

# HYDROCHLORIC ACID FACT SHEET

North Carolina Division of Public Health • Occupational and Environmental Epidemiology Branch

## Chemical Information

- 27<sup>th</sup> highest volume chemical produced in the United States.
- Highly corrosive.
- Noncombustible.
- Nonflammable.
- Toxic by ingestion, inhalation, and skin contact.
- Strong irritant to skin and eyes.
- Used in food processing, pickling and metal cleaning and as a laboratory testing agent.

## Hazards Identification

### **Acute Exposure:**

- Ingestion can cause severe injury to the lips, mouth, throat, esophagus, and stomach.
- Can cause severe chemical burns on contact with skin.
- Inhalation can lead to fluid build-up in the lungs.

### **Chronic Exposure:**

- Prolonged exposure can cause chronic inflammation of the bronchi.
- Can cause nasal discharge.
- Causes inflammation and discoloration of the skin.
- May cause erosion of dental enamel.
- Can cause eye inflammation.
- The Environmental Protection Agency (EPA) Acute Exposure Guideline Level 1 (AEGL - 1) for hydrochloric acid is 1.8 ppm for an 8-hour period.

## Stability & Reactivity

- Highly corrosive to most metals.
- Reacts with hydroxides, amines, and alkalis.
- Very water-soluble.
- Soluble in alcohol and ether.

## Handling & Storage

- Shipped as liquefied compressed gas.
- Requires shipping label of, "Poisonous Gas, Corrosive."

## **Glossary**

The Environmental Protection Agency (EPA) defines Acute Exposure Guideline Levels (AEGLs) as threshold exposure limits for the general public that are applicable to emergency exposure periods ranging from 10 minutes to 8 hours. The three AEGLs are defined as follows:

AEGL-1 – airborne concentration of a substance at which the general population could experience notable discomfort, irritation or certain asymptomatic non-sensory effects.

AEGL-2 – airborne concentration of a substance at which the general population could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.

AEGL-3 – airborne concentration of a substance at which the general population could experience life threatening health effects or death.

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