

Material Safety Data Sheet

Saturated Phenol, pH 6.6/7.9

ACC# 45479

Section 1 - Chemical Product and Company Identification

MSDS Name: Saturated Phenol, pH 6.6/7.9

Catalog Numbers: BP1750I100, BP1750I400

Synonyms: Phenol buffer solution.

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
108-95-2	Phenol	80-94	203-632-7
77-86-1	Tris (hydroxymethyl) aminomethane	N/A	201-064-4
6381-92-6	Disodium EDTA dihydrate	N/A	unlisted

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Not available. Flash Point: 175 deg F.

Danger! Corrosive. Causes severe eye and skin burns. Causes severe digestive and respiratory tract burns. Combustible liquid. Harmful if swallowed, inhaled, or absorbed through the skin. May cause central nervous system effects.

Target Organs: Kidneys, central nervous system, liver.

Potential Health Effects

Eye: Contact with liquid or vapor causes severe burns and possible irreversible eye damage.

Skin: Harmful if absorbed through the skin. Causes severe skin irritation and burns. Direct skin contact results in white, wrinkled discoloration, followed by severe burns. Phenol solutions may be absorbed through the skin rapidly to cause systemic poisoning and possible death.

Ingestion: Harmful if swallowed. Symptoms may include: headache, excitement, fatigue, nausea, vomiting, stupor, and coma. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Causes digestive tract burns with immediate pain, swelling of the throat, convulsions, and possible coma.

Inhalation: Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma. May be fatal if exposed to high concentrations. May also cause pallor, loss of appetite, nausea, vomiting, diarrhea, weakness, darkened urine, headache, sweating, convulsions, cyanosis (bluish skin due to deficient oxygenation of the blood), unconsciousness, fatigue, pulmonary edema & coma.

Chronic: Chronic inhalation may cause effects similar to those of acute inhalation. Chronic ingestion may cause effects similar to those of acute ingestion. May cause liver and kidney damage. Repeated skin contact may cause dermatitis with dark pigmentation of the skin.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure. SPEEDY ACTION IS CRITICAL!

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Use water spray to keep fire-exposed containers cool. Combustible liquid. May be ignited by heat, sparks, and flame. Containers may explode when heated.

Extinguishing Media: Use water spray to cool fire-exposed containers. Use water spray, dry chemical, carbon dioxide, or chemical foam. Cool containers with flooding quantities of water until well after fire is out.

Flash Point: 175e deg F (79.44 deg C)
Autoignition Temperature: Not available.
Explosion Limits, Lower:Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 4; Flammability: 2; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Provide ventilation. A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor but may not prevent ignition in closed spaces.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not ingest or inhale. Wash clothing before reuse. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from heat and flame. Keep away from sources of ignition. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Phenol	5 ppm TWA; Skin - potential significant contribution to overall exposure by the cutaneous route	5 ppm TWA; 19 mg/m3 TWA 250 ppm IDLH	5 ppm TWA; 19 mg/m3 TWA
Tris (hydroxymethyl) aminomethane	none listed	none listed	none listed
Disodium EDTA dihydrate	none listed	none listed	none listed

OSHA Vacated PELs: Phenol: 5 ppm TWA; 19 mg/m3 TWA Tris (hydroxymethyl) aminomethane: No OSHA Vacated PELs are listed for this chemical. Disodium EDTA dihydrate: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: 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: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: 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.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Not available.

Odor: none reported

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate:Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point:Not available.

Decomposition Temperature:Not available.

Solubility: Not available.

Specific Gravity/Density:Not available.

Molecular Formula:Not available.

Molecular Weight:Not available.

Section 10 - Stability and Reactivity

Chemical Stability: Stable.

Conditions to Avoid: Incompatible materials, ignition sources, excess heat.

Incompatibilities with Other Materials: Acids (mineral, non-oxidizing, e.g. hydrochloric acid, hydrofluoric acid, muriatic acid, phosphoric acid), acids (mineral, oxidizing, e.g. chromic acid, hypochlorous acid, nitric acid, sulfuric acid), azo, diazo, and hydrazines (e.g. dimethyl hydrazine, hydrazine, methyl hydrazine), isocyanates (e.g. methyl isocyanate), metals (alkali and alkaline, e.g. cesium, potassium, sodium), nitrides (e.g. potassium nitride, sodium nitride), peroxides and hydroperoxides (organic, e.g. acetyl peroxide, benzoyl peroxide, butyl peroxide, methyl ethyl ketone peroxide), epoxides (e.g. butyl glycidyl ether), explosives (e.g. ammonium nitrate, hydrazoic acid,

sodium azide), polymerizable compounds (e.g. butadiene, methyl acrylate, styrene, vinyl chloride), oxidizing agents (strong, e.g. bromine, hydrogen peroxide, nitrogen dioxide, potassium nitrate), reducing agents (strong, e.g. aluminum carbide, chlorosilane, hydrogen phosphide, lithium hydride), water reactive substances (e.g. acetic anhydride, alkyl.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:

CAS# 108-95-2: SJ3325000

CAS# 77-86-1: TY2900000

CAS# 6381-92-6: AH4410000

LD50/LC50:

CAS# 108-95-2:

Draize test, rabbit, eye: 5 mg Severe;
Draize test, rabbit, skin: 500 mg/24H Severe;
Draize test, rabbit, skin: 100 mg Mild;
Inhalation, mouse: LC50 = 177 mg/m³;
Inhalation, mouse: LC50 = 177 mg/m³/4H;
Inhalation, rat: LC50 = 316 mg/m³;
Inhalation, rat: LC50 = 316 mg/m³/4H;
Oral, mouse: LD50 = 270 mg/kg;
Oral, rat: LD50 = 317 mg/kg;
Oral, rat: LD50 = 512 mg/kg;
Skin, rabbit: LD50 = 630 mg/kg;
Skin, rat: LD50 = 669 mg/kg;
Skin, rat: LD50 = 1500 mg/kg;

CAS# 77-86-1:

Oral, rat: LD50 = 5900 mg/kg;

CAS# 6381-92-6:

Carcinogenicity:

CAS# 108-95-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 77-86-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 6381-92-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: No information found

Reproductive Effects: No information found

Mutagenicity: No information found

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Daphnia: Fathead Minnow: EC50=4.0 mg/l; 96-hour; cas#108-95-2 Daphnia: Fathead Minnow: EC50=12.0 mg/l; 48-hour; cas#108-95-2 No data

Environmental: Will not be expected to significantly bioconcentrate in aquatic organisms.

Physical: Hydrolytic and photolytic stability: In water, phenol will not be expected to significantly hydrolyze. Phenol absorbs light in the region 290-330 nm and therefore might directly photodegrade.

Other: NOEC for Lolium perenne and Raphanus sativus was 1 mg/l in a plant germination study. The 96-hour LC50 was 11 mg/l in Gammarus fasciatus and the 48-hour LC50 was 11.2 mg/L in Leuciscus idus.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series:

CAS# 108-95-2: waste number U188.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	PHENOL SOLUTIONS	PHENOL SOLUTION
Hazard Class:	6.1	6.1
UN Number:	UN2821	UN2821
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 108-95-2 is listed on the TSCA inventory.

CAS# 77-86-1 is listed on the TSCA inventory.

CAS# 6381-92-6 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).

Health & Safety Reporting List

CAS# 108-95-2: Effective 6/1/87, Sunset 6/1/97

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 108-95-2: 1000 lb final RQ; 454 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 108-95-2: 500 lb TPQ (lower threshold); 10000 lb TPQ (upper threshold)

SARA Codes

CAS # 108-95-2: immediate, delayed, fire.

CAS # 77-86-1: immediate.

CAS # 6381-92-6: immediate.

Section 313

This material contains Phenol (CAS# 108-95-2, 80-94%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 108-95-2 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

CAS# 108-95-2 is listed as a Hazardous Substance under the CWA. CAS# 108-95-2 is listed as a Priority Pollutant under the Clean Water Act. CAS# 108-95-2 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 108-95-2 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 77-86-1 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 6381-92-6 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T

Risk Phrases:

R 34 Causes burns.

R 24/25 Toxic in contact with skin and if swallowed.

Safety Phrases:

S 28 After contact with skin, wash immediately with...

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 108-95-2: 2

CAS# 77-86-1: 1

CAS# 6381-92-6: 2

Canada - DSL/NDSL

CAS# 108-95-2 is listed on Canada's DSL List.

CAS# 77-86-1 is listed on Canada's DSL List.

CAS# 6381-92-6 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B3, D1A, E.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 108-95-2 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 7/16/1999

Revision #5 Date: 10/03/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.