

# Hydrofluoric Acid (HF)

## What is hydrofluoric acid and where can it be found?

Hydrofluoric acid is an extremely corrosive acid that has many uses, including surface cleaning and etching. HF can be found in aluminum cleaners and brighteners (wheel brighteners) and carwash cleaners.

## How does hydrofluoric acid affect your health?

Hydrofluoric acid is a powerful irritant to the respiratory tract, skin and eyes. HF is corrosive and readily destroys tissue. Unlike other acids, HF penetrates the skin producing deep and extremely painful burns. The severity of the effect depends on the amount of acid you come in contact with and the duration of contact.

**Skin contact:** Chemical burns from HF are very painful and slow to heal. Contact with concentrated solutions (more than 50% HF) immediately results in serious and painful destruction of tissue (burns). Even at concentrations as low as 2% HF contact can cause burns; however, pain or the burning sensation may not occur until hours after exposure.

**Eye contact:** Exposure to HF can cause a range of effects from irritation to severe damage.

**Inhalation:** Breathing mist containing HF can result in nose and throat irritation. Breathing in significant amounts can lead to serious health effects such as pulmonary edema. Effects may be immediate or delayed up to 36 hours.

## How do you protect yourself from hydrofluoric acid?

Preventing exposure to hydrofluoric acid is a critical step in eliminating the health hazards.

Reduce the risk:

- Replace HF-containing products with non-HF products. **Caution:** *ammonium bifluoride is often substituted for HF and the product is often labeled - "acid-free". Be aware that contact with these products cause health effects similar to HF.*
- Purchase products with more dilute concentrations of HF.
- Avoid spraying products containing HF.
- Label containers that you transfer these chemicals into.

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There are several important ways to protect yourself:

- Always use goggles when spraying, transferring or mixing HF-containing products.
- Use medium to heavy chemical-resistant gloves, such as neoprene or nitrile. *Never use disposable latex gloves.*
- Read the warnings and instructions on the container label and the safety data sheet (SDS).
- Know the location of emergency equipment (eyewash and shower).
- Use only with adequate ventilation. Do not handle or use HF in confined areas.

### What should you do if you come in contact with HF?

**Skin:** Immediately flush the affected area with running water (preferably a shower; otherwise use a hose or tap) for at least 15 minutes. Remove contaminated clothing, rings, etc. while under the running water. Seek medical attention immediately.

**Eyes:** Immediately flush with water for at least 15 minutes. Make sure that the contaminated water does not run into the other eye. Seek medical attention immediately.

**Inhalation:** Seek medical attention immediately.

### Where can you get more information?

- Refer to the SDS and container labels

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