SAFETY DATA SHEET: PHENOL LIQUEFIED

1. IDENTIFICATION

Product Name: PHENOL LIQUEFIED
Synonyms: Carbolic acid; Hydroxybenzene; Phenic acid
Formula and Formula Weight: C6H5OH 94.11
Integra numbers beginning with: P272.10
Recommended Use: Commercial/industrial use
Restrictions on Use: No information available

INTEGRA Chemical Company
24 Hour Emergency Response: CHEMTREC 800-424-9300 (Outside USA 703-527-3887)
1216 6th Ave N
Kent WA 98032
Phone: 253-479-7000

2. HAZARDS IDENTIFICATION

OSHA Classification: Hazard Category: Hazard Statement:
Acute Toxicity - Oral 3 Toxic if swallowed.
Acute Toxicity - Dermal 3 Toxic in contact with skin.
Acute Toxicity - Inhalation 3 Toxic if inhaled.
Skin Corrosion/Irritation 1B Causes severe skin burns and eye damage.
Eye Damage/Irritation 1 Causes serious eye damage.
Germ Cell Mutagenicity 2 Suspected of causing genetic defects.
Specific Target Organ Toxicity (repeated exposure) 2 May cause damage to organs through prolonged or repeated exposure.
Flammable Liquids 4 Combustible liquid.

Precautionary Statements

Prevention: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from flames and hot surfaces. – No smoking.
Do not breathe dust, fume, gas, mist, vapors, spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves, protective clothing, eye protection, face protection.

Response
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water, shower.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
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, doctor.
Specific treatment (see first aid section on this label)
Take off immediately all contaminated clothing and wash it before reuse.
In case of fire: Use water spray, foam, dry powder or carbon dioxide to extinguish.

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

Disposal
Dispose of contents, container in accordance with all governmental regulations.

Hazards Not Otherwise Classified: No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Synonyms</th>
<th>CAS #</th>
<th>%</th>
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<tbody>
<tr>
<td>Phenol</td>
<td>Carbolic acid; Hydroxybenzene; Phenic acid</td>
<td>00108-95-2</td>
<td>89</td>
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<tr>
<td>Water</td>
<td></td>
<td>07732-18-5</td>
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4. FIRST AID MEASURES

OSHA SDS #: 26070 rev 101 3/27/2015 PHENOL LIQUEFIED
PHYSICAL AND CHEMICAL PROPERTIES

Odor: Sweet, medicinal odor
Odor Threshold: 0.011 ppm
pH: Not available
Melting/Freezing Point: Not available
Initial Boiling Point and Boiling Range: 110 °C
Flash Point: 79 °C
Evaporation Rate: < 1 Butyl Acetate=1

COLORLESS TO PINK LIQUID

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Water spray, carbon dioxide, dry chemical or foam. Do not use a straight stream of water, which will scatter and spread the fire.

Special Equipment and Precautions: Use water to cool nearby containers and structures. Wear full protective equipment, including suitable respiratory protection. Phenol liquid and vapor pose a severe health hazard when inhaled or exposed to bare skin.

Specific Hazards: Gives off flammable vapors which may form an explosive mixture with air. May react vigorously with strong oxidizers.


6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Remove all potential ignition sources. Prevent spread of spill. Wear full protective equipment including suitable respiratory protection. Absorb with sand or inert material. Place into suitable container for disposal. Do not flush to sewer.

Ingestion: Do not induce vomiting. If victim is conscious, rinse mouth, give water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Skin Contact: Immediately flush skin with water while removing contaminated clothing. After flushing, swab contaminated skin with cotton wool soaked in glycerol, polyethylene glycol or "Lutrol". It is important to avoid rubbing or wiping affected areas, which would aggravate irritation and disperse the irritant. Continue treatment for at least 10 minutes. Seek immediate medical help.

Eye Contact: Immediately flush eyes with large amounts of water, holding lids apart to ensure rinsing of entire surface. Continue rinsing for at least 15 minutes. Remove contact lenses, if present and easy to do. Washing eyes within several seconds of contact is essential to achieve maximum effectiveness. Get immediate medical attention.

Inhalation: Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult administer oxygen. Seek medical attention.

7. HANDLING AND STORAGE

Incompatible Materials: Incompatible with strong acids, strong bases, strong oxidizers. Calcium hypochlorite, acetaldehyde, isocyanates, nitrobenzene, sodium nitrite, aluminum chloride, metals. Aluminum, magnesium, lead, and zine are quickly attacked by hot phenol.

Storage and Handling: Store locked up in a cool, dry, well-ventilated area or cabinet dedicated to the storage of toxic materials. Isolate away from incompatible materials. Keep containers well closed and protect them from physical damage. Light and air sensitive. Hygroscopic. Dangerous contact hazard. Do not get on skin, in eyes or on clothing.

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8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

OSHA & ACGIH Exposure Limits:

Phenol OSHA TWA: 5 ppm; 19 mg/m3 ACGIH TWA: 5 ppm; 19 mg/m3
Water None identified

Engineering Controls: Use general or local exhaust ventilation to meet TLV and PEL requirements.

Respiratory Protection: Respiratory protection required if airborne concentrations exceed PEL or TLV. Use a NIOSH approved chemical cartridge respirator with an organic vapor cartridge and particulate filter. At concentrations above 50 ppm the use of a self-contained breathing apparatus is recommended.

Skin/Eye Protective Equipment: Safety goggles, protective clothing and gloves appropriate for the risk of exposure. Neoprene gloves are recommended.

Facilities storing or utilizing this material should have readily accessible eyewash stations and safety showers. Select respirators and other safety equipment in accordance with regulations and based upon the particular conditions of use and risk of exposure. Always use safe chemical-handling and good industrial hygiene practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless to pink liquid
Odor: Sweet, medicinal odor
Odor Threshold: 0.011 ppm
pH: Not available
Melting/Freezing Point: Not available
Initial Boiling Point and Boiling Range: 110 °C
Flash Point: 79 °C
Evaporation Rate: < 1 Butyl Acetate=1
Flammable or Explosive: Not available
Flammable or Explosive: Upper: 8.6
Flammable or Explosive: Lower: 1.5
Vapor Pressure: 0.35 mm Hg@20°C
Vapor Density: 3.24
Relative Density: 1.05 Water=1
Solubility: Moderately soluble in water
Partition Coefficient: n-octanol/water Not available
Auto-Ignition Temperature: 714 °C
Decomposition Temperature: Not available
Viscosity: Not available

10. STABILITY AND REACTIVITY
Reactivity: No information available
Stability: Stable
Possibility of Hazardous Reactions: Hazardous polymerization will not occur
Conditions to Avoid: Heat (temps. above 50°C), oxidizers, especially hypochlorites.
Incompatibles: Incompatible with strong acids, strong bases, strong oxidizers. Calcium hypochlorite, acetaldehyde, isocyanates, nitrobenzene, sodium nitrile, aluminum chloride, metals. Aluminum, magnesium, lead, and zince are quickly attacked by hot phenol.
Decomposition Products: Oxides of carbon. Acid hydrocarbon fumes.

11. TOXICOLOGICAL INFORMATION
Effects of Over Exposure:
Inhalation: Harmful if inhaled. Vapors and mists are corrosive to the mucous membranes. Severe irritation or burns to the respiratory system. Extreme overexposure may be fatal. Symptoms include increased sweating, pulmonary edema, reduced body temperature, euphoria, cyanosis, unconsciousness, coma, convulsions, tissue necrosis.
Skin Contact: Corrosive material. Contact may cause severe burns. The major hazard of phenol is its ability to rapidly penetrate the skin, particularly when liquid, causing severe injury, which can be fatal. Symptoms include shock, collapse, coma, convulsions, cyanosis. Skin burns may be painless due to local anesthetizing effect of phenol.
Eye Contact: Highly corrosive! Causes irritation with tearing, redness, swelling. Severe exposure causes severe burns possibly resulting in blindness.
Ingestion: Harmful if swallowed. Ingestion may cause nausea, vomiting and gastrointestinal irritation and burns to the mouth and throat. Abdominal pain, headache, muscular weakness, nausea, collapse, coma and death.
Chronic Effects: Carboluria, fetotoxic in animals, mutagenic.
Target Organs: Eyes, skin, respiratory system, liver, kidneys.
Additional Effects: May aggravate pre-existing kidney disorders
Reproductive Effects: May cause genetic defects.
Carcinogenicity: Phenol is listed by the IARC as Group 3, Unclassifiable.

Toxicity Data:
Phenol
LC50 (inhalation, rat) 316 mg/m3/4hr
LD50 (skin, rat) 669 mg/kg
LD50 (oral, mouse) 270 mg/kg
Water
No information available

12. ECOLOGICAL INFORMATION
Aquatic Toxicity Data: Terrestrial Toxicity Data:
Phenol
No information available No information available
Water
No information available No information available

Persistence and degradability: No information available
Bioaccumulative potential: No information available
Mobility in soil: No information available
Other adverse effects: No information available

13. DISPOSAL CONSIDERATIONS
Disposal Procedures: Dispose of material and containers in accordance with all local, state and federal regulations.

14. TRANSPORTATION INFORMATION
This product is a regulated material for domestic ground transporation, per CFR Title 49.
UN Number: UN2821
Proper Shipping Name: Phenol, solution
Packing Group: II
Hazard Class: 6.1
Environmental hazards: No information available
**15. REGULATORY INFORMATION**

Phenol is listed in the TSCA inventory, in SARA 302, and in SARA 313.

**16. OTHER INFORMATION**

OSHA SDS #: 26070 rev 101 3/27/2015

Special precautions: No information available
Bulk transport: No information available

NE = Not established, NA = Not applicable or Not available

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***** END OF SDS *****