

PHENOL, CRYSTALS

Material Safety Data Sheet

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Emergency Telephone Number
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Effective Date: 10-28-93 Supersedes 12-01-85

PRODUCT IDENTIFICATION:

Synonyms: Carboic acid; phenic acid; phenylic acid; hydroxybenzene; phenol,
fused

Formula CAS No.: 108-95-2

Molecular Weight: 94.11

Hazardous Ingredients: Phenol

Chemical Formula: C₆H₅OH

PRECAUTIONARY MEASURES

DANGER! MAY BE FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. RAPIDLY
ABSORBED THROUGH SKIN. CORROSIVE. CAUSES SEVERE BURNS. EXPOSURE MAY PRODUCE
LIVER, KIDNEY, AND NEUROLOGICAL DISORDERS. COMBUSTIBLE.

Do not breathe dust.

Do not get in eyes, on skin, or on clothing.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

This substance is classified as a POISON under the Federal Caustic Poison Act.

EMERGENCY FIRST AID

In all cases call a physician immediately. If swallowed, get immediate
medical attention. Give large quantities of milk or water. Never give anything
by mouth to an unconscious person. If inhaled, remove to fresh air. If not
breathing, give artificial respiration. If breathing is difficult, give oxygen.
In case of contact, immediately flush eyes or skin with plenty of water for at
least 15 minutes.

SEE SECTION 5.

Physical Data

SECTION 1

Appearance: Colorless to light pink crystals.

Odor: Sharp medicinal sweet tarry.

Solubility: 1 g/9 ml of water; very soluble in alcohol.

Boiling Point: 182 C (360 F)

Vapor Density (Air=1): 3.2

Melting Point: 40.5 C (104.9 F)

Vapor Pressure (mm Hg): 0.4 @ 20 C (68
F)

Specific Gravity: 1.07

Evaporation Rate: (BuAc=1) < 0.01

NFPA Ratings: Health: 3 Flammability: 2 Reactivity: 0

Fire and Explosion

SECTION 2

Information-----
Fire:

Combustible. Flash Point: 78 C (173 F)

Autoignition Temperature: 605 C (1121 F)

Flammable Limits in Air, % by Volume: lel: 1.7;
uel: 8.6.

Explosion: Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Contact with oxidizers may generate explosive mixtures.

Fire Extinguishing Media: Water spray, dry chemical, alcohol foam, or carbon dioxide.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Reactivity Data

Stability: Stable under ordinary conditions of use and storage. Heat will contribute to instability.

Hazardous Decomposition Products: Toxic gases and vapors may be released if involved in a fire.

Hazardous Polymerization: This substance does not polymerize.

Incompatibilities: Oxidizers, aluminum chloride and nitrobenzene, calcium hypochlorite butadiene. Hot liquid phenol will attack aluminum, magnesium, lead, and zinc metals.

Leak/Spill Disposal Information SECTION 4

Ventilate area of leak or spill. Clean-up personnel require protective clothing and respiratory protection from dust. Spills: Pick up and place in a suitable container for reclamation or disposal in a method that does not generate dust. Disposal: Whatever cannot be saved for reclamation may be disposed in a RCRA approved hazardous waste facility. Do not flush to the sewer. Reportable Quantity (RQ) (CWA/CERCLA) : 1000 lbs. Ensure compliance with local, state and federal regulations.

Health Hazard Information SECTION 5

A. Exposure/Health Effects

Inhalation: Breathing vapor or dust results in digestive disturbances (vomiting, difficulty in swallowing, diarrhea, loss of appetite). Will irritate, possibly burn respiratory tract. Other symptoms listed under ingestion may also occur.

Ingestion: Poison. Symptoms may include burning pain in mouth and throat, abdominal pain, nausea, vomiting, headache, dizziness, muscular weakness, increase in heart rate, irregular breathing, coma, and possibly death. Acute exposure associated with liver damage.

Skin Contact: Corrosive. Rapidly absorbed through the skin with systemic poisoning effects to follow. Discoloration and severe burns may occur, but may be disguised by a loss in pain sensation.

Eye Contact: Corrosive. Eye burns with redness, pain, blurred vision may occur. May cause severe damage and blindness.

Chronic Exposure: Repeated exposure may cause symptoms described for acute poisoning as well as liver and kidney damage.

Aggravation of

Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems or impaired liver or kidney function may be more susceptible to the effects of the substance.

B. FIRST AID

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, get immediate medical attention. Give large quantities of milk or water. Never give anything by mouth to an unconscious person.

Skin Exposure: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Call a physician immediately.

Eye Exposure: Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

C. TOXICITY

(RTECS, 1993)

Oral rat LD50: 317 mg/Kg; skin rabbit LD50: 850 mg/kg; inhalation rat LC50: 316 mg/m³; irritation data: skin rabbit 500 mg/24H severe, eye rabbit 5 mg severe; investigated as a mutagen, tumorigen reproductive effector.

Occupational Control Measures

SECTION 6

Airborne Exposure Limits: -OSHA Permissible Exposure Limit (PEL): 5 ppm (TWA) (skin) -ACGIH Threshold Limit Value (TLV): 5 ppm (TWA) (skin)

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

Personal Respirators (NIOSH Approved) If the TLV is exceeded, a dust/mist respirator with chemical goggles may be worn, in general, up to ten times the TLV. Consult respirator supplier for limitations. Alternatively, a supplied air full facepiece respirator or airlined hood may be worn.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

Storage and Special Information

SECTION 7

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and

incompatibilities. Outside or detached storage is preferred. Separate from other storage. Do not allow untrained workers to handle phenol.

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Addendum to Material Safety Data Sheet

REGULATORY STATUS

This Addendum Must Not Be
 Detached from the MSDS
 Identifies SARA 313 substance(s)

Any copying or redistribution of the MSDS
 must include a copy of this addendum

Hazard Categories for SARA Section 311/312 Reporting

Acute	Chronic	Fire	Pressure	Reactive
X	X	X		

Product or Components of Product:	SARA EHS		SARA Sec. 313 Chemicals		CERCLA	RCRA
	Sec. 302 RQ	TPQ	Name List	Chemical Category	Sec.103 RQ lbs	Sec. 261.33
PHENOL, CRYSTALS (108-95-2)	1000	500*	Yes	No	No	No

SARA Section 302 EHS RQ:
 Reportable Quantity of Extremely Hazardous Substance, listed at 40 CFR 355.

SARA Section 302 EHS TPQ:
 Threshold Planning Quantity of Extremely Hazardous substance. An asterisk (*) following a Threshold Planning Quantity signifies that if the material is a solid and has a particle size equal to or larger than 100 micrometers, the Threshold Planning Quantity = 10,000 LBS.

SARA Section 313 Chemicals:
 Toxic Substances subject to annual release reporting requirements listed at 40 CFR 372.65.

CERCLA Sec. 103:
 Comprehensive Environmental Response, Compensation and Liability Act (Superfund) Releases to air, land or water of these hazardous substances which exceed the Reportable Quantity (RQ) must be reported to the National Response Center, (800-424-8802); Listed at 40 CFR 302.4

RCRA:
 Resource Conservation and Recovery Act. Commercial chemical product wastes designated as acute hazards and toxic under 40 CFR 261.33

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