hazards:** not a marine pollutant

**14.6 Special precautions for the user:**

**Danger group (Kemmler):** 60

**EmS Number** : F-A, S-A

**Tunnel restriction code** : D/E

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** 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 COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006

**Hazard pictograms** Please refer section 2

**Signal word** Danger

**Labeling according to EU guidelines:** The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

**Code letter and hazard designation of product:** please refer Section 2

**Risk phrases:** please refer Section 2

**15.2 Chemical safety assessment** A Chemical Safety Assessment has not been carried out and shall be available at the time of REACH registration

**Substances of very high concern (SVHC) according to REACH, Article 57:** The substance is not listed as SVHC.

#### **SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing MSDS:**

Product safety department.

**Contact:**

Tel: +91-022-27782555

Fax: +91-022-27782430

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

EC10: 10% effect concentration

EC50: 50% effect concentration

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

**Sources**

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/ EEC and

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1999/45/EC, and amending Regulation (EC) No 1907/2006

ECHA: [http://apps.echa.europa.eu/registered/data/dossiers/DISS-9d87b5ae-c1a2-150b-e044-00144f67d249/DISS-9d87b5ae-c1a2-150b-e044-00144f67d249\\_DISS-9d87b5ae-c1a2-150b-e044-00144f67d249.html](http://apps.echa.europa.eu/registered/data/dossiers/DISS-9d87b5ae-c1a2-150b-e044-00144f67d249/DISS-9d87b5ae-c1a2-150b-e044-00144f67d249_DISS-9d87b5ae-c1a2-150b-e044-00144f67d249.html)

Sigma-Aldrich MSDS:

<http://www.sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=IN&language=en&productNumber=W322318&brand=ALDRICH&PageToGoToURL=http%3A%2F%2Fwww.sigmaaldrich.com%2Fcatalog%2Fproduct%2Faldrich%2Fw322318%3Flang%3Den>

CDC: <http://www.cdc.gov/niosh/docs/81-123/pdfs/0493.pdf>

ChemIDplus: <http://chem.sis.nlm.nih.gov/chemidplus/rn/108-95-2>

ACTOR Webpage: <http://actor.epa.gov/actor/GenericChemical?casrn=108-95-2>

Toxnet database: <http://toxnet.nlm.nih.gov/cpdb/chempages/PHENOL.html>

**Data compared to the previous version altered.**

- Section 2: Hazard Identification
- Section 4: First-aid measures.
- Section 5: Fire-fighting measures
- Section 6: Accidental Release measures
- Section 7: Handling and storage.
- Section 8: Exposure Controls/Personal protection.
- Section 9: Physical and Chemical properties.
- Section 10: Stability and Reactivity.
- Section 11: Toxicological Information.
- Section 12: Ecological Information.