

## SAFETY DATA SHEET

Preparation Date: 3/13/2017

Revision Date: 3/13/2017

Revision Number: G1

### 1. IDENTIFICATION

#### Product identifier

**Product code:** P1828  
**Product Name:** PHENOL-CHLOROFORM-ISOAMYL ALCOHOL, 25:24:1, PH 8.0, BIOTECHGRADE

#### Other means of identification

**Synonyms:** No information available  
**CAS #:** Mixture  
**RTECS #** Not available  
**CI#:** Not available

#### Recommended use of the chemical and restrictions on use

**Recommended use:** No information available.  
**Uses advised against** No information available

#### Supplier:

Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000.

#### Order Online At:

<https://www.spectrumchemical.com>

#### Emergency telephone number

Chemtrec 1-800-424-9300

#### Contact Person:

Martin LaBenz (West Coast)

#### Contact Person:

Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

#### Classification

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

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Gases)	Category 3
Acute toxicity - Inhalation (Vapors)	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
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2

#### Label elements

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 PHENOL-CHLOROFORM-ISOAMYL  
 ALCOHOL, 25:24:1, PH 8.0,  
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## Danger

### Hazard statements

Harmful if swallowed  
Toxic in contact with skin  
Toxic if inhaled  
Causes severe skin burns and eye damage  
Suspected of causing genetic defects  
Suspected of causing cancer  
May cause respiratory irritation. May cause drowsiness or dizziness  
May cause damage to organs through prolonged or repeated exposure



### Hazards not otherwise classified (HNOC)

Not Applicable

### Other hazards

Harmful to aquatic life with long lasting effects

### **Precautionary Statements - Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
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  
Wear eye/face protection  
Wear protective gloves  
Wear protective clothing

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

### **Precautionary Statements - Storage**

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

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**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components	CAS-No.	Weight %
Phenol	108-95-2	40-55
Chloroform	67-66-3	40-50
Isopentyl Alcohol	123-51-3	2-5

**4. FIRST AID MEASURES****First aid measures**

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.
- Skin Contact:** Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician immediately.
- Eye Contact:** Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.
- Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. Call a physician immediately.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

**Most important symptoms and effects, both acute and delayed**

- Symptoms** Severe skin and eye irritation or burns. May cause gastrointestinal (digestive) tract burns. Can burn mouth, throat, and stomach. Dyspnea (Shortness of breath and difficulty breathing). Rapid breathing. May cause build-up of fluid in the lungs (pulmonary edema). May cause methemoglobinemia and cyanosis. May cause central nervous system effects. Pallor. Excessive sweating. Hypotension. Cardiac arrhythmias. Pupillary dilation. May affect the liver. It may affect the kidneys.

**Indication of any immediate medical attention and special treatment needed**

- Notes to Physician:** Treat symptomatically.

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

**5. FIRE-FIGHTING MEASURES**

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## **Extinguishing Media**

### **Suitable Extinguishing Media:**

The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

### **Unsuitable Extinguishing Media:**

No information available.

## **Specific hazards arising from the chemical**

### **Hazardous Combustion Products:**

No information available.

### **Specific hazards:**

No information available.

## **Special Protective Actions for Firefighters**

### **Specific Methods:**

No information available.

### **Special Protective Equipment 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 Precautions:**

Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Remove all sources of ignition. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

#### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas. Do not let product enter drains. Should not be released into the environment.

### **Methods and material for containment and cleaning up**

#### **Methods for containment**

Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

#### **Methods for cleaning up**

Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

## **7. HANDLING AND STORAGE**

### **Precautions for safe handling**

#### **Technical Measures/Precautions:**

Use only in area provided with appropriate exhaust ventilation. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors or spray mist. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

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

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**Technical Measures/Storage Conditions:**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep refrigerated. Keep at temperatures between 2 and 8 °C. Store in a segregated and approved area. Store away from incompatible materials.

**Incompatible Materials:**

Oxidizing agents  
Acids  
Bases  
Potassium t-butoxide  
Alkali Metals  
Lithium  
Sodium  
Potassium  
Alkaline Earth metals  
Magnesium

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters****National occupational exposure limits****United States**

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WHEEL
Phenol	108-95-2	5 ppm TWA 19 mg/m <sup>3</sup> TWA	5 ppm TWA 19 mg/m <sup>3</sup> TWA 15.6 ppm Ceiling 15 min 60 mg/m <sup>3</sup> Ceiling 15 min	5 ppm TWA	None
Chloroform	67-66-3	50 ppm Ceiling 240 mg/m <sup>3</sup> Ceiling	2 ppm STEL 9.78 mg/m <sup>3</sup> STEL	10 ppm TWA	None
Isopentyl Alcohol	123-51-3	100 ppm TWA 360 mg/m <sup>3</sup> TWA	= 100 ppm TWA	= 125 ppm STEL	None

**Canada**

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Phenol	108-95-2	5 ppm TWA 19 mg/m <sup>3</sup> TWA	5 ppm TWA	5 ppm TWA	5 ppm TWAEV 19 mg/m <sup>3</sup> TWAEV
Chloroform	67-66-3	10 ppm TWA 49 mg/m <sup>3</sup> TWA	2 ppm TWA	10 ppm TWA	5 ppm TWAEV 24.4 mg/m <sup>3</sup> TWAEV
Isopentyl Alcohol	123-51-3	= 100 ppm TWA = 361 mg/m <sup>3</sup> TWA	= 100 ppm TWA	100 ppm TWA	100 ppm TWAEV 361 mg/m <sup>3</sup> TWAEV 125 ppm STEV 452 mg/m <sup>3</sup> STEV

**Australia and Mexico**

Components	CAS-No.	Australia	Mexico
Phenol	108-95-2	1 ppm TWA 4 mg/m <sup>3</sup> TWA	5 ppm TWA 19 mg/m <sup>3</sup> TWA 10 ppm STEL 38 mg/m <sup>3</sup> STEL
Chloroform	67-66-3	2 ppm TWA 10 mg/m <sup>3</sup> TWA	10 ppm TWA 50 mg/m <sup>3</sup> TWA 50 ppm STEL 225 mg/m <sup>3</sup> STEL
Isopentyl Alcohol	123-51-3	452 mg/m <sup>3</sup> STEL 100 ppm TWA 361 mg/m <sup>3</sup> TWA	= 100 ppm TWA = 360 mg/m <sup>3</sup> TWA

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## Appropriate engineering controls

### Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

## Individual protection measures, such as personal protective equipment

### Personal Protective Equipment

<b>Eye protection:</b>	Goggles or Face-shield
<b>Skin and body protection:</b>	Gloves Long sleeved clothing Chemical resistant apron
<b>Respiratory protection:</b>	Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
<b>Hygiene measures:</b>	Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands and face before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Liquid	<b>Appearance:</b> No information available.	<b>Color:</b> No information available.
<b>Odor:</b> No information available.	<b>Taste</b> No information available.	<b>Formula:</b> No information available
<b>Molecular/Formula weight:</b> No information available	<b>Flammability:</b> No information available	<b>Flashpoint (°C/°F):</b> >98.9 (°C)/>210 (°F)
<b>Flash Point Tested according to:</b> Open cup	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> No information available	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> 68.04 (°C)/154.5 (°F) weighted average	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> No information available
<b>Specific gravity:</b> 1.18 (weighted average)	<b>pH:</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> No information available	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available	<b>Viscosity:</b> No information available

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**Miscibility:**  
No information available

**Solubility:**  
No information available

## 10. STABILITY AND REACTIVITY

### Reactivity

For Phenol:

Contact of phenol with peroxodisulfuric acid may cause explosion

The combination of phenol with acetaldehyde results in violent condensaton

The combination of phenol with 1,3-butadiene, and born trifluoride diethyl ether complex results in an intense exothermic reaction

The combination of phenol with isocyanates results in heat generation and violent polymerization

The combination of phenol with nitrides results in heat and flammable gas generation

Violent reaction with aluminum chloride and nitromethane at 110 deg. C.

Hot phenol reacts with metals

A combination of phenol with mineral oxidizing acids results in fire

Violent reaction with phenol and aluminum chloride + nitrobenzene at 120 deg. C.

Potential for an explosive reacton exists when phenol comes into contact with formaldehyde or sodium nitrate + trifluoroacetic acid

Mixtures of air and 3-10% phenol are explosive

Phenol + sodiuim nitrite causes explosion on heating

When heated, phenol evolves flammable vapors which will form explosive mixtures with air

Phenol + calcium hypochlorite results in an exothermic reaction producing toxic fumes whic hmay ignite

For Chloroform:

Chloroform reacts violently with or may explode if it comes in contact with the following: Perchloric acid + Methanol; Sodium + Methanol; Sodium methylate + Methanol; Sodium hydroxide + Methanol; Acetone; Carbon tetrachloride; disilane; Nitrogen tetroxide; Sodium methylate; Sodium-Potassium alloy; Triisopropyl phosphine; 2-Nitrophenylacetyl chloride; Perchloric acid + Phosphorus pentoxide

### Chemical stability

**Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Incompatible materials.

**Incompatible Materials:**

- Oxidizing agents
- Acids
- Bases
- Potassium t-butoxide
- Alkali Metals
- Lithium
- Sodium
- Potassium
- Alkaline Earth metals
- Magnesium

**Hazardous decomposition products:** Carbon monoxide. Carbon dioxide.

### Other Information

**Corrosivity:** Severe corrosive effect on Brass  
Minor corrosive effect on bronze

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

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## Information on likely routes of exposure

### Principal Routes of Exposure:

Ingestion. Inhalation. Skin. Eyes.

## Acute Toxicity

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

### Component Information

Phenol	
CAS-No.	108-95-2

**LD50/oral/rat** = 317mg/kg  
**LD50/oral/mouse** = 270 mg/kg  
**LD50/dermal/rabbit** = 630 mg/kg Dermal LD50 Rabbit  
**LD50/dermal/rat** = 525 mg/kg Dermal LD50 Rat  
669 mg/kg  
**LC50/inhalation/rat** = 316 mg/m<sup>3</sup> 4 h  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50information** = No information available

Chloroform	
CAS-No.	67-66-3

**LD50/oral/rat** = 450 mg/kg Oral LD50 Rat  
**LD50/oral/mouse** = 36 mg/kg (RTECS)  
36-460 mg/kg (European Commission IUCLID Dataset)  
353-1366 mg/kg (European Commission IUCLID Dataset)  
**LD50/dermal/rabbit** = 20 g/kg Dermal LD50Rabbit  
>3980 mg/kg (LOLI; European Commission IUCLID Dataset)  
**LD50/dermal/rat** = > 20 g/kg Dermal LD50 = 47702 mg/m<sup>3</sup> Inhalation LC50 = 450 mg/kg Oral LD50  
**LC50/inhalation/rat** = 47702 mg/m<sup>3</sup> Inhalation LC50 Rat 4 h  
**LC50/inhalation/mouse** = 17200 mg/m<sup>3</sup> 2 h  
6000 mg/m<sup>3</sup> 6 h  
**Other LD50 or LC50information** = 820 mg/kg Oral LD50 Guinea Pig

Isopentyl Alcohol	
CAS-No.	123-51-3

**LD50/oral/rat** = 1300 mg/kg Oral LD50 Rat  
**LD50/oral/mouse** = No information available  
**LD50/dermal/rabbit** = 3250mg/kg Dermal LD50 Rabbit  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = No information available  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50information** = No information available

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**LD50/oral/rat** =  
**VALUE- Acute Tox Oral** = No information available

**LD50/oral/mouse** =  
**Value - Acute Tox Oral** = No information available

**LD50/dermal/rabbit**  
**VALUE-Acute Tox Dermal** = No information available

**LD50/dermal/rat**

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**VALUE -Acute Tox Dermal =** No information available

**LC50/inhalation/rat**

**VALUE-Vapor =** No information available

**VALUE-Gas =** No information available

**VALUE-Dust/Mist =** No information available

**LC50/Inhalation/mouse**

**VALUE-Vapor =** No information available

**VALUE - Gas =** No information available

**VALUE - Dust/Mist =** No information available

**Symptoms**

**Skin Contact:** Toxic in contact with skin. Causes severe irritation and burns. Readily penetrates the skin and mucous membranes. If absorbed through the skin it may affect behavior/central nervous system and cause central nervous system effects. If absorbed through the skin, it may affect the cardiovascular system (irregular heartbeat, circulatory failure), kidneys (hematuria), and may cause methemoglobinemia. Phenol burns may be severe, but painless due to damage to the nerve endings causing numbness.

**Eye Contact:** Causes severe eye irritation and possible burns. May cause corneal injury.

**Inhalation** Toxic by inhalation. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, pneumonitis, and pulmonary edema. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath. May cause cyanosis. Inhalation of high concentrations may cause asphyxiation. May cause abdominal pain. May cause nausea, vomiting. May cause sweating and pallor, and ringing in the ears. It may affect the liver. May affect the kidneys. It may affect behavior/central nervous system (weakness, fatigue, excitement followed by headache, drowsiness, seizures, convulsions, twitching, dizziness, spasticity, drunkenness, euphoria, loss of coordination and judgement, nervousness, delirium, hallucinations, fainting, unconsciousness, coma).

**Ingestion** Harmful if swallowed. Causes digestive (gastrointestinal) tract irritation. May cause digestive (gastrointestinal) tract burns. May cause abdominal pain, nausea, vomiting, diarrhea. Symptoms may include burning pain in the mouth, throat and stomach, areas of necrosis on the lips and in the mouth, throat and esophagus, and swelling of the throat. May cause permanent damage to the digestive tract. May affect liver. May affect urinary system (kidneys). May cause central nervous system effects (affect behavior). May cause pallor. May cause mydriasis (dilated pupils). May cause tinnitus. May cause dim vision. May cause metabolic acidosis. May affect the cardiovascular system (hypotension). Advanced stages may result in cardiovascular collapse, unconsciouness, coma, and possible death to respiratory failure. May cause methemoglobinemia, (the formation of methemoglobin in the blood which causes deficient oxygenation of the blood due to decreased available hemoglobin). Signs and symptoms of methemoglobinemia include shortness of breath, cyanosis (a bluish discoloration of the skin, lips, mucous membranes), mental status changes such as headache, mental impairment, fatigue, muscular weakness, exercise intolerance, lightheadness, dizziness, incoordination, seizures, and loss of consciousness. Arterial blood with elevated methemoglobin levels has a characteristic chocolate-brown color as compared to normal bright red oxygen containing arterial blood. Severe methemoglobinemia is characterized by bradycardia or tachyrdardia (slow or fast heart beat), dysrhythmias, seizures, coma and death.

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**Aspiration hazard** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Chronic Toxicity** Prolonged or repeated inhalation may cause central nervous system effects. Prolonged or repeated ingestion may affect behavior/central nervous system. Chronic exposure may affect the liver and kidneys.

**Sensitization:** No information available.

**Mutagenic Effects:** Suspected of causing genetic defects

**Carcinogenic effects:** Suspected of causing cancer.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Phenol	108-95-2	Group 3 - Not Classifiable - Monograph 71 [1999] Monograph 47 [1989]	A4 Not Classifiable as a Human Carcinogen	Not listed	Not listed	Not listed	Not listed
Chloroform	67-66-3	Monograph 73 [1999]	A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans	Reasonably Anticipated To Be A Human Carcinogen	Present	Not listed	Not listed
Isopentyl Alcohol	123-51-3	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

**Reproductive toxicity** Suspected of damaging fertility or the unborn child

**Reproductive Effects:** No information available

**Developmental Effects:** For Chloroform:  
May cause adverse developmental effects  
Possible risk of harm to the unborn child

**Teratogenic Effects:** For Chloroform:  
May cause birth defects (teratogenic effects) based on animal test data

**Specific Target Organ Toxicity**

**STOT - single exposure** Respiratory system. central nervous system.  
**STOT - repeated exposure** May cause damage to organs through prolonged or repeated exposure.  
**Target Organs:** Central nervous system. Respiratory system. Kidneys. Liver. Skin. Cardiovascular system. Heart. Blood. Methemoglobin formation.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

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**Ecotoxicity effects:** Aquatic environment.

*Phenol - 108-95-2*

**Freshwater Algae Data:** 0.0188 - 0.1044 mg/L EC50 Pseudokirchneriella subcapitata 96 h  
187 - 279 mg/L EC50 Desmodesmus subspicatus 72 h  
46.42 mg/L EC50 Pseudokirchneriella subcapitata 96 h

**Freshwater Fish Species Data:** 11.9 - 25.3 mg/L LC50 Lepomis macrochirus 96 h flow-through 1  
11.9 - 50.5 mg/L LC50 Pimephales promelas 96 h flow-through 1  
20.5 - 25.6 mg/L LC50 Pimephales promelas 96 h static 1  
23.4 - 36.6 mg/L LC50 Oryzias latipes 96 h static 1  
33.9 - 43.3 mg/L LC50 Oryzias latipes 96 h flow-through 1  
34.09 - 47.64 mg/L LC50 Poecilia reticulata 96 h static 1  
4.23 - 7.49 mg/L LC50 Oncorhynchus mykiss 96 h semi-static 1  
5.0 - 12.0 mg/L LC50 Oncorhynchus mykiss 96 h 1  
5.449 - 6.789 mg/L LC50 Oncorhynchus mykiss 96 h flow-through 1  
7.5 - 14 mg/L LC50 Oncorhynchus mykiss 96 h static 1  
0.00175 mg/L LC50 Cyprinus carpio 96 h semi-static 1  
11.5 mg/L LC50 Lepomis macrochirus 96 h semi-static 1  
13.5 mg/L LC50 Lepomis macrochirus 96 h static 1  
27.8 mg/L LC50 Brachydanio rerio 96 h 1  
31 mg/L LC50 Poecilia reticulata 96 h semi-static 1  
32 mg/L LC50 Pimephales promelas 96 h 1

**Water Flea Data:** 10.2 - 15.5 mg/L EC50 Daphnia magna 48 h  
4.24 - 10.7 mg/L EC50 Daphnia magna 48 h

*Chloroform - 67-66-3*

**Freshwater Fish Species Data:** 71 mg/L LC50 Pimephales promelas 96 h flow-through 1 18 mg/L LC50  
Oncorhynchus mykiss 96 h flow-through 1 18 mg/L LC50 Lepomis macrochirus 96  
h flow-through 1 300 mg/L LC50 Poecilia reticulata 96 h static 1  
29 mg/L EC50 Daphnia magna 48 h

**Water Flea Data:**

*Isopentyl Alcohol - 123-51-3*

**Freshwater Algae Data:** 181 mg/L EC50 Desmodesmus subspicatus 96 h  
493 mg/L EC50 Desmodesmus subspicatus 72 h

**Freshwater Fish Species Data:** 700 mg/L LC50 Salmo gairdneri 96 h static 1

**Water Flea Data:** 260 mg/L EC50 Daphnia magna 48 h

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available.

**Mobility:** No information available.

### 13. DISPOSAL CONSIDERATIONS

#### Disposal Methods

**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Phenol	108-95-2	None	None	None	U188
Chloroform	67-66-3	None	None	None	U044

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Isopentyl Alcohol	123-51-3	None	None	None	None
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## 14. TRANSPORT INFORMATION

### DOT

**UN-No:** UN2810  
**Proper Shipping Name:** Toxic liquids, organic, n.o.s.(phenol; chloroform; isoamyl alcohol, solution)  
**Hazard Class:** 6.1  
**Subsidiary Class:** No information available  
**Packing group:** III  
**Emergency Response Guide Number:** 153  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions:** IB3, T7, TP1, TP28  
**Symbol(s):** [DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.  
**Description:** UN2810, Toxic liquids, organic, n.o.s., 6.1, III

### TDG (Canada)

**UN-No:** UN2810  
**Proper Shipping Name:** Toxic liquid, organic, n.o.s.  
**Hazard Class:** 6.1  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Marine Pollutant:** No Information available  
**Description:** UN2810, TOXIC LIQUID, ORGANIC, N.O.S., 6.1, III

### ADR

**UN-No:** UN2810  
**Proper Shipping Name:** Toxic liquid, organic, n.o.s.  
**Hazard Class:** 6.1  
**Packing Group:** III  
**Subsidiary Risk:** No information available  
**Special Provisions:** 274, 614  
**Description:** UN2810, TOXIC LIQUID, ORGANIC, N.O.S., 6.1, III

### IMO / IMDG

**UN-No:** UN2810  
**Proper Shipping Name:** Toxic liquids, organic, n.o.s.(phenol; chloroform; isoamyl alcohol, solution)  
**Hazard Class:** 6.1  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Marine Pollutant:** No information available  
**EMS:** F-A  
**Special Provisions:** 223, 274  
**Description:** UN2810, TOXIC LIQUID, ORGANIC, N.O.S. (PHENOL-CHLOROFORM-ISOAMYL ALCOHOL 24:25:1, PH 8.0), 6.1, III

### RID

**UN-No:** UN2810  
**Proper Shipping Name:** Toxic liquid, organic, n.o.s.  
**Hazard Class:** 6.1  
**Subsidiary Risk:** No information available  
**Packing Group:** III

**Product code:** P1828

**Product name:**  
 PHENOL-CHLOROFORM-ISOAMYL  
 ALCOHOL, 25:24:1, PH 8.0,  
 BIOTECHGRADE

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**Special Provisions** 274, 614  
**Description:** UN2810, TOXIC LIQUID, ORGANIC, N.O.S., 6.1, III

**ICAO**

**UN-No:** UN2810  
**Proper Shipping Name:** Toxic liquid, organic, n.o.s.  
**Hazard Class:** 6.1  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Description:** UN2810, TOXIC LIQUID, ORGANIC, N.O.S., 6.1, III  
**Special Provisions** A3, A4, A137

**IATA**

**UN-No:** UN2810  
**Proper Shipping Name:** Toxic liquid, organic, n.o.s.  
**Hazard Class:** 6.1  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**ERG Code:** 6L  
**Special Provisions** No information available  
**Description:** UN2810, TOXIC LIQUID, ORGANIC, N.O.S., 6.1, III

**15. REGULATORY INFORMATION**

**International Inventories**

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Phenol</i>	108-95-2	Present	Present KE-28209	Present	Present (3)-481	Present	Present	Present 203-632-7
<i>Chloroform</i>	67-66-3	Present	Present KE-34076	Present	Present (2)-37	Present	Present	Present 200-663-8
<i>Isopentyl Alcohol</i>	123-51-3	Present	Present KE-23575	Present	Present (2)-217	Present	Present	Present 204-633-5

**U.S. Regulations**

*Phenol*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 1487  
**New Jersey (EHS) List:** 1487 500 lb TPQ  
**New Jersey - Discharge Prevention - List of Hazardous Substances:** Present  
**Pennsylvania RTK:** Environmental hazard  
**Pennsylvania RTK - Environmental Hazard List** Present  
**Minnesota - Hazardous Substance List:** Present  
**New York Release Reporting - List of Hazardous Substances:**  
 1000 lb RQ  
 1 lb RQ  
**Louisiana Reportable Quantity List for Pollutants:** 1000lbfinal RQ  
 454kgfinal RQ  
**California Directors List of Hazardous Substances:** Present

**FDA - 21 CFR - Total Food Additives** 175.105 175.300 175.380 175.390 176.170 177.1210 177.1580 177.2410 177.2600

*Chloroform*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 0388  
**New Jersey (EHS) List:** 0388 500 lb TPQ  
**New Jersey - Discharge Prevention - List of Hazardous Substances:** Present  
**New Jersey TCPA - EHS:** 20000lbTQ  
**Pennsylvania RTK:** Environmental hazard  
 Special hazardous substance

**Product code:** P1828

**Product name:**  
 PHENOL-CHLOROFORM-ISOAMYL  
 ALCOHOL, 25:24:1, PH 8.0,  
 BIOTECHGRADE

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**Pennsylvania RTK - Environmental Hazard List** Present  
**Pennsylvania RTK - Special Hazardous Substances** Present  
**Michigan - Critical Materials List:** Present  
**Minnesota - Hazardous Substance List:** Present  
**New York Release Reporting - List of Hazardous Substances:**  
 10 lb RQ  
 1 lb RQ  
**Louisiana Reportable Quantity List for Pollutants:** 10lbfinal RQ  
 4.54kgfinal RQ  
**California Directors List of Hazardous Substances:** Present

**FDA - 21 CFR - Total Food Additives** 175.105, 177.1580, 177.1585

*Isopentyl Alcohol*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 1039  
**Pennsylvania RTK:** Present  
**Minnesota - Hazardous Substance List:** Present  
**California Directors List of Hazardous Substances:** Present

**FDA - Direct Food Additives** 21 CFR 172.515


**FDA - 21 CFR - Total Food Additives** 172.515

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

**Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

 **WARNING:** This product can expose you to chemicals including (see table below) which is (are) known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Phenol	108-95-2	Not Listed	Not Listed	Not Listed	Not Listed
Chloroform	67-66-3	carcinogen	developmental toxicity	Not Listed	Not Listed
Isopentyl Alcohol	123-51-3	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
<i>Phenol</i>	108-95-2	1000 lb final RQ 454 kg final RQ	1000 lb EPCRA RQ	None	None	1.0 % de minimis concentration
<i>Chloroform</i>	67-66-3	10 lb final RQ 4.54 kg final RQ	10000 lb TPQ 10 lb EPCRA RQ	None	None	0.1 % de minimis concentration
<i>Isopentyl Alcohol</i>	123-51-3	None	None	None	None	None

**U.S. TSCA**

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Phenol	108-95-2	Not Applicable	06/01/1987 06/01/1997
Chloroform	67-66-3	Not Applicable	06/01/1987 06/01/1997
Isopentyl Alcohol	123-51-3	Not Applicable	Not Applicable

**Canada**

**WHMIS hazard class:**

Not determined

**Product code:** P1828

**Product name:**  
 PHENOL-CHLOROFORM-ISOAMYL  
 ALCOHOL, 25:24:1, PH 8.0,  
 BIOTECHGRADE

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**Components**

Phenol

Chloroform

Isopentyl Alcohol

**WHIMHAZ**

D1A E

D1B,D2A,D2B

B3 D2B

**Canada Controlled Products Regulation:**

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Phenol	1 %
Chloroform	0.1 %
Isopentyl Alcohol	1 %

**Inventory**

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Phenol	108-95-2	Present	Not Listed
Chloroform	67-66-3	Present	Not Listed
Isopentyl Alcohol	123-51-3	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Phenol	108-95-2	Not listed
Chloroform	67-66-3	Not listed
Isopentyl Alcohol	123-51-3	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Phenol	108-95-2	Not listed
Chloroform	67-66-3	Not listed
Isopentyl Alcohol	123-51-3	Not listed

**EU Classification****R-phrase(s)**

not determined

**S -phrase(s)**

Not determined

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Phenol	108-95-2	T; R23/24/25 C; R34 Xn; R48/20/21/22 Muta.Cat.3; R68	10%<=C: T; R:23/24/25 3%<=C<10%: Xn; R:20/21/22 3%<=C: C; R:34 1%<=C<3%: Xi; R:36/38	S1/2 S24/25 S26 S28 S36/37/39 S45
Chloroform	67-66-3	Xn; R20/22-48/20 Xi; R36/38 Carc.Cat.3; R40 Repr.Cat.3; R63	5%<=C Xn; R22 5%<=C Xn; R48/20/22	
Isopentyl Alcohol	123-51-3		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Indication of danger:**

T - Toxic

Product code: P1828

Product name:  
PHENOL-CHLOROFORM-ISOAMYL  
ALCOHOL, 25:24:1, PH 8.0,  
BIOTECHGRADE

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Xn - Harmful.  
C - Corrosive.

## 16. OTHER INFORMATION

**Preparation Date:** 3/13/2017  
**Revision Date:** 3/13/2017  
**Prepared by:** Sonia Owen

**Disclaimer:** All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**