SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Liquefied Phenol
CAS number	See section 3 for composition
Synonyms	Carbolic acid; Hydroxybenzene; Phenylic acid

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

Identified uses	Laboratory chemicals

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 4)
Corrosive to metals (Category 1)
Acute oral toxicity (Category 3)
Acute dermal toxicity (Category 3)
Skin corrosion/irritation (Category 1)
Serious eye damage/eye irritation (Category 1)
Germ cell mutagenicity (Category 2)
Specific target organ toxicity (single exposure) (Category 3)
Respiratory system, Central nervous system

Specific target organ toxicity (repeated exposure) (Category 2)
Liver, Kidney, Blood

2.2 GHS Label elements, including precautionary statements

Pictogram 

Signal Word Danger

Hazard statements

Combustible liquid
May be corrosive to metals
Toxic if swallowed
Toxic in contact with skin
Toxic if inhaled
Causes severe skin burns and eye damage
Suspected of causing genetic defects
May cause respiratory irritation
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure

Precautionary statements

Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required
Wash face, hands and any exposed skin throroughly after handling
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep cool

Response
Immediately call a POISON CENTER or doctor/physician

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for

Skin
Wash contaminated clothing before reuse
IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water/shower

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Ingestion
Rinse mouth
Do NOT induce vomiting

Fire
In case of fire: Use CO2, dry chemical, or foam for extinction

Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Disposal
Dispose of contents/container to an approved waste disposal plant

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Phenol	Carbolic acid; hydroxybenzene	108-95-2	90%
Water	-	7732-18-5	10%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

In case of skin contact Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

In case of eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

If swallowed Do not induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Breathing difficulties. Causes burns by all exposure routes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

4.3 Indication of any immediate medical attention and special treatment needed

No information available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.

Unsuitable extinguishing media No information available

5.2 Specific hazards arising from the substance or mixture
Combustible material. Risk of ignition. Containers may explode when heated.

5.3 Special protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

5.4 Further information

Flash Point 79.4 °C / 174.9 °F

Autoignition Temperature 715 °C / 1319 °F

Explosion limits

Upper 8.6 vol %
Lower 1.8 vol %
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available
NFPA

Health	Flammability	Instability	Physical hazards
4	2	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Take precautionary measures against static discharges.

6.2 Environmental precautions
Avoid release to the environment. See section 12 for additional ecological information . Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up
Remove all sources of ignition. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Use spark-proof tools and explosion-proof equipment.

6.4 Reference to other sections
See section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Take precautionary measures against static discharges.

Hygiene measures
No information available

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Protect from moisture. Protect from light. Corrosives area.

Incompatibilities
No information available

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value	
Phenol	TWA	5 ppm	19 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Phenol	TWA	5 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value	
Phenol	IDLH	250 ppm	
	TWA	5 ppm	19 mg/m3
	Ceiling	15.6 ppm	60 mg/m3

8.2 Exposure controls

Appropriate engineering controls
Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

Skin protection
Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Control of environmental exposure
No information available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Sweet
Odor Threshold	No information available
pH	6
Melting Point/Range	42.8 °C / 109 °F
Boiling Point/Range	182 °C / 359.6 °F
Evaporation Rate	< 0.01 (Butyl Acetate = 1.0)
Flammability (solid)	Not applicable
Flammability or explosive limit	
Upper	8.6 vol %
Lower	1.8 vol %
Vapor Pressure	.35 mmHg @ 25 C
Vapor Density	3.2
Density	1.0576
Solubility	Slightly soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	715 °C / 1319 °F
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	C6 H5 OH
Molecular Weight	94.1
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information
No information available

SECTION 10: Stability and reactivity

10.1 Reactivity
None known, based on information available

10.2 Chemical stability
Hygroscopic. Light sensitive

10.3 Possibility of hazardous reactions
None under normal processing

10.4 Conditions to avoid
Incompatible products. Heat, flames, and sparks. Exposure to moisture. Exposure to light. Keep

10.5 Incompatible materials
Acids, bases, strong oxidizing agents, halogens, lead, metals

10.6 Hazardous decomposition products
Carbon monoxide (CO), Carbon dioxide (CO2)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phenol	340 mg/kg	630 mg/kg	316 mg/m3 - 4h

Skin corrosion/irritation
Causes burns by all exposure routes

Serious eye damage/eye irritation
Causes burns by all exposure routes

Respiratory or skin sensitization
No information available

Germ cell mutagenicity
Possible risk of irreversible effects

Carcinogenicity
IARC:
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans

Specific target organ toxicity - single exposure
Respiratory system, Central nervous system

Specific target organ toxicity - repeated exposure

Liver, Kidney, Blood

Reproductive toxicity
Experiments have shown reproductive toxicity effects on laboratory animals.

Chronic effects
No information available

11.2 Additional Information
The toxicological properties have not been fully investigated.

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results
Phenol	EC50	Freshwater Algae	0.0188 mg/L
	EC50	Freshwater Algae	46.42 mg/L - 96h
	EC50	Freshwater Algae	187-279 mg/L - 72h
	LC50	Freshwater Fish	4-7 mg/L - 96h
	LC50	Freshwater Fish	32 mg/L - 96h
	EC50	Microtox	21-36 mg/L - 30 min
	EC50	Microtox	23.38 mg/L - 5 min
	EC50	Microtox	25.61 mg/L - 15 min
	EC50	Microtox	28.8 mg/L - 5 min
	EC50	Microtox	31.6 mg/L - 15 min
	EC50	Water Flea	10.2-15.5 mg/L - 48h
	EC50	Water Flea	4.24-10.7 mg/L - 48h

12.2 Persistence and degradability
May persist based on information available

12.3 Bio accumulative potential
No information available

12.4 Mobility in soil
Is not likely mobile in the environment due to its low water solubility

12.5 Results of PBT and vPvB assessment
No information available

12.6 Endocrine disrupting properties
No information available

12.7 Other adverse effects
The toxicological properties have notbeen fully investigated.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN-no.	UN2821
Proper Shipping Name	PHENOL SOLUTIONS
Hazard Class	6.1
Packing Group	II

IMDG

UN-no.	UN2821
Proper Shipping Name	PHENOL SOLUTIONS
Hazard Class	6.1
Packing Group	II

IATA

UN-no.	UN2821
Proper Shipping Name	PHENOL SOLUTIONS
Hazard Class	6.1
Packing Group	II

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not applicable

CERCLA Hazardous Substance List (40 CFR 302.4)

Listed - RQ: 1000 lb

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not applicable

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

See section 2 for more information

SARA 313 (TRI reporting)

Listed - Threshold values %: 1.0

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Listed

Safe Drinking Water Act

Listed - RQ: 1000 lb

US state regulations

US. Massachusetts RTK - Substance List

Listed

US. New Jersey Worker and Community Right-to-Know Act

Listed

US. Pennsylvania Worker and Community Right-to-Know Law

Listed

California Proposition 65

Not listed

SECTION 16: Other information

Issue date: 12/21/2010
Revision 1: 03/03/2019
Revision 2: 07/17/2024
Revision 3: 07/03/2025

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.