

# FLINN SCIENTIFIC, INC.

## Material Safety Data Sheet (MSDS)

MSDS #: 582.00

Revision Date: February 24, 2012

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Perchloric Acid

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

### SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Perchloric acid, 70%

CAS#: 7601-90-3

### SECTION 3 — HAZARDS IDENTIFICATION

Colorless, fuming liquid. Strong chlorine odor.  
Severely toxic by inhalation and ingestion. Poison. Severe corrosive to all body tissues.  
Although 68-72% cold perchloric acid behaves as a strong but non oxidizing acid, it becomes an extreme oxidant and powerful dehydrator at elevated temperatures or when anhydrous.  
Dangerous fire risk.

#### FLINN AT-A-GLANCE

Health-3  
Flammability-0  
Reactivity-3  
Exposure-3  
Storage-3

0 is low hazard, 3 is high hazard

### SECTION 4 — FIRST AID MEASURES

Call a physician and seek medical attention for further treatment, observation, and support after first aid.  
Inhalation: Remove to fresh air at once. If breathing has stopped, give artificial respiration immediately.  
Eye or External: Immediately flush with fresh water for at least 15 minutes.  
Internal: Do NOT induce vomiting. Rinse mouth. Call a physician or poison control at once.

### SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable liquid.  
Flash point: 110 °C Strong oxidizer when heated or anhydrous: will ignite vigorously in contact with organic materials. Fire and explosion risk. When heated to decomposition, emits toxic fumes of Cl.  
**Fire Fighting Instructions:** Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

#### NFPA CODE

H-3  
F-0  
R-3  
OX

### SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area. Remove all ignition sources and ventilate area. Contain spill with sand or other inert absorbent material, neutralize with sodium bicarbonate or calcium hydroxide and deposit in sealed bag or container. See Sections 8 and 13 for further information.

### SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #6. Store with bromates and chlorates.  
Store in a dedicated acid cabinet and away from any source of water; if an acid cabinet is not available, store in Flinn Saf-Cube.  
Store in a cool dry place. Use and dispense in a hood.

### SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use exhaust ventilation to keep airborne concentrations low.

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

Colorless, fuming liquid.  
Solubility: Soluble in water.  
Formula: HClO<sub>4</sub>  
Formula weight: 100.46

Melting point: -112 °C  
pH: very acidic  
Specific gravity: 1.764

Discontinued product

**SECTION 10 — STABILITY AND REACTIVITY**

Avoid contact with strong bases, strong acids, amines, phosphorus halides, acid anhydrides alcohols, water, and organic materials. Reacts vigorously with water with evolution of heat; ignites vigorously in contact with organic materials. Fire and explosion risk. Shelf life: Indefinite, if stored properly.

**SECTION 11 — TOXICOLOGICAL INFORMATION**

Acute effects: Poison, corrosive  
Chronic effects: N.A.  
Target organs: N.A.

ORL-RAT LD<sub>50</sub>: 1100 mg/kg  
IHL-RAT LC<sub>50</sub>: N.A.  
SKN-RBT LD<sub>50</sub>: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

**SECTION 12 — ECOLOGICAL INFORMATION**

Data not yet available.

**SECTION 13 — DISPOSAL CONSIDERATIONS**

Please review all federal, state and local regulations that may apply, before proceeding.  
Flinn Suggested Disposal Method #12a is one option.

**SECTION 14 — TRANSPORT INFORMATION**

Shipping name: Perchloric acid  
Hazard class: 5.1, Oxidizer, corrosive  
UN number: UN1873  
N/A = Not applicable

**SECTION 15 — REGULATORY INFORMATION**

TSCA-listed, EINECS-listed (231-512-4), RCRA code D001, D002, D003.

**SECTION 16 — OTHER INFORMATION**

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**Consult your copy of the *Flinn Science Catalog/Reference Manual*  
for additional information about laboratory chemicals.**