Several Duke employees have experienced painful burns from very small (milliliter) splashes of phenol. 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 nervous system, liver, circulatory system, lungs and/or kidneys. A splash to the eyes could cause blindness.

To prevent phenol burns:

- **Purchase phenol in the smallest feasible volumes, in the desired concentration when possible.** (For some clinical uses, single application swabs are available—contact OESO for details.)

- **Wear appropriate PPE:**
  - **Minimum:** Safety goggles, lab coat buttoned to neck and extending to wrists, and two pairs 4-mil (or 1 pair 8-mil) nitrile gloves with extended cuffs. **WARNING:** phenol can penetrate 8-mil thick nitrile gloves within 10 minutes. Plan tasks to avoid glove contact. **If splashed, change gloves immediately.** (If glove contact cannot be avoided, use Viton® or butyl gloves, or nitrile over Silver Shield.)
  - **If splash is possible:** Chemical face shield over 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/clothing for affected area. Examples: Viton®, butyl, or nitrile over Silver Shield gloves for hands, or an impervious apron for torso.

**First Aid materials and instructions (in case of exposure):**

- All areas using phenol should keep ≥ 1 L undiluted polyethylene glycol (PEG-300 or PEG-400, both viscous liquids) and other supplies indicated as part of the Phenol Exposure Kit in OESO’s Phenol Guideline.

- For skin exposures, follow the First Aid Instructions in OESO’s Phenol Guideline. Be aware that skin exposures affecting more than 100 cm² of skin require an emergency room visit. Phenol can act as a local anesthetic and can cause extensive damage before pain is felt.