

# SAFETY DATA SHEET

## Phenol

### Section 1. Identification

<b>GHS product identifier</b>	Phenol
<b>Chemical name</b>	Phenol
<b>Other means of identification</b>	carbolic acid; monohydroxybenzene; phenylalcohol; Phenol, molten; Phenyl hydroxide; Hydroxybenzene; Oxybenzene; Phenic acid; Benzenol
<b>Product use</b>	Chemical Intermediate
<b>Supplier's details</b>	ALTIVIA Petrochemicals, LLC 1019 Haverhill-Ohio Furnace Road Haverhill, Ohio, 45636 Product Safety Information: (740) 532-3420
<b>Company web address</b>	www.ALTIVIA.com
<b>Emergency telephone number (with hours of operation)</b>	For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

### Section 2. Hazards identification

<b>OSHA/HCS status</b>	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
<b>Classification of the substance or mixture</b>	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SKIN CORROSION/IRRITATION - Category 1B SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 GERM CELL MUTAGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver, mucous membranes, nervous system and skin) - Category 2

#### GHS label elements

##### Hazard pictograms



##### Signal word

Danger

##### Hazard statements

Combustible liquid.  
Toxic if swallowed, in contact with skin or if inhaled.  
Causes severe skin burns and eye damage.  
Suspected of causing genetic defects.  
May cause damage to organs through prolonged or repeated exposure. (kidneys, liver, mucous membranes, nervous system, skin)

##### Precautionary statements

## Section 2. Hazards identification

### Prevention

Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Use personal protective equipment as required.  
 Wear protective gloves. Wear eye or face protection: Recommended: chemical splash goggles and face shield. Wear protective clothing.  
 Keep away from flames and hot surfaces. - No smoking.  
 Use only outdoors or in a well-ventilated area.  
 Do not breathe vapor.  
 Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

### Response

Get medical attention if you feel unwell.  
 IF exposed or concerned: Get medical attention.  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician.  
 IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.  
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician.  
 IF ON SKIN: Wash with plenty of soap and water. Specific measures (see Section 4: First aid measures) Call a POISON CENTER or physician if you feel unwell.  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.  
 IN CASE OF FIRE: Use dry chemical, CO<sub>2</sub>, alcohol-resistant foam or water spray (fog).

### Storage

Store locked up.  
 Store in a well-ventilated place.  
 Keep cool.

### Disposal

Dispose of contents and container in accordance with all local, regional, national and international regulations.

### Hazards not otherwise classified

None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	Substance
<b>Chemical name</b>	Phenol
<b>Other means of identification</b>	carbolic acid; monohydroxybenzene; phenylalcohol; Phenol, molten; Phenyl hydroxide; Hydroxybenzene; Oxybenzene; Phenic acid; Benzenol

### CAS number/other identifiers

<b>CAS number</b>	108-95-2
<b>Product code</b>	Not available.

Ingredient name	%	CAS number
Phenol	99.8 - 100	108-95-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

## Section 4. First aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.
<b>Inhalation</b>	Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Skin contact</b>	Call medical doctor or poison control center immediately. Remove all clothing. Patient should be immediately placed in an emergency shower and skin should be flushed with large amounts of water for at least 20 minutes. If phenol has contaminated the face or head, victim should wear goggles in the shower to prevent phenol from entering the eyes. If the eyes are involved, immediately flush eyes with plenty of water. After emergency shower, swab affected area(s) of the patient with cotton soaked in polyethylene glycol 300 (PEG) or PEG 400 for a minimum of 10 to 20 minutes. Do not rub. After treatment with PEG, patient should be transported to an emergency medical facility for cardiac monitoring and further treatment. Phenol may have an effect on many different organ systems, especially the heart and kidneys. Even if exposure is small, patient should be admitted for at least 24 hours for observation. Dispose of contaminated shoes and clothing in accordance with all local, regional, national and international regulations.
<b>Ingestion</b>	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	Causes serious eye damage. Contact with the eye may result in irritation, conjunctival swelling, whitened cornea, and blindness.
<b>Inhalation</b>	Toxic if inhaled.
<b>Skin contact</b>	Toxic in contact with skin. Contact of the skin with the solid or liquid can produce chemical burns, redness, edema, tissue necrosis, and gangrene.
<b>Ingestion</b>	Toxic if swallowed. Ingestion of lethal amounts causes severe burns of the mouth and throat, marked abdominal pain, cyanosis, muscular weakness, collapse, coma, and death.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	Adverse symptoms may include the following: pain, watering, redness
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	Adverse symptoms may include the following pain or irritation, redness, blistering may occur

## Section 4. First aid measures

### Ingestion

Adverse symptoms may include the following:  
stomach pains

### Indication of immediate medical attention and special treatment needed, if necessary

#### Notes to physician

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

#### Specific treatments

No specific treatment.

#### Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing media

Use dry chemical, CO<sub>2</sub>, alcohol-resistant foam or water spray (fog).

#### Unsuitable extinguishing media

Do not use water jet.

### Specific hazards arising from the chemical

Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

### Hazardous thermal decomposition products

Decomposition products may include the following materials:  
carbon dioxide, carbon monoxide

### Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

### Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.  
See also the information in: For non-emergency personnel

### Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required. US regulations require reporting spills of this material that could reach any surface waters. The toll-free number for the US Coast Guard National Response Center is (800) 424-8802.

## Section 6. Accidental release measures

### Methods and materials for containment and cleaning up

#### Small spill

Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

#### Large spill

Stop leak if without endangering people and provide mechanical means such as earthen dikes or other spill containment devices to contain spillage and keep out of sewers, water ways, basements or confined areas. Pure phenol will solidify at 105 deg F. Allow the leaked product to solidify. Do not add water which could more rapidly spread the leak and greatly reduce the solidification temperature. Take up solid material mechanically, placing in appropriate containers for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor.

Phenol, liquid: Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor Final cleaning. Collect the rinsing water when cleaning-down contaminated equipment and plant components for proper disposal.

Note: Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

#### Protective measures

Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

#### Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

#### Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

Consult with a Health and Safety Professional for Specific Selections

### Occupational exposure limits

Ingredient name	Exposure limits
Phenol	<b>ACGIH TLV (United States, 4/2014).</b> <b>Absorbed through skin.</b> TWA: 5 ppm 8 hours. TWA: 19 mg/m <sup>3</sup> 8 hours. <b>OSHA PEL (United States).</b> <b>Absorbed through skin.</b> TWA: 5ppm 8 hours . TWA: 19 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 10/2013).</b> <b>Absorbed through skin.</b>

## Section 8. Exposure controls/personal protection

### Appropriate engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

#### Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Recommended: chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent).

### Skin protection

#### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Recommended glove material: Polyvinyl chloride (PVC); Neoprene; Natural rubber; Teflon; Viton

#### Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Where splashing is possible, full chemically resistant protective clothing (e.g., acid suit) and boots are required.

Recommended materials acceptable for use as protective clothing: Polyvinyl chloride (PVC); Neoprene; Natural rubber.

#### Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

## Section 8. Exposure controls/personal protection

### Respiratory protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Half-mask air purifying respirator with organic vapor cartridges is acceptable for exposures to ten (10) times the exposure limit. Full-face air purifying respirator with organic vapor cartridges is acceptable for exposures to fifty (50) times the exposure limit. Exposure should not exceed the cartridge limit of 1000 ppm. Half-mask air purifying respirator with dust/mist filters or HEPA filter cartridges is acceptable for exposures to ten (10) times the exposure limit. Full-face air purifying respirator with dust/mist filters or HEPA filter cartridges is acceptable for exposures to fifty (50) times the exposure limit. Protection by air purifying respirators is limited. Use a positive pressure-demand full-face supplied air respirator or SCBA for exposures greater than fifty (50) times the exposure limit. If exposure is above the IDLH (Immediately Dangerous to Life and Health) or there is the possibility of an uncontrolled release, or exposure levels are unknown, then use a positive pressure-demand full-face supplied air respirator with escape bottle or SCBA. Wear a NIOSH-approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

## Section 9. Physical and chemical properties

<b>Physical state</b>	Solid or molten
<b>Color</b>	Colorless to light pink solid, or white molten
<b>Odor</b>	Sweet aromatic
<b>Odor threshold</b>	0.3 ppm
<b>pH</b>	<6
<b>Melting point</b>	40.85°C (105.5°F)
<b>Boiling point</b>	181.75°C (359.2°F)
<b>Flash point</b>	Closed cup: 79°C (174.2°F) Open cup: 85°C (185°F)
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Lower and upper explosive (flammable) limits</b>	Lower: 1.7% Upper: 8.6%
<b>Vapor pressure</b>	0.027 kPa (0.2 mm Hg) [room temperature]
<b>Vapor density</b>	3.24 [Air = 1]
<b>Relative density</b>	1.07 [Water=1]
<b>Solubility</b>	Not available.
<b>Solubility in water</b>	8.4 wt. %
<b>Partition coefficient n-octanol/water</b>	29.5
<b>Auto-ignition temperature</b>	715°C (1319°F)
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	3.8 cSt at 45°C (113°F) 2.52 cSt at 60°C (140°F) 1.597 cSt at 80°C (176°F)



## Section 10. Stability and reactivity

<b>Reactivity</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	The product is stable.
<b>Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Flammable vapors may be released at elevated temperatures. Do not allow vapor to accumulate in low or confined areas.
<b>Incompatible materials</b>	Hot phenol attacks aluminum, lead, magnesium and zinc. The phenol will appear discolored. The following materials are incompatible with this product: Strong oxidizers; Calcium hypochlorite; Halogens and halogenated compounds; Copper or copper alloys; Iron; Phenol can react exothermically with peroxymonosulfuric acid, sodium nitrate, 1,3-butadiene and boron trifluoride diethyl ether.
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous polymerization does not occur.

## Section 11. Toxicological Information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Phenol	LC50 Inhalation Vapor	Rat	316 mg/m3	4 hours
	LD50 Dermal	Rabbit	630 mg/kg	-
	LD50 Dermal	Rat	669 mg/kg	-
	LD50 Oral	Rat	317 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Phenol	Eyes - Mild irritant	Rabbit	-	0.5 minutes 5 milligrams	-
	Eyes - Severe irritant	Rabbit	-	5 milligrams	-
	Skin - Severe irritant	Pig	-	0.5 minutes 400 microliters	-
	Skin - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Severe irritant	Rabbit	-	535 milligrams	-

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Classification

Product/ingredient name	OSHA	IARC	NTP
Phenol	-	3	-

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Phenol	Category 2	Not determined	kidneys, liver, mucous membranes, nervous system and skin

#### Aspiration hazard

Not available.

## Section 11. Toxicological Information

### Information on the likely routes of exposure

#### Potential acute health effects

	Not available.
<b>Eye contact</b>	Causes serious eye damage. Contact with the eye may result in irritation, conjunctival swelling, whitened cornea, and blindness.
<b>Inhalation</b>	Toxic if inhaled.
<b>Skin contact</b>	Toxic in contact with skin. Contact of the skin with the solid or liquid can produce chemical burns, redness, edema, tissue necrosis, and gangrene.
<b>Ingestion</b>	Toxic if swallowed. Ingestion of lethal amounts causes severe burns of the mouth and throat, marked abdominal pain, cyanosis, muscular weakness, collapse, coma, and death.

#### Symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	Adverse symptoms may include the following: Pain, watering, redness
<b>Inhalation</b>	No specific data.
<b>Skin contact</b>	Adverse symptoms may include the following: pain or irritation, redness, blistering may occur
<b>Ingestion</b>	Adverse symptoms may include the following: stomach pains

#### Delayed and immediate effects and also chronic effects from short and long term exposure

##### Short term exposure

<b>Potential immediate effects</b>	Acute phenol intoxication causes shock, collapse, coma, convulsions, cyanosis, and death.
<b>Potential delayed effects</b>	Not available.

##### Long term exposure

<b>Potential immediate effects</b>	Not available.
<b>Potential delayed effects</b>	Chronic phenol poisoning is characterized by vomiting, difficult swallowing, excessive salivation, diarrhea, anorexia, headache, fainting, vertigo, mental disturbances, and possibly skin eruptions. Prolonged cutaneous exposure may result in deposition of dark pigment in the skin.

#### Potential chronic health effects

Not available.

<b>General</b>	May cause damage to organs through prolonged or repeated exposure.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	Suspected of causing genetic defects.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

#### Numerical measures of toxicity

##### Acute toxicity estimates

Not available.

## Section 12. Ecological Information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Phenol	Acute EC50 61.1 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 36 mg/l Marine water	Algae - Hormosira banksii - Gamete	72 hours
	Acute EC50 94 mg/l Fresh water	Aquatic plants - Lemna aequinoctialis	96 hours
	Acute EC50 4200 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 800 µg/l Marine water	Crustaceans - Archaeomysis kokuboi - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 1.75 µg/l Fresh water	Fish - Cyprinus carpio - Larvae	96 hours
	Chronic EC10 969 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
Chronic NOEC 1.5 mg/l Fresh water	Daphnia - Daphnia magna	21 days	
Chronic NOEC 118 µg/l Fresh water	Fish - Oncorhynchus mykiss	90 days	

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Phenol	29.5	647	high

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>)

Not available.

### Other adverse effects

No known significant effects or critical hazards.

## Section 13. Disposal considerations

### Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues.







Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 13. Disposal considerations

### United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Phenol	108-95-2	Listed	U188

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	UN2312	UN2312	UN2312	UN2312	UN2312	UN2312
UN proper shipping name	Phenol, molten	Phenol, molten	Phenol, molten	Phenol, molten	Phenol, molten	Phenol, molten
Transport hazard class(es)	6.1	6.1	6.1	6.1	6.1	6.1
Transport Label						
Packing group	II	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	Marine Pollutant: No	No.
Additional information	<p><b>Reportable quantity</b> 1000 lbs / 454 kg [113.15 gal / 428.3 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</p>	-	-	-	-	-

### Special precautions for user

**Transport within user's premises** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not available.

## Section 15. Regulatory information

### U.S. Federal regulations

**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined

**United States inventory (TSCA 8b):** This material is listed or exempted.

**Clean Water Act (CWA) 307:** Phenol

**Clean Water Act (CWA) 311:** Phenol

**Clean Air Act Section 112  
(b) Hazardous Air  
Pollutants (HAPs)**

Listed

**Clean Air Act Section 602  
Class I Substances**

Not listed

**Clean Air Act Section 602  
Class II Substances**

Not listed

**DEA List I Chemicals  
(Precursor Chemicals)**

Not listed

**DEA List II Chemicals  
(Essential Chemicals)**

Not listed

**SARA 302/304**

**Composition/information on ingredients**

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Phenol	100	Yes.	500 / 10000	56.6 / 1131.5	1000	113.1

**SARA 304 RQ** 1000 lbs / 454 kg [113.1 gal / 428.3 L]

**SARA 311/312**

**Classification**

Fire hazard  
Immediate (acute) health hazard  
Delayed (chronic) health hazard

**Composition/information on ingredients**

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Phenol	100	Yes.	No.	No.	Yes.	Yes.

**SARA 313**

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	Phenol	108-95-2	100
<b>Supplier notification</b>	Phenol	108-95-2	100

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

**State regulations**

**Massachusetts** This material is listed.

**New York** This material is listed.

**New Jersey** This material is listed.

**Pennsylvania** This material is listed.

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

## Section 15. Regulatory information

### Montreal Protocol (Annexes A, B, C, E)

Not listed.

### Stockholm Convention on Persistent Organic Pollutants

Not listed.

### Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### International lists

#### National inventory

<b>Australia</b>	This material is listed or exempted.
<b>Canada</b>	This material is listed or exempted.
<b>China</b>	This material is listed or exempted.
<b>Europe</b>	This material is listed or exempted.
<b>Japan</b>	This material is listed or exempted.
<b>Malaysia</b>	This material is listed or exempted.
<b>New Zealand</b>	This material is listed or exempted.
<b>Philippines</b>	This material is listed or exempted.
<b>Republic of Korea</b>	This material is listed or exempted.
<b>Taiwan</b>	This material is listed or exempted.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	3*
Flammability	2
Physical hazards	0

Caution HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA).

The customer is responsible for determining the PPE code for this material.

### National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

### Procedure used to derive the classification

## Section 16. Other information

Classification	Justification
Flam. Liq. 4, H227 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Muta. 2, H341 STOT RE 2, H373 (kidneys, liver, mucous membranes, nervous system and skin)	Expert judgment Expert judgment Expert judgment Expert judgment Expert judgment Expert judgment Expert judgment Expert judgment

### History

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<b>Version</b>	2

### Key to abbreviations

ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 UN = United Nations

### References

Not available.

☑ Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.