SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Phenol Crystals
CAS number	108-95-2
Synonyms	Carbolic acid; Hydroxybenzene

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)

Acute oral toxicity (Category 3)
Acute dermal toxicity (Category 3)
Acute Inhalation Toxicity - Dusts and Mists (Category 3)
Skin Corrosion/Irritation (Category 1B)
Serious Eye Damage/Eye Irritation (Category 1)
Germ Cell Mutagenicity (Category 2)
Specific target organ toxicity (single exposure) (Category 3)
Target Organs - Respiratory system
Specific target organ toxicity (repeated exposure) (Category 1)

Target Organs - Liver, kidney, blood, central nervous system (CNS)

2.2 GHS Label elements, including precautionary statements

Pictogram 

Signal Word Danger

Hazard statements

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

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, hand and any exposed skin thoroughly 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 breathing
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

Toxic to aquatic life with long lasting effects.

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%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper 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 In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

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

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: May cause central nervous system depression.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Water mist may be used to cool closed containers. CO2, dry chemical, dry sand, alcohol-resistant foam.

Unsuitable extinguishing media No information available

5.2 Specific hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes.

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. Thermal decomposition can lead to release of irritating gases and vapors.

5.4 Further information

Flash Point 79 °C / 174.2 °F

Autoignition Temperature 605 °C / 1121 °F

Explosion limits

Upper 8.6 vol %

Lower 1.7 vol %

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

NFPA

Health	Flammability	Instability	Physical hazards
4	2	1	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Evacuate personnel to safe areas. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid dust formation.

6.2 Environmental precautions

Should not be released into the environment.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

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

Wear perosnal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not ingest. If swallowed then seek immediate medical assistance. Do not breathe (dust, vapor, mist, gas). Avoid dust formation.

Hygiene measures

Handle in accordance with good industrial hygiene practices.

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, sparks, and flame. Protect from moisture. Protect from light. Corrosives area. Store under an inert atmosphere. Keep container tightly closed in a dry and well-ventilated place.

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 (skin)

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value	
Phenol	IDLH	250 ppm	
	TWA	5 ppm (skin)	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
Effective dust mask filter type A

Control of environmental exposure
No information available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Crystalline solid
Appearance	Colorless - Translucent White
Odor	Pungent
Odor Threshold	No information available
pH	6 @ 20°C 10 g/L aq.sol
Melting Point/Range	39 - 42 °C / 102.2 - 107.6 °F
Boiling Point/Range	182 °C / 359.6 °F @ 760 mmHg
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	8.6 vol%
Lower	1.7 vol%
Vapor Pressure	0.4 mbar @ 20 °C
Vapor Density	Not applicable
Density	1.07
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	605 °C / 1121 °F
Decomposition Temp	No information available
Viscosity	3.437 mPa.s (50°C)
Molecular Formula	C6 H6 O
Molecular Weight	94.11
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
Yes

10.2 Chemical stability
Hygroscopic, Light sensitive

10.3 Possibility of hazardous reactions
None under normal processing

10.4 Conditions to avoid

Avoid dust formation. Incompatible products. Exposure to moisture. Exposure to light. Keep away from open flames, hot surfaces and sources of ignition. Exposure to moist air or water.

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	60 mg/kg (Human evidence)	300 mg/kg (Human evidence)	0.5 mg/L (Human evidence)

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

No information available

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Phenol	108-95-2	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

Respiratory system

Specific target organ toxicity - repeated exposure

Liver, Kidney, Blood, Central nervous system.

Reproductive toxicity

Experiments have shown reproductive toxicity effects on laboratory animals.

Chronic effects

No information available

11.2 Additional Information

No information available

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results
Phenol	EC50	Freshwater Algae	187-279 mg/L, 72h
	EC50	Freshwater Algae	0.0188 - 0.1044 mg/L, 96h
	EC50	Freshwater Algae	46.42 mg/L, 96h
	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	23.28 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

Soluble in water. Persistence is unlikely based on information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Will likely be mobile in the environment due to its 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

No information available.

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.	UN1671
Proper Shipping Name	PHENOL, SOLID
Hazard Class	6.1
Packing Group	II

IMDG

UN-no.	UN1671
Proper Shipping Name	PHENOL, SOLID
Hazard Class	6.1
Packing Group	II

IATA

UN-no.	UN1671
Proper Shipping Name	PHENOL, SOLID
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

SARA 304 Emergency release notification

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

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

Other federal regulations

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

Listed

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not listed

Safe Drinking Water Act

Not regulated

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

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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.