

Safety data sheet as per Commission Regulation (EU) 2015/830

Product: Phenol crystals



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

1.1 Product identifier

Trade name	Phenol
Chemical Name	Phenol/ Hydroxybenzene
CAS Number	108-95-2
EC Number	203-632-7
Pre-Registration number (REACH)	17-2119643026-46-0000

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

Relevant identified uses	Used in manufacture of plastics and resins like Nylon, Bakelite, paints, in surgical procedures Used in manufacture of agrochemicals and pharma drugs
Uses identified against	Not for uses other than those recommended Dependent on relevant national regulations

1.3 Details of the supplier of the safety data sheet:

Manufacturer	Prasol Chemicals Pvt. 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.
Telephone	+91-22-27782555
Telefax	+91-22-27782430
e-mail address	sales@prasolchem.com; inquiry@prasolchem.com

1.4 Emergency telephone number

Telephone	+91-22- 27782555
Language	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)

Acute Toxicity (Oral)	Category 3	H301	Toxic if swallowed
Acute Toxicity (Dermal)	Category 3	H311	Toxic in contact with skin
Skin Corrosion	Category 1B	H314	Causes severe skin burns and eye damage
Acute Toxicity	Category 3	H331	Toxic if inhaled
Mutagenicity	Category 2	H341	Suspected of causing genetic defects
Specific Target Organ Toxicity	Category 2	H373	May cause damage to organs through prolonged or repeated exposure
Aquatic Chronic	Category 2	H411	Toxic to aquatic life with long lasting effects

Information concerning particular hazards for human and environment: No further information

2.2 Label elements

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

Hazard pictograms



GHS05



GHS06



GHS08



GHS09

Signal word Danger

Hazard statements	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
	H411	Toxic to aquatic life with long lasting effects

Precautionary statements

General	P103	Read label before use.
Prevention	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P260	Do not breathe fume/mist/vapours/spray.

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	P261	Avoid breathing fume/mist/vapours/spray
	P264	Wash hands thoroughly after handling.
	P270	Do not eat, drink or smoke when using this product.
	P271	Use only outdoors or in a well-ventilated area
	P273	Avoid release to the environment.
	P280	Use protective gloves and eye protection.
Response	P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor
	P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
	P302+P352	IF ON SKIN: Wash with plenty of water.
	P303+P361+P363	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water
	P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
	P308+P313	IF exposed or concerned: Get medical attention.
	P314	Get medical advice if you feel unwell.
	P321	Specific treatment: wash with plenty of water.
	P330	Rinse mouth
Storage	P361+P364	Take off immediately all contaminated clothing and wash it before reuse
	P403+P233	Store in a well-ventilated place. Keep container tightly closed.
	P405	Store locked up.
Disposal	P501	Dispose of contents and container in accordance with national regulations

2.3 Other hazards

Results of PBT and vPvB assessment:

Not a PBT, vPVB substance according to the criteria of REACH regulation

◆ SECTION 3: Composition/information on ingredients

Chemical characterization:

Ingredient	CAS No.	EC No.	Concentration (%)
Phenol	108-95-2	203-632-7	99 min

Additional information:

Molecular Formula	C ₆ H ₆ O
Molecular Weight	94.11

◆ SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Take off all contaminated clothing immediately.

After inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention

After skin contact

Wash off with plenty of water immediately, seek medical advice if necessary.

After eye contact

Rinse with plenty of water immediately and seek medical advice.

After swallowing

Do not induce vomiting and seek medical advice immediately.

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

May cause irritations of the respiratory tract
Treat symptomatically and supportively

◆ SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

CO₂, dry powder, foam or water spray

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

May form toxic carbon oxides if burning.

Combustible material

Closed container may rupture if strongly heated.

Vapours are heavier than air and will spread at floor level. In case of



5.3 Advice for firefighters warming, development of explosive gases/vapours.
Explosive mixtures may occur at temperatures at or above the flashpoint.
Cool closed containers exposed to fire with water spray.
Wear self-contained breathing apparatus.

SECTION 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 allow to enter sewers, surface or ground water.

6.3 Methods and material for containment and cleaning up Soak up with inert absorbent material and dispose of as hazardous waste.
Keep in suitable, closed containers for disposal.
Suitable binder: sand

6.4 Reference to other sections Section 8 for information on personal protection equipment.
Section 13 for disposal information

SECTION 7: Handling and storage

7.1 Precautions for safe handling If possible, use material transfer, metering and blending plants that are closed.
Avoid contact with skin and eyes.
Avoid inhalation of vapour or mist.

7.2 Conditions for safe storage, including any incompatibilities Advice on protection against fire and explosion Follow normal measures for preventive fire protection.
Storage Store in a cool place.
Keep container tightly closed in a dry and well-ventilated place.
Residual vapours might explode on ignition; do not apply heat, cut, drill and grind or weld on or near this container.
Mechanical exhaust required.

Advice on common storage Observe prohibition against storing together!

Storage stability Stable under recommended storage conditions

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters Occupational Exposure Limit IOELV: STEL 16 mg/m³
IOELV: TWA 7.8 mg/m³, 2 ppm Skin

8.2 Exposure controls Appropriate engineering controls If possible, use material transfer, metering and blending plants that are closed

Personal protective equipment Eye/ face protection closed goggles, face shield

Skin protection

Hand protection	Type of material	Thickness	Breakthrough time
	Butyl-rubber	0.5 mm	> 480 min
	Polychloroprene (PCP)	0.5 mm	110 min

Body protection Boots, body suit

Respiratory protection Respiratory equipment with suitable filter or a self-contained respiratory apparatus.

Thermal hazards Combustible solid; Possibility of decomposition on excess heating

Industrial hygiene Do not inhale vapours / aerosols.
Avoid contact with skin and eyes.
Remove immediately all contaminated clothing.
Use disposable clothing if appropriate.
Smoking, eating and drinking should be prohibited in the application area.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties Appearance Colourless crystals



Odour	sweetish
Odour threshold	0.048 ppm
pH	6.0
Melting point	40-42°C
Boiling point	181.8°C
Flash point	79°C (Closed cup)
Evaporation rate	<0.01 (Butyl acetate=1)
Flammability (solid, gas)	not flammable; combustible
Flammability limits	Lower 1.7 Vol % Upper 8.6 Vol %
Vapour pressure	0.48 hPa at 20°C
Vapour density	3.25 (air =1 at boiling point)
Relative density	1.07 at 20°C
Solubility in water	87.5 g/l at 25°C, pH 5.0
Partition coefficient	1.47 log Kow (n-octanol/water) at 23°C
Ignition temperature	595°C
Decomposition temperature	no data available
Viscosity	3.437mPa s (dynamic)at 50°C
Explosive properties	no explosive properties
Oxidizing properties	no oxidizing properties
9.2 Other information	
Surface tension at 20°C	38.2mN/m at 50oC
Heat of combustion	-3058kJ/mol
Heat of vaporization	58.8 kJ/mol

◆ **SECTION 10: Stability and reactivity**

10.1 Reactivity	No hazardous reaction when handled and stored according to provisions.
10.2 Chemical stability	Under storage at normal ambient temperatures (-40°C to +40°C), the product is stable.
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	Thermal decomposition products- carbon oxides

◆ **SECTION 11: Toxicological information**

11.1 Information on toxicological effects	
Acute toxicity	
LD50 oral rat	340-540mg/kg bw toxic
LC0 inhalation rat	900 mg/l (8h) not classified
LD50 Dermal rabbit	660 mg/kg bw toxic
LD50 subcutaneous rabbit	620mg/kg bw toxic
Skin irritation	corrosive, causes skin burns
Serious eye irritation	corrosive, causes eye burns
Respiratory or skin sensitization	No sensitizing effects known
Germ cell mutagenicity	in vitro tests showed mutagenic effects (Muta. Cat. 3)
Carcinogenicity	not carcinogenic
Reproductive toxicity	no data available
STOT-single exposure	corrosive to eyes, skin
STOT-repeated exposure	
Oral	NOAEL 5000 ppm or 450 mg/kg bw/day (oral) reduced water consumption
Inhalation	NOAEC 100mg/m3
Dermal	NOAEL 130 mg/kg bw/day.
Aspiration hazard	no data available



SECTION 12: Ecological information

- ◆ **12.1 Toxicity**
 - Aquatic toxicity**
 - Toxicity to fish LC50 14d 21.93mg/L *Poecilia reticulata*
 - Toxicity to aquatic invertebrates EC50 48h 3.1 mg/L *Ceriodaphnia dubia*
 - Toxicity to aquatic algae and cyanobacteria EC50 96h 61.1 mg/L *Pseudokirchneriella subcapitata*
 - Toxicity to microorganisms IC50 24h 100mg *Nitrosomonas* sp.
 - Toxicity to other aquatic organisms LC50 4d 0.04mg/L *Rana pipiens* (frog)
 - Long term toxicity to fish NOEC 60d 0.077mg/L *Cirrhina mrigala*
 - Long-term toxicity to aquatic invertebrates EC50 16d 10mg/L *Daphnia magna*
- 12.2 Persistence and degradability**
- Biodegradation** readily biodegradable (62% in 100h)
- 12.3 Bioaccumulative potential** Bioconcentration factor 17.5; Half-life 0.83h *Danio rerio* (zebra fish)
very low potential for bioaccumulation
- 12.4 Mobility in soil** Koc = 82.8; very low potential for geoaccumulation
- 12.5 Results of PBT and vPvB assessment** Not a PBT, vPvB substance according to the REACH regulation
- 12.6 Other adverse effects** No further information available

SECTION 13: Disposal considerations

- ◆ **13.1 Waste treatment methods** Observe all federal, state, and local environmental regulations.
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.
Do not dispose in sewage.

SECTION 14: Transport information

- ◆ **14.1 UN Number** ADR/RID 1671 IMDG 1671 ICAO/IATA 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 6.1 Code T2 6.1 Code T2
- 14.4 Packaging group** II II II
- 14.5 Environmental hazards** not environmentally hazardous, not a marine pollutant
- 14.6 Special precautions for the user** Combustible solid; Flash point 79°C (closed cup)
- 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** See regulatory information for transport approval

SECTION 15: Regulatory information

- ◆ **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- Major accident hazard** Seveso III not applicable
- International Chemical Inventory Status**
- USA (TSCA)** listed
- Canada (DSL)** listed
- Australia (AICS)** listed
- Japan (MITI)** listed
- Korea (KECL)** listed
- Philippines (PICCS)** listed
- China** listed

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New Zealand	listed
Taiwan	listed
15.2 Chemical safety assessment	A Chemical Safety Assessment will be carried out at the time of REACH registration

◆ 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.

Further information:

Sections in which changes have been made since the last version are marked with a diamond ◆ in the left hand margin.

Abbreviations and acronyms in English language:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CLP	Classification for Labeling and Packaging
DSL	Domestic Substances List
EC	European Commission
EC50	Half maximal effective concentration
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency Schedule
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
IATA	International Air Transport Association
IBC	International Bulk Chemical
ICAO	International Civil Aviation Organization
IMDG	International Maritime Code for Dangerous Goods
IOELV	Indicative Occupational Exposure Limit Values
KECL	Korea Existing Chemicals List
KOC	Soil adsorption coefficient
KOW	Partition Coefficient octanol-water
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
MARPOL	International Convention for the Prevention of Pollution from Ships
MITI	Ministry of International Trade and Industry
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
PBT	Persistent, bioaccumulative and toxic substances
PICCS	Philippine Inventory of Chemicals and Chemical Substances
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
STEL	Short-term exposure limits
STOT	Specific target organ toxicity
TSCA	Toxic Substances Control Act
TWA	Time-weighted average
UN	United Nations
vPVB	(very) Persistent, (very) Bioaccumulative

Sources

Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

ECHA	https://echa.europa.eu/registration-dossier/-/registered-dossier/15508
Chemid	http://chem.sis.nlm.nih.gov/chemidplus/rn/108-95-2
HSDB	http://toxnet.nlm.nih.gov/cpdb/chempages/PHENOL.html
CDC	https://www.cdc.gov/niosh/npd/npd0493.html
