Several employees at Duke have experienced painful phenol burns from splashes of very small amounts of phenol (milliliter quantities). Splashing a larger amount on the skin could be fatal—in addition to causing burns, phenol absorbs rapidly through the skin and can affect the central nervous system, liver, and kidneys. A splash to the eyes could cause blindness.

To prevent phenol burns:

- Purchase phenol in the smallest feasible quantities, in the desired concentration when possible. (For some clinical uses, single application swabs are available—contact OESO for details.)
- Wear appropriate PPE:
  - Minimum: Safety glasses, lab coat buttoned to neck and extending to wrists, and two pairs of standard (4-mil thick) nitrile gloves (or 1 pair 8-mil thick nitrile gloves). **WARNING:** phenol will penetrate 8-mil thick nitrile gloves within 10 minutes. Plan tasks to avoid glove contact. **If there is a splash, change gloves immediately.** (If glove contact cannot be avoided, use butyl or neoprene gloves, or nitrile over Silver Shield.)
  - **If splash is possible:** Chemical face shield with splash goggles; chemical resistant gown OR lab coat with impervious apron and chemical resistant sleeves (coated Tyvek or Silver Shield).
  - **Employees with conditions that increase skin permeability:** Use more protective gloves or clothing for affected area of skin. Examples: butyl rubber or neoprene gloves for hands, or an impervious apron for torso.

To minimize the severity of burns should exposure occur:

- All areas that use phenol should keep undiluted polyethylene glycol (PEG-300 or PEG-400, both viscous liquids) on hand for first aid.
- If a small area of skin is exposed, swab with PEG 300 or 400 repeatedly until the phenol smell is gone. For larger exposed areas or splashes to eyes, flush with COPIOUS amounts of water (eyewash, drench hose or safety shower) for at least 15 minutes, then seek IMMEDIATE medical attention. (For medical advice about exposures call Employee Health at 919-684-8115.)