Safe Use of Phenol

Phenol (carbolic acid) is a colorless or pink crystalline solid or viscous liquid with a characteristic sweet, medicinal odor. It is corrosive and considered moderately toxic. It can affect the body if it is inhaled, ingested, or contacts eyes or skin. Exposure to vapors may cause eye, nose and throat irritation. The Cal/OSHA Permissible Exposure Limit is 5 ppm (19 mg/m³).

**Synonyms:** Carbolic acid, hydroxybenzene, monohydroxybenzene, phenyl alcohol, phenol hydroxide.

**Hazards with Acute Exposure**

- Contact with eyes may cause severe damage and blindness.
- Contact with skin may cause severe burns or systemic poisoning as phenol is readily absorbed through the skin. Skin exposure may not cause immediate pain as phenol has a local anesthetic effect.
- Systemic effects may occur from any route of exposure, especially after skin absorption.

**Hazards with Chronic Exposure**

- Repeated or prolonged skin exposure to phenol or vapors from heated phenol may cause headache, nausea, dizziness, muscle ache, difficulty swallowing, diarrhea, vomiting, shock, convulsions, and death.
- Phenol affects the central nervous system, liver, and kidneys.
- Phenol can cause sensitization reactions with repeated exposure.

**Special Safety Precautions**

- Phenol should be used with adequate ventilation to minimize inhalation. When heating phenol, use a water bath inside a chemical fume hood. **Never** heat or melt phenol in an incubator, microwave, drying oven, or similar appliance.
- **Prevent** contact with skin by wearing neoprene gloves, lab coat, and chemical resistant apron.
Prior to use of phenol or any chemical, it is important to review the manufacturer-specific Safety Data Sheet (SDS).

**Contact**

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