

# Dealing with Phenol Exposure

## Physical form of Phenol

Phenol is normally be used as either a solid or a liquid.

## Phenol Hazard Pictograms



## Effects of Phenol on human tissues

Phenol is an extremely poisonous and corrosive substance that can cause both skin and eye damage and also respiratory damage. It be absorbed across intact skin and will react with both the liquid surrounding the eye and the surface of the eyes <sup>1,2,3,4</sup>.

Significant damage can be caused to skin and eyes following contact with Phenol before individuals are aware of a problem as it is a local anaesthetic. It is important that treatment of the affected area begins as soon as possible after a splash has occurred.

Phenol that is absorbed into the body may result in nausea, vomiting, diarrhoea, a fast heart rate and sweating. Exposure to high concentrations may cause drowsiness, breathing and heart problems and lung and kidney damage.

Damage to the eye may include clouding of the eye surface, corneal ulceration, and temporary or permanent blindness.

Inhalation of Phenol vapours has been reported to cause upper respiratory tract irritation. Inhalation of large doses of the vapour has been reported to cause swelling of throat, inflammation of the trachea, tracheal ulceration <sup>5</sup>.

## Phenol COSHH assessment

Any unit intending to use Phenol should already have produced a COSHH risk assessment that details the PPE to be worn e.g. gloves and eye protection either goggles or a full face shield. The COSHH should also state the emergency procedures / first aid measures and where the PEG-300 solution is located and often it is replenished.

## Dealing with exposure to Phenol

*It is important when dealing with a casualty not to become exposed to Phenol.*

### Skin Exposure

Call for help or ask a nearby person to call for a first aider on extension 0909.

While wearing protective gloves, remove all the contaminated clothing. It is important not to contaminate yourself and not to spread the Phenol onto unaffected areas.

Flush the affected skin area with copious amounts of water under low pressure for a minimum of 10 - 15 minutes to remove the surface contamination. It is important to use water at a low pressure to avoid the Phenol being forced through the epidermis into the dermis. After the skin has been cleaned, swab the affected area with a soft sterile bandage (if possible) soaked in a 50% solution of Polyethylene Glycol PEG-300. Cover the affected area with sterile dressing taking care not to apply pressure to the skin.

Take the casualty to Accident and Emergency in St. James Wing as soon as possible and show the staff the [Safety Data Sheet](#)<sup>4</sup> for Phenol. Try to re-assure the affected person.

### Eye Exposure

Call for help or ask a nearby person to call for a first aider on extension 0909. Try to re-assure the affected person.

Ask the person if they wear contact lenses. It is important to know if the person wears contact lenses as these may trap Phenol against the surface of the eye. You should not attempt to remove the contact lenses as this could cause additional eye problems.

Hold the eyelids open as wide as possible and flush immediately with clean water or sterile saline. Escort the injured party as soon and as quickly as possible to Accident and Emergency in St. James Wing and show the staff the [Safety Data Sheet](#)<sup>4</sup> for Phenol. Explain that the person has

splashed Phenol into their eye. It is important to tell the staff if the affected individual was wearing contact lenses at the time.

## Ingestion

Call for help or ask a nearby person to call for a first aider on extension 0909. Try to re-assure the affected person.

If Phenol has been swallowed wash the mouth out with plenty of water. Instruct the injured party not to swallow any of the liquid. Escort the injured party as quickly and as soon as possible to Accident and Emergency in St. James Wing and show the staff the [Safety Data Sheet](#)<sup>4</sup> for Phenol. Try to re-assure the affected person.

## Further information

Further information on the effects of [Phenol](#)<sup>1</sup> can be obtained via Public Health England -[Phenol Incident Management](#)<sup>2</sup> or the [CDC](#)<sup>3</sup>. A safety Data Sheet for Phenol is available from Sigma. Information on [Phenol](#) can also be obtained from the Agency for Toxic Substances & disease Registry.

## Information on Phenol from the Merck (Sigma) Safety Data Sheet

### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take

victim immediately to hospital. Consult a physician.

### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with

water. Consult a physician.

### **General Physiological Information**

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Circulatory collapse, tachypnea, paralysis, Convulsions, Coma., necrosis of the mouth and G.I. Tract, Jaundice, respiratory failure, cardiac arrest