

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** PHENOL, CRYSTALS

**Other means of identification**

**Product No.:** 4056, 2858, 2862, 0605, 0273, 0028

**Recommended use and restriction on use**

**Recommended use:** Not available.

**Restrictions on use:** Not known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

Company Name: Avantor Performance Materials, Inc.  
Address: 3477 Corporate Parkway, Suite 200  
Center Valley, PA 18034

Telephone: Customer Service: 855-282-6867

Fax:  
Contact Person: Environmental Health & Safety  
e-mail: info@avantormaterials.com

**Emergency telephone number:**

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

## 2. Hazard(s) identification

**Hazard classification**

**Health hazards**

Acute toxicity (Oral)	Category 3
Acute toxicity (Dermal)	Category 3
Acute toxicity (Inhalation - vapor)	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	Category 2

**Environmental hazards**

Acute hazards to the aquatic environment	Category 1
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**Label elements**

**Hazard symbol:**



**Signal word:** Danger

**Hazard statement:** Toxic if swallowed.  
Toxic if inhaled.  
Toxic in contact with skin.  
Causes severe skin burns and eye damage.  
Suspected of causing genetic defects.  
May cause damage to organs through prolonged or repeated exposure.  
Very toxic to aquatic life.

#### Precautionary statement

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling. Avoid release to the environment.

**Response:** Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Specific treatment (see this label). Collect spillage.

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

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification:** None.

### 3. Composition/information on ingredients

#### Substances

Chemical identity	Common name and synonyms	CAS number	Content in percent (%)*
PHENOL		108-95-2	99 - 100%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4. First-aid measures

**General information:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

**Ingestion:** Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Inhalation:** Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration.

<b>Skin contact:</b>	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
<b>Eye contact:</b>	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

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

<b>Symptoms:</b>	Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled. Corrosive to skin and eyes.
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#### Indication of immediate medical attention and special treatment needed

<b>Treatment:</b>	Treat symptomatically. Symptoms may be delayed.
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### 5. Fire-fighting measures

<b>General fire hazards:</b>	In case of fire and/or explosion do not breathe fumes.
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#### Suitable (and unsuitable) extinguishing media

<b>Suitable extinguishing media:</b>	Water spray, fog, CO <sub>2</sub> , dry chemical, or alcohol resistant foam. Water spray should be used to cool containers.
<b>Unsuitable extinguishing media:</b>	None known.

<b>Specific hazards arising from the chemical:</b>	During fire, gases hazardous to health may be formed. Heat may cause the containers to explode.
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#### Special protective equipment and precautions for firefighters

<b>Special fire fighting procedures:</b>	Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.
<b>Special protective equipment for fire-fighters:</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures:</b>	Keep unauthorized personnel away. Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
<b>Methods and material for containment and cleaning up:</b>	Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.
<b>Notification Procedures:</b>	Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.
<b>Environmental precautions:</b>	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

**Precautions for safe handling:** Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Do not breathe dust or vapor. Do not taste or swallow. Do not eat, drink or smoke when using the product. Use only with adequate ventilation. Wash hands thoroughly after handling. See Section 8 of the MSDS for Personal Protective Equipment.

**Conditions for safe storage, including any incompatibilities:** Do not store in metal containers. Keep in a cool, well-ventilated place. Store in a dry place.

## 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
PHENOL	TWA	5 ppm	US. ACGIH Threshold Limit Values (2011)
	REL	5 ppm 19 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	Ceil_Time	15.6 ppm 60 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	5 ppm 19 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	5 ppm 19 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

#### Biological limit values

Chemical identity	Exposure Limit values	Source
PHENOL (Phenol with hydrolysis: Sampling time: End of shift.)	250 mg/g (Creatinine in urine)	ACGIH BEL (2011)

**Appropriate engineering controls** No data available.

### Individual protection measures, such as personal protective equipment

**General information:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

**Eye/face protection:** Wear safety glasses with side shields (or goggles) and a face shield.

#### Skin protection

**Hand protection:** Chemical resistant gloves

**Other:** Wear suitable protective clothing and gloves.

**Respiratory protection:** In case of inadequate ventilation use suitable respirator.

**Hygiene measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Provide eyewash station and safety shower.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	Liquid Solid
<b>Form:</b>	Crystalline solid
<b>Color:</b>	Colorless to light pink
<b>Odor:</b>	Somewhat sickeningly sweet and acrid odor
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	Approximate 6.0 Aqueous solution
<b>Melting point/freezing point:</b>	43 °C
<b>Initial boiling point and boiling range:</b>	182 °C (101.3 kPa)
<b>Flash Point:</b>	79 °C (Closed Cup)
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	Combustible Solid

### Upper/lower limit on flammability or explosive limits

<b>Flammability limit - upper (%):</b>	10 %(V) Mixtures of air and phenol
<b>Flammability limit - lower (%):</b>	3 %(V) Mixtures of air and phenol
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.

<b>Vapor pressure:</b>	0.053 kPa (25 °C)
<b>Vapor density:</b>	3.24 AIR=1
<b>Relative density:</b>	1.06 (20 °C)

### Solubility(ies)

<b>Solubility in water:</b>	90 g/l (25 °C)
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	1.46
<b>Auto-ignition temperature:</b>	715 °C
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

### Other information

<b>Molecular weight:</b>	94.11 g/mol (C <sub>6</sub> H <sub>6</sub> O)
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## 10. Stability and reactivity

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Heat, sparks, flames. Keep away from sources of ignition - No smoking. Contact with incompatible materials.
<b>Incompatible materials:</b>	Strong oxidizing agents. Halogens. Formaldehyde.
<b>Hazardous decomposition products:</b>	Thermal decomposition may release oxides of carbon. By heating and fire, toxic vapors/gases may be formed.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion:</b>	Toxic if swallowed.
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<b>Inhalation:</b>	Toxic if inhaled.
<b>Skin contact:</b>	Toxic in contact with skin. Causes severe skin burns.
<b>Eye contact:</b>	Causes serious eye damage.

**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)**

<b>Oral</b>	
<b>Product:</b>	LD 50 (Rat): 317 mg/kg
<b>Dermal</b>	
<b>Product:</b>	LD 50 (Rabbit): 850 mg/kg
<b>Inhalation</b>	
<b>Product:</b>	No data available.
<b>Repeated dose toxicity</b>	
<b>Product:</b>	No data available.

**Skin corrosion/irritation**

<b>Product:</b>	Causes severe skin burns.
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**Serious eye damage/eye irritation**

<b>Product:</b>	Causes serious eye damage.
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**Respiratory or skin sensitization**

<b>Product:</b>	Not a skin sensitizer.
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**Carcinogenicity**

<b>Product:</b>	No data available.
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**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogenic components identified

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**

No carcinogenic components identified

**Germ cell mutagenicity**

<b>In vitro</b>	
<b>Product:</b>	Suspected of causing genetic defects.

<b>In vivo</b>	
<b>Product:</b>	Suspected of causing genetic defects.

**Reproductive toxicity**

<b>Product:</b>	No data available.
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**Specific target organ toxicity - single exposure**

<b>Product:</b>	No data available.
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**Specific target organ toxicity - repeated exposure**

<b>Product:</b>	Liver, Nervous System, Skin, Kidney - May cause damage to organs through prolonged or repeated exposure.
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**Aspiration hazard**

<b>Product:</b>	Not classified
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**Other effects:** None known.

## 12. Ecological information

### Ecotoxicity:

#### Acute hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Specified substance(s):

PHENOL  
LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 20.5 - 25.6 mg/l Mortality  
LC 50 (Carp (*Cyprinus carpio*), 96 h): 0.00175 mg/l Mortality  
LC 50 (Bluegill (*Lepomis macrochirus*), 96 h): 11.5 mg/l Mortality

##### Aquatic invertebrates

**Product:** No data available.

##### Specified substance(s):

PHENOL LC 50 (Water flea (*Daphnia magna*), 96 h): 4 mg/l Mortality

#### Chronic hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Aquatic invertebrates

**Product:** No data available.

##### Toxicity to Aquatic Plants

**Product:** No data available.

##### Specified substance(s):

PHENOL LC 50 (Duckweed (*Lemna minor*), 72 h): 1,500 mg/l Mortality

### Persistence and degradability

#### Biodegradation

**Product:** There are no data on the degradability of this product.

#### BOD/COD ratio

**Product:** No data available.

### Bioaccumulative potential

#### Bioconcentration factor (BCF)

**Product:** No data available on bioaccumulation.

#### Partition coefficient n-octanol / water (log Kow)

**Product:** Log Kow: 1.46

**Mobility in soil:** No data available.

#### Known or predicted distribution to environmental compartments

PHENOL No data available.

**Other adverse effects:** Very toxic to aquatic organisms.

## 13. Disposal considerations

<b>Disposal instructions:</b>	Discharge, treatment, or disposal may be subject to national, state, or local laws.
<b>Contaminated packaging:</b>	Since emptied containers retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

### DOT

UN number:	UN 1671
UN proper shipping name:	Phenol, solid
Transport hazard class(es)	
Class(es):	6.1
Label(s):	6.1
Packing group:	II
Marine Pollutant:	No

### IMDG

UN number:	UN 1671
UN proper shipping name:	PHENOL, SOLID
Transport hazard class(es)	
Class(es):	6.1
Label(s):	6.1
EmS No.:	F-A, S-A
Packing group:	II
Marine Pollutant:	No

### IATA

UN number:	UN 1671
Proper Shipping Name:	Phenol, solid
Transport hazard class(es):	
Class(es):	6.1
Label(s):	6.1
Marine Pollutant:	No
Packing group:	II

## 15. Regulatory information

### US federal regulations

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

##### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

#### CERCLA Hazardous Substance List (40 CFR 302.4):

PHENOL Reportable quantity: 1000 lbs.

#### Superfund amendments and reauthorization act of 1986 (SARA)

##### Hazard categories

☒ Acute (Immediate) ☒ Chronic (Delayed) ☒ Fire ☐ Reactive ☐ Pressure Generating

##### SARA 302 Extremely hazardous substance

Chemical identity	RQ	Threshold Planning Quantity
PHENOL	1000 lbs.	- - -



**SARA 304 Emergency release notification**

Chemical identity	RQ
PHENOL	1000 lbs.

**SARA 311/312 Hazardous chemical**

Chemical identity	Threshold Planning Quantity
PHENOL	500lbs

**SARA 313 (TRI reporting)**

Chemical identity	Reporting threshold for other users	Reporting threshold for manufacturing and processing
PHENOL	10000 lbs	25000 lbs.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

PHENOL	Reportable quantity: 1000 lbs.
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**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

**US state regulations**

**US. California Proposition 65**

No ingredient regulated by CA Prop 65 present.

**US. New Jersey Worker and Community Right-to-Know Act**

PHENOL	Listed
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**US. Massachusetts RTK - Substance List**

PHENOL	Listed
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**US. Pennsylvania RTK - Hazardous Substances**

PHENOL	Listed
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**US. Rhode Island RTK**

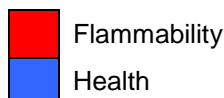
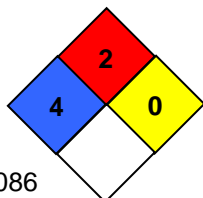
PHENOL	Listed
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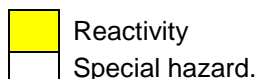
**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

**16. Other information, including date of preparation or last revision**

**NFPA Hazard ID**





Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

**Issue date:** 04-29-2014

**Revision date:** No data available.

**Version #:** 1.0

**Further information:** No data available.

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