Phenol, 5% w/v

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 11/19/2013 Version: 1.0

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

1.1. Product identifier

Product form : Mixture

Product name : Phenol, 5% w/v

Product code : LC18195

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : For laboratory and manufacturing use only.

1.3. Details of the supplier of the safety data sheet

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Corr. 1B	H314
Eye Dam. 1	H318
Muta. 2	H341
STOT RE 2	H373
Aquatic Acute 3	H402
Aquatic Chronic 3	H412

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS05 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) :
H314 - Causes severe skin burns and eye damage
H341 - Suspected of causing genetic defects
H373 - May cause damage to organs (liver, kidneys) through prolonged or repeated exposure (oral, Inhalation, Dermal)
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS-US) :
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe mist, vapours, spray
P264 - Wash exposed skin thoroughly after handling
P273 - Avoid release to the environment
P280 - Wear protective gloves, protective clothing, eye protection, face protection
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - IF exposed or concerned: Get medical advice/attention
P310 - Immediately call a POISON CENTER or doctor/physician
P314 - Get medical advice and attention if you feel unwell
P363 - Wash contaminated clothing before reuse
P405 - Store locked up

P501 - Dispose of contents/container to comply with local, state and federal regulations

2.3. Other hazards

Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

Full text of H-phrases: see section 16

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Water	(CAS No) 7732-18-5	95	Not classified
Phenol	(CAS No) 108-95-2	5	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1B, H314 Muta. 2, H341 STOT RE 2, H373 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Causes severe skin burns and eye damage. Suspected of causing genetic defects. Causes damage to organs (liver, kidneys) (Ingestion, Dermal, Inhalation).

Symptoms/injuries after eye contact : Causes serious eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Reactivity : Thermal decomposition generates : Corrosive vapours.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses. Combined gas/dust mask with filter type B/P3.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe mist, vapours, spray. Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood.

Hygiene measures : Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use. incompatible materials.

Incompatible products : Strong oxidizers. Strong reducing agents. Strong bases.

Incompatible products : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Phenol (108-95-2)		
USA ACGIH	ACGIH TWA (mg/m³)	19 mg/m³
USA ACGIH	ACGIH TWA (ppm)	5 ppm
USA ACGIH	ACGIH STEL (ppm)	5 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	19 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	5 ppm

8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or face shield.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Molecular mass : 94.1 g/mol

Colour : Colourless.

Odour : Sweet.

Odour threshold	:	No data available
pH	:	6
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Self ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	0.35 mm Hg 25°C
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Density	:	1 g/ml
Solubility	:	Soluble in water.
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	1.8 - 8.6 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong reducing agents. Strong oxidizers. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Phenol, 5% w/v	
LD50 oral rat	6340 mg/kg
LD50 dermal rat	10500 mg/kg
LC50 inhalation rat (mg/l)	6.32 mg/l/4h

Phenol (108-95-2)	
LD50 oral rat	317 - 650 mg/kg (Rat)
LD50 dermal rat	669 mg/kg (Rat)
LD50 dermal rabbit	850 - 1400 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	0.32 mg/l/4h (Rat)

Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg

Skin corrosion/irritation : Causes severe skin burns and eye damage.
pH: 6

Serious eye damage/irritation : Causes serious eye damage.
pH: 6

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Suspected of causing genetic defects.

Carcinogenicity : Not classified

Phenol (108-95-2)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : May cause damage to organs (liver, kidneys) through prolonged or repeated exposure (oral, Inhalation, Dermal).
May cause damage to organs through prolonged or repeated exposure

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries after eye contact : Causes serious eye damage.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Phenol, 5% w/v	
LC50 fishes 1	80 mg/l

Phenol (108-95-2)	
LC50 fishes 1	27.8 mg/l (96 h; Brachydanio rerio)
EC50 Daphnia 1	18 - 36 mg/l (48 h; Daphnia pulex)
LC50 fish 2	9.1 - 12.2 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	6.6 mg/l (48 h; Daphnia magna)
TLM fish 1	39.2 mg/l (96 h; Poecilia reticulata)
TLM fish 2	5.7 mg/l (96 h; Lepomis macrochirus)
Threshold limit other aquatic organisms 1	64 mg/l (Pseudomonas putida)
Threshold limit algae 1	7.5 mg/l (192 h; Scenedesmus quadricauda)
Threshold limit algae 2	4.6 mg/l (192 h; Microcystis aeruginosa)

12.2. Persistence and degradability

Phenol, 5% w/v	
Persistence and degradability	May cause long-term adverse effects in the environment.

Phenol (108-95-2)	
Persistence and degradability	Readily biodegradable in water. Photolysis in water. Readily biodegradable in the soil. Inhibits biodegradation processes in the soil. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	1.68 g O^2/g substance
Chemical oxygen demand (COD)	2.28 g O^2/g substance
ThOD	2.38 g O^2/g substance
BOD (% of ThOD)	0.71 % ThOD

Water (7732-18-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Phenol, 5% w/v	
Bioaccumulative potential	Not established.

Phenol (108-95-2)	
BCF fish 1	20 (Leuciscus idus)
BCF fish 2	1276 - 1496 (Pimephales promelas)
BCF other aquatic organisms 1	277 (Daphnia magna)
BCF other aquatic organisms 2	3.5 - 16 (Scenedesmus quadricauda)
Log Pow	1.47 (Experimental value; 30 °C,Experimental value; 30 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Water (7732-18-5)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

Phenol (108-95-2)	
Surface tension	0.039 N/m (41 °C)

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

No dangerous good in sense of transport regulations

Additional information

Other information : No supplementary information available.

ADR

Transport document description :

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Phenol, 5% w/v	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Immediate (acute) health hazard

Phenol (108-95-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	1000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Fire hazard
SARA Section 313 - Emission Reporting	1 %

Water (7732-18-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Phenol, 5% w/v	
WHMIS Classification	Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material

Phenol (108-95-2)	
Listed on the Canadian DSL (Domestic Sustances List) inventory.	
WHMIS Classification	Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material

Water (7732-18-5)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

Phenol (108-95-2)
Listed on the Canadian Ingredient Disclosure List

15.3. US State regulations

No additional information available

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

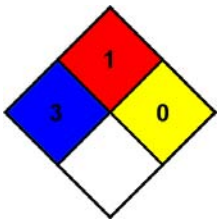
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Acute 2	Hazardous to the aquatic environment — AcuteHazard, Category 2
Aquatic Acute 3	Hazardous to the aquatic environment — AcuteHazard, Category 3
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Muta. 2	Germ cell mutagenicity, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H301	Toxic if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled
H341	Suspected of causing genetic defects

H373	May cause damage to organs through prolonged or repeated exposure
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard : 1 - Must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 1 Slight Hazard

Physical : 0 Minimal Hazard

Personal Protection : J

SDS US (GHS HazCom 2012)

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and LabChem Inc assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.