

Safetygram

NCI-Frederick

ISM-213

Laboratory
Hydrofluoric Acid

April 2013

Hydrogen fluoride is a chemical compound containing fluorine. When hydrogen fluoride is dissolved in water it is referred to as hydrofluoric acid.

Contact with hydrofluoric acid may cause severe skin damage due to its corrosiveness and toxicity. In a matter of minutes the chemical can completely penetrate the skin causing necrosis, damaging deep tissue and the bone. If not properly treated, exposure may result in loss of limbs or possibly death. In addition to dermal contact, exposure may result from inhalation, burning lung tissue and causing pulmonary edema.

If an employee does become exposed to hydrofluoric acid, first aid must be begun immediately. Calcium gluconate gel should be applied to the employee's skin as soon as possible, in order to neutralize the burn. OHS will supply labs utilizing hydrofluoric acid with calcium gluconate gel along with first aid training on how to handle employee exposures.

The best preventative measures for employee injuries are safe work practices and proper use of Personal Protective Equipment (PPE). Approved lab coats, safety glasses, close-toed shoes, and gloves shall be worn at all times when working with hydrofluoric acid. For the best protection neoprene gloves should be utilized in place of latex or nitrile.

If you are currently working with or plan to work with hydrofluoric acid, a protocol must be submitted to EHS and approved. It is important to know what labs are working with hydrofluoric acid to insure employees have the proper materials and first aid training. Below is a link to the protocol form.

- <http://home.ncifcrf.gov/ehs/uploadedFiles/Appendix%20A.pdf>

In the event of exposure employees shall contact OHS x1096 and inform their supervisor immediately after providing first aid.

Please contact EHS if you have any comments or questions at x1451.

References: <http://www.bt.cdc.gov/agent/hydrofluoricacid/>
<http://ehs.unc.edu/environmental/docs/hydrofluoricacid.pdf>