



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

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MSDS No. PP 130
Effective Date April 9, 1999

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	PHENOL, LIQUID 5% Aqueous Solution
Chemical Synonyms	Carbolic Acid
Formula	Mixture.
Unit Size	up to 3.785 Lt.
C.A.S. No.	Mixture.

	CHEMTREC 800-424-9300 Day 716-226-6177	Health 3 Fire 0 Reactivity 1
NFPA HAZARD RATING	HMIS *	
LEAST SLIGHT MODERATE HIGH EXTREME	0 1 2 3 4	

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Phenol: (CAS No. 108-95-2)	5%	See Section V.
Water: (CAS No. 7732-18-5)	95%	
DANGER! POISON CORROSIVE! MAY BE FATAL IF SWALLOWED OR		
ABSORBED THROUGH SKIN. CAUSES SEVERE SKIN AND EYE BURNS. HAZARDOUS LIQUID.		

SECTION III PHYSICAL DATA

Melting Point (°F)	Approx. 0°C (32°F)	Specific Gravity (H ₂ O = 1)	1.0 @ 20°C
Boiling Point (°F)	Approx. 100°C (212°F)	Percent Volatile by Volume (%)	100%
Vapor Pressure (mm Hg)	N/A	Evaporation Rate (n-Butyl Ac. = 1)	For Phenol greater than 1.
Vapor Density (Air=1)	3.24 (pure Phenol)		
Solubility in Water	Complete.		
Appearance & Odor	Colorless to pink or brownish color; sweet characterisitic odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	175°F (79°C) (cc) Solid	Flammable Limits in Air % by Volume Pure Phenol	Lower 1.7	Upper 8.6
Extinguisher Media	Use water spray; carbon dioxide (CO ₂); dry chemical; foam.			

SPECIAL FIREFIGHTING PROCEDURES

This phenol solution is very dilute. In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing including eye protection. Avoid skin and eye contact; extremely corrosive to all body tissue in the fume state.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 153)

UNUSUAL FIRE AND EXPLOSION HAZARDS

Although this solution is very dilute phenol yields flammable vapors when heated, which will form explosive mixtures with air. Phenol discolors above 50°C. Vapors are flammable and toxic.

Ignition Temperature for pure phenol is: 1319°F (715°C). (Pure phenol)

D.O.T. Phenol solutions, 6.1, UN 2821, PG II

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V

HEALTH HAZARD DATA

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Threshold Limited Value

RTCS No. SJ3325000 Toxicity data for phenol solid: oral Human LDLo = 140 mg/kg. Oral-rat LD50 317 mg/kg. (Skin values) TWA 5 ppm; 19 mg/m³ (ACGIH 1992-93).

Effects of Overexposure

TARGET ORGANS AFFECTED: Lung, liver, heart, kidneys. **INHALATION:** In animals, prolonged inhalation of vapors (30-60 ppm) has induced respiratory difficulties, lung damage, loss of weight and paralysis. Breathing of phenol vapors can cause irritation of the mucous membranes. **INGESTION:** Ingestion of phenol causes intense burning of mouth and throat followed by marked abdominal pain and distress. Lethal oral doses of phenol for adults have ranged from 1 to 10 gm; for infants 50 to 500 mg. Cyanosis, muscular weakness and collapse may occur within a few minutes after ingestion. Tremors and convulsions are occasionally observed. **SKIN:** Phenol is rapidly absorbed through the skin. A serious burn or poisoning through skin absorption may occur if the chemical is not removed promptly and thoroughly. If the phenol is left on the skin the exposed area will burn. **EYES:** Exerts a strong corrosive action. May cause corneal damage or blindness.

Emergency and First Aid Procedures

Speed in removing phenol is of primary importance. **INGESTION:** If swallowed, do NOT induce vomiting without specific instructions from physician. Get immediate medical attention. Keep victim warm and quiet. **SKIN:** Flush thoroughly with water while removing contaminated clothing and shoes. **EYES:** Flush thoroughly with water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get immediate medical attention. **INHALATION:** Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration administered by trained personnel. Get immediate medical attention.

SECTION VI

REACTIVITY DATA

Stability	Unstable Stable	Conditions to Avoid	Excessive temperatures and heat.
Incompatibility (Materials to Avoid)	Avoid contact with strong oxidizers, halogens and calcium hypochlorite. Hot phenol attacks aluminum, lead, magnesium and zinc and the phenol is discolored. The discoloration of phenol is catalyzed by iron and copper.		
Hazardous Decomposition Products	Complete combustion results in the formation of carbon dioxide and water vapor; incomplete combustion can yield carbon monoxide. Avoid breathing vapors or gases released on exposure to high temperature or fire.		
Hazardous Polymerization	May Occur Will Not Occur	Conditions to Avoid	Not applicable.
	X		

SECTION VII

SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled

Allow only trained and protected personnel in area. Wearing proper protective equipment and with good ventilation, remove all sources of ignition. Scoop up or if liquid, absorb with an inert dry material and place in fiber carton for incineration. Wash spill area well with soap and water.

Waste Disposal Method

Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Dispose of in an approved incinerator or contract with a licensed waste disposal service.

SECTION VIII

SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type)	Use in a well-ventilated area. Work in fume hood. If necessary use a NIOSH/MSHA-approved special cartridge respirator.		
Ventilation	Local Exhaust	Recommended.	Special No.
	Mechanical (General)	Recommended.	Other No.
Protective Gloves	Neoprene.	Eye Protection	Splash proof goggles.
Other Protective Equipment	Smock, apron, eye wash station, ventilation hood, proper gloves, fire extinguisher. Face shields may be worn in addition to safety goggles.		

SECTION IX

SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing

Keep container tightly closed when not in use.

See Section V above. Do not handle with bare hands. Store in a cool, dry well-ventilated place away from fire hazards and protect from light. Wash thoroughly after handling.

Other Precautions

Read label on container before using. Do not wear contact lenses when working with chemicals.

Distill only under inert atmosphere. Threshold (Odor) is 0.3 ppm. Solution turns pink or red if not perfectly pure. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Revision No. 6	Date 4/9/99	Approved Michael Raszeja	Chemical Safety Coordinator MR
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