



Material Safety Data Sheet

Perchloric acid, 0.1N in Acetic Acid

Section 1 - Chemical Product and Company Identification

MSDS Name:

Perchloric acid, 0.1N in Acetic Acid

Catalog Numbers:

LC18100

Synonyms:

None

Company Identification:

LabChem Inc
200 William Pitt Way
Pittsburgh, PA 15238

Company Phone Number:

(412) 826-5230

Emergency Phone Number:

(800) 424-9300

CHEMTREC Phone Number:

(800) 424-9300

Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
64-19-7	Acetic acid	balance
7601-90-3	Perchloric acid	1

Section 3 - Hazards Identification

Emergency Overview

Appearance: Clear, colorless solution**Danger!** Corrosive. Flammable. Causes burns by all exposure routes.**Target Organs:** Eyes, skin, respiratory and gastrointestinal systems, teeth

Potential Health Effects

Eye:

Eye contact with liquid or vapors may cause irritation, burns, swelling, damage to the cornea and conjunctiva resulting in blurred or partial loss of vision.

Skin:

May cause irritation to skin with burns and scar tissue. Skin contact may result in blisters and brown or yellow stains.

Ingestion:

May cause gastrointestinal burns with nausea, vomiting and diarrhea. Vomiting and diarrhea of dark blood may occur; asphyxia from throat swelling. Stomach and esophagus may become perforated.



Material Safety Data Sheet

Perchloric acid, 0.1N in Acetic Acid

Inhalation:

May cause respiratory irritation, burns, headache, dizziness, and weakness. Exposure to 50ppm acetic acid is intolerable for most individuals.

Chronic:

Prolonged or repeated contact may cause dermatitis, conjunctivitis, dental erosion, tooth discolorization, jaw necrosis, nasal ulceration, laryngitis, bronchitis, pneumonia and gastrointestinal disturbances. Acetic acid sensitization dermatitis from prolonged exposure can occur.

Section 4 - First Aid Measures

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

Skin:

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid at once.

Ingestion:

Do not induce vomiting. Give conscious victim 2-4 cupfuls of milk or water. Get medical aid at once. Give oxygen if respiration is depressed.

Inhalation:

Move victim to fresh air immediately. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Get medical aid at once.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Flammable liquid. Avoid breathing corrosive vapors. Vapors are heavier than air and may travel considerable distance and flash back from source of ignition. Do not get water inside container.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:

867°F (464°C)

Flash Point:

104°F (40°C)

NFPA Rating:

CAS# 64-19-7: Health-3, Flammability-2, Instability-0

CAS# 7601-90-3: Health-3, Flammability-0, Instability-3

Explosion Limits:

Lower: 5.4 Upper: 16



Material Safety Data Sheet Perchloric acid, 0.1N in Acetic Acid

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb liquid with inert or neutralizing substance such as fuller's earth, cement powder, fly ash, sand. Scoop material into suitable (plastic or glass) container, and label for disposal. Shut off ignition sources. Avoid corrosive vapors. Isolate and ventilate spill area.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Do not ingest or inhale. Do not get in eyes, on skin, or on clothing. Wash contaminated clothing before reuse. Use only in a well ventilated area.

Storage:

Store protected from heat and ignition sources. Keep out of sewers and drains. Keep away from combustible materials.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities using or storing this material should be equipped with an eyewash and safety shower. Use adequate general and local ventilation to keep airborne levels below the permissible exposure limits.

Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Acetic acid	10 ppm TWA; 25 mg/m ³ TWA	10 ppm TWA; 25 mg/m ³ TWA;	10 ppm TWA; 15 ppm STEL
Perchloric acid	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.

OSHA Vacated PELs:

Acetic acid: 10 ppm TWA; 25 mg/m³ TWA

Personal Protective Equipment**Eyes:**

Do not wear contact lenses when working with chemicals. Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134. Always use a NIOSH-approved respirator when necessary.



Material Safety Data Sheet Perchloric acid, 0.1N in Acetic Acid

Section 9 - Physical and Chemical Properties

Physical State:	Clear liquid
Color:	Colorless
Odor:	Pungent vinegar-like odor
pH:	Acidic
Vapor Pressure:	No information found.
Vapor Density:	No information found.
Evaporation Rate:	No information found.
Viscosity:	No information found.
Boiling Point:	244°F (118°C)
Freezing/Melting Point:	62°F (17°C)
Decomposition Temperature:	No information found.
Solubility in water:	Soluble.
Specific Gravity/Density:	1.04
Molecular Formula:	No information found.
Molecular Weight:	No information found.

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible substances, excess heat, sources of ignition.

Incompatibilities with Other Materials:

Explosive or violent reactions with bromine pentafluoride, chlorine trifluoride, chromic acid and anhydride, diallyl methyl carbinol and ozone, nitric acid, nitric acid and acetone, perchloric acid, permanganates, phosphorous trichloride, sodium peroxide, n-xylene, azidotetrazole, phosphorous isocyanate, potassium hydroxide, hydrogen peroxide.

Hazardous Decomposition Products:

Oxides of carbon, chlorine, hydrogen chloride.

Hazardous Polymerization:

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 64-19-7: AF1225000.

CAS# 7601-90-3: SC7500000.

LD50/LC50:

CAS# 64-19-7:

Inhalation, mouse: LC50 = 5620 ppm/1H

Oral, rat: LD50 = 3310 mg/kg

Skin, rabbit: LD50 = 1060 mg/kg.

CAS# 7601-90-3:

Oral, rat: LD50 = 1100 mg/kg.



Material Safety Data Sheet Perchloric acid, 0.1N in Acetic Acid

Carcinogenicity:

CAS# 64-19-7: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 7601-90-3: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:

No information found

Teratogenicity:

No information found

Reproductive:

No information found

Mutagenicity:

Acetic acid is mutagenic for bacteria and yeast.

Neurotoxicity:

No information found

Section 12 - Ecological Information

No information found

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Acetic acid, solution

Hazard Class: 8 (3)

UN Number: UN2789

Packing Group: PG II

Section 15 - Regulatory Information

US Federal**TSCA:**

CAS# 64-19-7 is listed on the TSCA Inventory.

CAS# 7601-90-3 is listed on the TSCA Inventory.

SARA Reportable Quantities (RQ):

CAS# 64-19-7: final RQ = 5000 pounds (2270 kg)

CERCLA/SARA Section 313:

None of the components are on this list.

OSHA - Highly Hazardous:

CAS# 7601-90-3 is considered highly hazardous by OSHA.



Material Safety Data Sheet Perchloric acid, 0.1N in Acetic Acid

US State

State Right to Know:

Acetic acid can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Perchloric acid can be found on the following state Right-to-Know lists: New Jersey, Florida, Pennsylvania, Massachusetts.

California Regulations:

None.

European/International Regulations

Canadian DSL/NDSL:

CAS# 64-19-7 is listed on Canada's DSL List.

CAS# 7601-90-3 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:

CAS# 64-19-7 is listed on Canada's Ingredient Disclosure List.

CAS# 7601-90-3 is listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: October 21, 1997

Revision Date: June 16, 2010

Information in this MSDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and LabChem Inc. assumes no liability resulting from the use of this MSDS. The user must determine suitability of this information for his application.