

SAFETY DATA SHEET

According to OSHA Hazcom Standard 29 CFR 1910.1200

Phenol

Date of issue: 2019-01-04

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Version: R0006.0001

1. IDENTIFICATION

A. Product name

- Phenol

B. Recommended use and restriction on use

- General use : for experimental, research and industrial use
- Restriction on use : Never drink, Not used except for experimental, research and industrial applications.

C. Manufacturer / Supplier / Distributor information

○ Manufacturer information

- Company name : DUKSAN PURE CHEMICALS
- Address : 53,SINWONRO 133BEONGIL, DANWONGU, ANSANSI, GYUNGGIDO, KOREA
- Emergency telephone number : 82-31-495-4055

○ Supplier/Distributor information

- Company name : DUKSAN PURE CHEMICALS
- Address : 53,SINWONRO 133BEONGIL, DANWONGU, ANSANSI, GYUNGGIDO, KOREA
- Telephone number : 82-31-495-4055
- Emergency telephone number : 82-31-495-4055
- Fax number : 82-31-495-4058

2. HAZARD IDENTIFICATION

A. GHS Classification

- Acute toxicity (oral) : Category3
- Acute toxicity (dermal) : Category3
- Acute Toxicity (Inhalation: dust / mist) : Category4
- Skin corrosion/irritation : Category1A
- Serious eye damage/irritation : Category1
- Germ cell mutagenicity : Category2
- Specific target organ toxicity(Repeated exposure) : Category2
- Chronic aquatic toxicity : Category2

B. GHS label elements

○ Hazard symbols



○ Signal words

- Danger

○ Hazard statements

- H301 Toxic if swallowed
- H311 Toxic in contact with skin
- H314 Causes severe skin burns and eye damage
- H318 Causes serious eye damage
- H332 Harmful if inhaled

- H341 Suspected of causing genetic defects
- H373 May cause damage to organs through prolonged or repeated exposure (Refer Section SDS 11)
- H411 Toxic to aquatic life with long lasting effects

o **Precautionary statements**

1) Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust/fume.
- P261 Avoid breathing dust/fume.
- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

2) Response

- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- 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.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P314 Get medical advice/attention if you feel unwell.
- P321 Specific treatment
- P330 Rinse mouth.
- P361 Remove/Take off immediately all contaminated clothing.
- P363 Wash contaminated clothing before reuse.
- P391 Collect spillage.

3) Storage

- P405 Store locked up.

4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

C. Other hazards which do not result in classification : (NFPA Classification)

o **NFPA grade (0 ~ 4 level)**

- Health : 4, Flammability : 2, Reactivity : 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
Phenol	-	108-95-2	100

4. FIRST AID MEASURES

A. Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.
- Remove contact lenses if worn.

B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.
- Get medical attention immediately.

- Take the doctor's examination.
- Wash thoroughly after handling.

C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Get medical attention immediately.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.

D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Get medical attention immediately.

E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- If exposed or concerned, get medical attention/advice.

5. FIREFIGHTING MEASURES

A. Suitable (Unsuitable) extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

B. Specific hazards arising from the chemical

- Not available

C. Special protective actions for firefighters

- Cool containers with water until well after fire is out.
- Avoid inhalation of materials or combustion by-products.
- Use appropriate extinguishing measure suitable for surrounding fire.
- Wear appropriate protective equipment.
- Keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures

- Ventilate closed spaces before entering.
- Must work against the wind, let the upwind people to evacuate.
- Move container to safe area from the leak area.
- Remove all sources of ignition.
- Avoid skin contact and inhalation.
- Cleanup and disposal under expert supervision is advised.
- Keep unauthorized people away, isolate hazard area and deny entry.

B. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

C. Methods and materials for containment and cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.

- Appropriate container for disposal of spilled material collected.
- Small liquid state spills: Appropriate container for disposal of spilled material collected.
- Put the spilled material in an appropriate containers and clean the contaminated area
- Prevent the influx to waterways, sewers, basements or confined spaces.

7. HANDLING AND STORAGE

A. Precautions for safe handling

- Wash thoroughly after handling.
- Comply with all applicable laws and regulations for handling
- Get the manual before use.
- Dealing only with a well-ventilated place.
- Contaminated work clothing should not be allowed out of the workplace.

B. Conditions for safe storage, including any incompatibilities

- Store according to current laws and regulations
- Keep in the original container.
- Keep sealed when not in use.
- Prevent static electricity and keep away from combustible materials or heat sources.
- Collected them in sealed containers.
- Do not eat, drink or smoke when using this product.
- Store away from water and sewer.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

- **ACGIH TLV**
 - [Phenol] : TWA 5 ppm (19 mg/m³)
- **OSHA PEL**
 - [Phenol]:5ppm 19mg/m³

B. Engineering controls

- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

C. Individual protection measures, such as personal protective equipment

- **Respiratory protection**
 - Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
 - Respiratory protection is ranked in order from minimum to maximum.
 - Consider warning properties before use.
 - Dust, mist, fume-purifying respiratory protection
 - Air-purifying respirator with high-efficiency particulate filtering
 - Any respiratory protection with a electromotion fan(for dust, mist, fume-purifying)
 - Self-contained breathing apparatus with a corpuscle filter of high efficiency
 - For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
- **Eye protection**
 - Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
 - Provide an emergency eye wash station and quick drench shower in the immediate work area.
- **Hand protection**
 - Wear appropriate glove.
- **Skin protection**
 - Wear appropriate clothing.
- **Others**
 - Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance	
- Appearance	Solid(Other)
- Color	Not available
B. Odor	characteristic
C. Odor threshold	3 ppm
D. pH	6 (solution)
E. Melting point/Freezing point	40 ~ 43 °C
F. Initial Boiling Point/Boiling Ranges	182 °C
G. Flash point	79 °C
H. Evaporation rate	Not available
I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	10 / 1.36 %
K. Vapour pressure	0.35 mmHg (25°C)
L. Solubility	8.28 g/100mℓ (25°C)
M. Vapour density	3.2
N. Specific gravity(Relative density)	1.0576
O. Partition coefficient of n-octanol/water	1.46
P. Autoignition temperature	715 °C
Q. Decomposition temperature	Not available
R. Viscosity	1.51 cP (80°C)
S. Molecular weight	94.11

10. STABILITY AND REACTIVITY

A. Chemical Stability

- This material is stable under recommended storage and handling conditions.

B. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

C. Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

- (Respiratory tracts)
 - Not available
- (Oral)
 - Toxic if swallowed
- (Eye·Skin)
 - Causes serious eye damage
 - Causes severe skin burns and eye damage

B. Delayed and immediate effects and also chronic effects from short and long term exposure

- Acute toxicity
 - * Oral
 - [Phenol] : LD50 650 mg/kg Rat (ECHA)
 - * Dermal
 - [Phenol] : LD50 625 mg/kg Rat (ECHA)

- * **Inhalation**
 - [Phenol] : dust LC50 1.27 mg/ℓ 4 hr Rat (ECHA)
- **Skin corrosion/irritation**
 - Causes severe skin burns and eye damage
- **Serious eye damage/irritation**
 - Causes serious eye damage
- **Respiratory sensitization**
 - Not available
- **Skin sensitization**
 - Not available
- **Carcinogenicity**
 - * **IARC**
 - [Phenol] : Group 3
 - * **OSHA**
 - Not available
 - * **ACGIH**
 - [Phenol] : A4
 - * **NTP**
 - Not available
 - * **EU CLP**
 - Not available
- **Germ cell mutagenicity**
 - Suspected of causing genetic defects
- **Reproductive toxicity**
 - Not available
- **STOT-single exposure**
 - Not available
- **STOT-repeated exposure**
 - May cause damage to organs through prolonged or repeated exposure
- **Aspiration hazard**
 - Not available

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

- **Fish**
 - [Phenol] : LC50 21.93 mg/ℓ 96 hr Poecilia reticulata (ECHA)
- **Crustaceans**
 - [Phenol] : EC50 3.1 mg/ℓ 48 hr Ceriodaphnia dubia (ECHA)
- **Algae**
 - [Phenol] : EC50 61.1 mg/ℓ 96 hr Selenastrum capricornutum (ECHA)

B. Persistence and degradability

- **Persistence**
 - [Phenol] : log Kow = 1.47 (ECHA)
- **Degradability**
 - Not available

C. Bioaccumulative potential

- **Bioaccumulative potential**
 - [Phenol] : BCF = 17.5 ~ 647 (ECHA)
- **Biodegradation**
 - [Phenol] : 62% 100 hr (ECHA)

D. Mobility in soil

- [Phenol] : Koc = 14 ~ 73 (ECHA)

E. Other adverse effects

- Not available

13. DISPOSAL CONSIDERATIONS

A. Disposal methods

- Since more than two kinds of designated waste is mixed, it is difficult to treat separately, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.

B. Special precautions for disposal

- The user of this product must dispose by oneself or entrust it to a waste disposer, a person who recycles other's waste or establishes and operates waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION

A. UN No. (IMDG CODE/IATA DGR)

- 1671

B. Proper shipping name

- PHENOL, SOLID

C. Hazard Class

- 6.1

D. IMDG CODE/IATA DGR Packing group

- II

E. Marine pollutant

- Applicable

F. Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : F-A (General fire schedule)
- EmS SPILLAGE SCHEDULE : S-A (Toxic substances)

15. REGULATORY INFORMATION

A. National and/or international regulatory information

- POPs Management Law
 - Not applicable
- Information of EU Classification
 - * Classification
 - [Phenol] : H341, H331, H311, H301, H373, H314
- U.S. Federal regulations
 - * OSHA PROCESS SAFETY (29CFR1910.119)
 - Not applicable
 - * CERCLA Section 103 (40CFR302.4)
 - [Phenol] : 453.599 kg 1000 lb
 - * EPCRA Section 302 (40CFR355.30)
 - [Phenol] : 226.7995/4535.99 kg 500/10000 lb
 - * EPCRA Section 304 (40CFR355.40)
 - [Phenol] : 453.599 kg 1000 lb
 - * EPCRA Section 313 (40CFR372.65)
 - [Phenol] : Applicable
- Rotterdam Convention listed ingredients
 - Not applicable
- Stockholm Convention listed ingredients

- Not applicable
- **Montreal Protocol listed ingredients**
 - Not applicable

16. OTHER INFORMATION

A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.
- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

B. Issue date

- 2019-01-04

C. Revision number and Last date revised

- 5 times, 2025-11-07

D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).