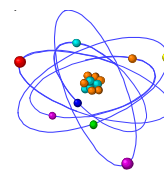


LABORATORY SAFETY FACT SHEET #18

Corrosives (Acids and Bases)



Examples:

Acids –

Solids: benzoic acid, sulfamic acid. *Liquids:* acetic acid, nitric acid, phenol, sulfuric acid.

Gases: hydrogen chloride, hydrogen fluoride, hydrogen bromide, chlorine, and sulfur dioxide

Bases-

Solids: sodium, potassium bismuth, and calcium hydroxides.

Liquids: ammonium hydroxide, bromine, potassium hydroxide.

Gases: ammonia

Hazard Properties:

- Corrosives can seriously burn body tissue on contact as well as cause dermatitis and eye damage.
- Exposure to vapors or mists can affect the respiratory tract and mucous membranes.
- Corrosives are not flammable, but they can react with each other and with other chemicals, causing potential fire and explosion.
- Contact with ordinary materials such as paper and wood may generate sufficient heat to ignite; especially true for oxidizing acids such as nitric and perchloric.
- Many corrosives may cause delayed injury, particularly bases. The absence of immediate symptoms may prolong exposure and as a result, cause even more severe injuries.

Practices:

- Be aware of the nearest eyewash station and emergency shower. If a chemical splash occurs, flush with running water for at least 15 minutes and seek medical attention.
- Use chemical splash goggles or other eye protection when working with acids/bases. Appropriate acid- and base-resistant protective clothing, including aprons, lab coats, and gloves, should also be worn.
- When diluting acids or bases with water, always pour the reagent slowly (while mixing) into the water, never the reverse.
- Hydrofluoric acid can cause severe chemical burns. Ensure first-aid treatment paste is on-hand for HF users.
- Whenever acid, base or solvent bottles are carried from the laboratory, the bottles should be placed in buckets which act as secondary protective containers.