

Perchloric Acid

Chemical Name: CAS #:

Hazard Classification:

Location Used: Principal Investigator:

Processes for Which Chemical Is Used:

HAZARDS AND PROTECTION

Hazard Information

- Causes severe skin burns and eye damage
- May cause fire or explosion
- Strong oxidizer
- Corrosive to metals

Routes of Exposure

- Ingestion ● Skin Absorption
- Inhalation
- Eye absorption

If exposed by:

- Inhalation: Remove to fresh air. If not breathing, give artificial respiration.
- Ingestion: Do not induce vomiting. Rinse mouth with water.
- Eye or skin: Remove contaminated clothing.

Rinse with plenty of water for 15 minutes.

Wash skin with soap and water. If in eyes, continue rinsing with water during transport to hospital.

If exposed by any route, seek immediate medical attention.

Symptoms of Exposure

- Burning sensation
- Coughing, wheezing, shortness of breath, laryngitis

Special Use Requirements

Perchloric acid has special use requirements. These requirements are for use of perchloric acid at any concentration.

- Remove any organic materials from the area.
- After working with perchloric acid, the area must be decontaminated with a 10% sodium carbonate solution.

Engineering Controls

- Chemical Fume Hood Never open perchloric acid outside of a chemical fume hood.

Perchloric acid 7601-90-3

Health Hazard and Physical Hazard

ARKANSAS STATE UNIVERSITY EHS

LABORATORY CHEMICAL STANDARD OPERATING PROCEDURE

CS-005 Last Reviewed July 8, 2019

Administrative Controls

- Designated area sign
- Particularly hazardous substance label
- Post designated area sign before each use.
- Label containers of perchloric acid as a health and physical hazard.
- Use as small a quantity as possible.

Personal Protective Equipment

- Gloves
- Splash goggles
- Lab coat

Wash hands immediately after use. Splash goggles must be worn when working with solutions of perchloric acid greater than 1%.

OTHER SAFETY INFORMATION

Transportation Follow guidance given in the laboratory safety manual for transport of chemicals.

Storage

- Store in cabinet with other acids, but in a separate secondary container.
- Do not store in metal containers.
- Do not store near organic materials.
- Keep away from heat and open flames.

Incompatible materials include:

Strong bases, strong acids, amines, phosphorus halides, alcohols, organic materials, powdered metals, strong reducing agents

Spill/Accident Procedures

For all spills:

- Wear nitrile gloves, splash goggles and lab coat
- Evacuate the immediate area

Exposure:

- If anyone exposed requires emergency medical attention, dial 911 (or 9-911 from landline).
- Follow procedures outlined in laboratory safety manual.

Small spills (less than 50 mL in a hood): Cover spills of dry chemical with sand or other inorganic absorbent.

Do not use organic materials such as paper to absorb!

Sweep contents into a non-metal container collection

by EHS. If the spill is liquids, cover with absorbent material and then place the absorbent materials in a glass container for collection by EHS. Clean area with soap and water once spill is removed.

Large spills (greater than 50 mL in a hood or any amount outside a fume hood): If the spill is in a chemical fume hood, contact the EHS director (864-710-2933). If he cannot be reached (does not answer phone, do not leave voicemail), then call 911, pull the fire alarm and exit the building. If the spill is outside of a hood, then call 911, pull the fire alarm and exit the building.

Waste Disposal Waste perchloric acid must be collected for disposal.

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