

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Phenol Crystalline

Other means of identification

Product Code(s) A3651

UN/ID no. 1671

Synonyms No information available

Product Use For Laboratory Research Use Only.

Supplier/Manufacturer

Biomatik Corporation
9-140 McGovern Dr.
Cambridge, Ontario N3H 4R7
Canada

Telephone Number 1-519-489-7195

E-mail Address info@biomatik.com

Emergency Telephone Number Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute Toxicity - Oral	Category 3
Acute Toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Skin Corrosion/Irritation	Category 1 Sub-category B
Serious Eye Damage/Eye Irritation	Category 1
Germ cell mutagenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Emergency Overview

Danger

Hazard statements

H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H314 - Causes severe skin burns and eye damage
H331 - Toxic if inhaled
H341 - Suspected of causing genetic defects
H373 - May cause damage to organs through prolonged or repeated exposure

**Appearance** White**Physical State** Solid**Odor** Phenolic Medicinal sweetish odor**Precautionary Statements - Prevention**

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

Precautionary Statements - Response

Specific treatment (see .? on this label)
 Immediately call a POISON CENTER or doctor
 Specific treatment (see .? on this label)
 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 doctor
 Call a POISON CENTER or doctor if you feel unwell
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
 Wash contaminated clothing before reuse
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 Immediately call a POISON CENTER or doctor
 IF SWALLOWED: Immediately call a POISON CENTER or doctor
 Rinse mouth
 Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not regulated

Other Information

- Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	EC No.	Weight %	Trade Secret
Phenol	108-95-2	203-632-7	95-100	Not applicable

4. FIRST AID MEASURES

First Aid Measures**Eye Contact**

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.
 Consult a physician.

Skin Contact	For severe burns, immediate medical attention is required. Remove contaminated clothing/shoes immediately. Blot from skin to avoid further spread. Rapid decontamination is critical. Immediately wash off with plenty of water, then with polyethylene glycol (PEG) solution and with plenty of water. Apply PEG/EtOH solution liberally to affected area. Leave for 15-30 seconds, then wash with water. Continue cycle of PEG/EtOH solution - water for at least 15 minutes. (PEG/EtOH solution consists of 2 parts polyethylene glycol 400 to 1 part ethanol. For external use only.) Wash off with soap and water. Obtain medical attention. Wash contaminated clothing before reuse.
Inhalation	Move to fresh air. If not breathing, give artificial respiration.
Ingestion	Immediate medical attention is required. Never give anything by mouth to an unconscious person.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, CO₂, water spray or alcohol-resistant foam.

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical

No information available.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal protection Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Avoid dust formation. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling Handle in accordance with good industrial hygiene and safety practice. Heat Sensitive. Hygroscopic. Light Sensitive.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Hygroscopic. Protect from light. Keep away from heat and sources of ignition.

Incompatible Products Strong oxidizing agents. Strong acids. Strong bases. Protect from light. Aluminium. Halogens. Magnesium. Nitric acid. Zinc. Isocyanates. Acetaldehyde. Nitrides. Calcium hypochlorite. Lead. Peroxomonosulfuric acid. Sodium Nitrite. moisture. Formaldehyde.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Phenol	TWA: 5 ppm	TWA: 5 ppm TWA: 19 mg/m ³	IDLH: 250 ppm Ceiling: 15.6 ppm Ceiling: 60 mg/m ³ TWA: 5 ppm TWA: 19 mg/m ³

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses with side-shields. Face-shield. Avoid contact with eyes.

Skin and Body Protection Wear protective gloves/clothing.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical State	Solid	Odor	Phenolic Medicinal
Appearance	White		sweetish odor
Color	No information available	Odor Threshold	No information available
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	<6.0		
Melting point/freezing point	39-41 °C		
Boiling Point/Range	182 °C		
Flash Point (High in °C)	79 °C	Closed cup	
Evaporation Rate	No information available		
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	1.3		

Lower flammability limit:	8.6
Vapor pressure	No information available
Vapor Density	No information available
Specific Gravity	No information available
Water Solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition Temperature	715 °C
Decomposition Temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive Properties	No information available
Oxidizing Properties	No information available

Other Information

Softening Point	No information available
Molecular Weight	No information available
VOC Content	No information available
Density	3.24
Bulk Density	No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical Stability

Stable under recommended storage conditions. Unstable if heated.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Incompatible products. Protect from heat and light. Hygroscopic.

Incompatible Materials

Strong oxidizing agents. Strong acids. Strong bases. Protect from light. Aluminium. Halogens. Magnesium. Nitric acid. Zinc. Isocyanates. Acetaldehyde. Nitrides. Calcium hypochlorite. Lead. Peroxomonosulfuric acid. Sodium Nitrite. moisture. Formaldehyde.

Hazardous Decomposition Products

Carbon oxides. May emit toxic fumes under fire conditions.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information**

Inhalation	Harmful by inhalation.
Eye Contact	Corrosive to the eyes and may cause severe damage including blindness.
Skin Contact	Contact causes severe skin irritation and possible burns.
Ingestion	Harmful if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phenol	= 317 mg/kg (Rat) = 340 mg/kg (Rat)	= 630 mg/kg (Rabbit)	= 316 mg/m ³ (Rat) 4 h

Information on toxicological effects

Symptoms	No information available.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Phenol	-	Group 3	-	-

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Chronic Toxicity Suspected mutagen.
Target Organ Effects Liver, Kidneys, Central nervous system (CNS).
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

12. ECOLOGICAL INFORMATION**Ecotoxicity**

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Toxicity to Fish	Crustacea
Phenol	187 - 279: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50 static 46.42: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 0.0188 - 0.1044: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 static	20.5 - 25.6: 96 h <i>Pimephales promelas</i> mg/L LC50 static 5.449 - 6.789: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 11.9 - 50.5: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 32: 96 h <i>Pimephales promelas</i> mg/L LC50 5.0 - 12.0: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 13.5: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 0.00175: 96 h <i>Cyprinus carpio</i> mg/L LC50 semi-static 31: 96 h <i>Poecilia reticulata</i> mg/L LC50 semi-static 34.09 - 47.64: 96 h <i>Poecilia reticulata</i> mg/L LC50 static 33.9 - 43.3: 96 h <i>Oryzias latipes</i> mg/L LC50 flow-through 11.9 - 25.3: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through 11.5: 96 h <i>Lepomis macrochirus</i> mg/L LC50 semi-static 27.8: 96 h <i>Brachydanio rerio</i> mg/L LC50 23.4 - 36.6: 96 h <i>Oryzias latipes</i> mg/L LC50 static 7.5 - 14: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static 4.23 - 7.49: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 semi-static	4.24 - 10.7: 48 h <i>Daphnia magna</i> mg/L EC50 Static 10.2 - 15.5: 48 h <i>Daphnia magna</i> mg/L EC50

Persistence and Degradability

No information available.

Bioaccumulation/Accumulation

No information available.

Chemical Name	Partition coefficient
Phenol	1.47

Other Adverse Effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Method Dispose of material in accordance with all federal, state, and local regulations.

Contaminated Packaging Do not re-use empty containers.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Phenol	-	-	-	-

Chemical Name	California Hazardous Waste Status
Phenol	Toxic; Corrosive

14. TRANSPORT INFORMATION

DOT

UN/ID no. 1671
 Proper shipping name Phenol, Solid
 Hazard Class 6.1
 Packing Group II

IATA

UN/ID no. 1671
 Proper shipping name Phenol, Solid
 Hazard Class 6.1
 Packing Group II

15. REGULATORY INFORMATION

International Inventories

TSCA Does not comply
 DSL/NDSL Complies
 EINECS/ELINCS Complies
 ENCS Complies
 IECSC Complies
 KECL Complies
 PICCS Complies
 AICS Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 IECSC - China Inventory of Existing Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Component	SARA 313 - Threshold Values %
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Phenol	1.0
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SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Phenol	1000 lb	X	X	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Phenol	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

Chemical Name	California Prop. 65
Phenol	-

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Phenol	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not regulated

16. OTHER INFORMATION

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet