DEPARTMENT OF
**ENVIRONMENTAL HEALTH AND SAFETY**

# EHS Fact Sheet

## Corrosives (Acids and Bases)

Corrosives are any solid, liquid, or gaseous substance that can burn, irritate, or destructively attack organic tissue or attack metals or building materials.

**Inorganic Acids**
- Hydrochloric Acid
- Phosphoric Acid
- Sulfuric Acid

**Organic Acids**
- Acetic Acid
- Formic Acid
- Trichloroacetic Acid

**Oxidizing Acids**
- Nitric Acid
- Perchloric Acid

**Bases (Hydroxides)**
- Sodium or potassium Hydroxide
- Ammonia (Ammonium Hydroxide)

**Others**
- Acetic Anhydride
- Fluorides
- Some chlorides

**Hazards and Toxicity**

Strong acids and bases can destroy human tissue and corrode metals.

The effects of the burn can be immediate or delayed.

Acids and bases are incompatible with each other and need to be segregated.

Most corrosive materials are non-flammable, except for acetic acid and formic acid. However, nitric acid and perchloric acid are oxidizers and should be segregated from combustible and flammable materials.

Corrosive materials can have other hazards, however, the corrosivity is usually the primary hazard.

For compound-specific hazards, consult the safety data sheet (SDS) for additional information.

Hydrofluoric acid has unique properties; please consult the EHS Fact Sheet – Hydrofluoric Acid and the Hydrofluoric Acid SDS.

**Usage**

As with any hazardous material, incorporate the hazards and safe handling procedures in the laboratory's operating procedures/ protocols.

As with all procedures/protocols, the principal investigator must ensure all personnel have been trained and that the training is documented.

Wear chemical safety goggles, not safety glasses. Wear other appropriate personal protective equipment (PPE) such as gloves and a lab coat. A lab apron may be an appropriate choice.

Use engineering controls such as fume hoods.

Segregate acids from bases. Store below eye level.

Know where the eyewash and safety shower are located and how to use them. Flush for a minimum of 15 minutes.

Always add acid to water.

**Spills**

Clean up small spills using absorbent material or an appropriate neutralizing compound if available.

Wear appropriate PPE and have adequate ventilation.

Hydrofluoric acid spills require a special, HF-specific clean up kit. Do not use other absorbents. Consult the EHS Fact Sheet – Hydrofluoric Acid and the Hydrofluoric Acid SDS for more information.

Collect cleaned up material for waste disposal.

For large spills, evacuate area and contact EHS.

**Disposal -** Corrosives need to be disposed of by EHS. Please contact us for more information.

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