

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

SAFETY DATA
SHEET

Version: v1
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Perchloric acid standard solution
Product Number : P141368
Brand : aladdin
CAS-No. : 7601-90-3(acetic acid)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances.

1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION
Address : 14078 Meridian Parkway,
Riverside, CA. 92518
Telephone : +1 (833) 552-7181
Fax : no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300
CHEMTREC®, Outside the USA :

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquid (Class 3), H226

Acute toxicity, oral (Category 5), H303

Skin corrosion/irritation (Category 1A), H314

Serious eye damage/eye irritation (Category 1), H318

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H271 May cause fire or explosion; strong Oxidizer
H290 May be corrosive to metals
H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H373 Causes damage to organs through prolonged or repeated exposure

Precautionary statement(s)

P210 Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P220 Keep away from clothing and other combustible materials.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash hands [and ...] thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P283 Wear fire resistant or flame retardant clothing.
P304 IF INHALED:
P321 Specific treatment (see ... on this label).
P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P363 Wash contaminated clothing before reuse.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].

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P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P306+P360	IF ON CLOTHING: Rinse Immediately contaminated CLOTHING and SKIN with plenty of water before removing clothes.
P370+P378	In case of fire: Use ... to extinguish.
P371+P380+P375	In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P405	Store locked up.
P420	Store separately.
P501	Dispose of contents/container to an approved waste disposal plant.
P302+P361+P354	IF ON SKIN: Take off Immediately all contaminated clothing. Immediately rinse with water for several minutes.
P316	Get emergency medical help immediately.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Synonyms	: no data available
Formula	: HClO ₄
Molecular weight	: 100.46

Component	Classification	Concentration
Acetate		
CAS-No. : 64-19-7 EC-No. : 200-580-7	Flam. Liq. 3; Skin Corr. 1A; Eye Dam. 1; H226, H314, H318 Concentration limits: >= 90 %: Skin Corr. 1AH314; 25 - < 90 %: Skin Corr. 1B, H314; 10 - < 25 %: Skin Irrit. 2, H315; 10 - < 25 %: Eye Irrit. 2, H319; 10 - < 25 %: Eye Irrit. 2, H319; 10 - < 25 %: Skin Irrit. 2, H315; 25 - < 90 %: Skin Corr. 1B, H314; >= 90 %: Skin Corr. 1A, H314; >= 90 %: 3, H226;	
Perchloric acid standard solution		
CAS-No. : 7601-90-3 EC-No. : 231-512-4	Oxidizing liquid category 1; Metal corrosive category 1; Acute toxicity category 4; Skin corrosion/irritation category 1A; Serious eye damage/eye irritation category 1; Specific target organ toxicity (repeated exposure) category 2; H271, H290 , H302, H314, H318, H373	

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

In case of skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

In case of eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

If swallowed

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

Unsuitable extinguishing media

Do not spray with water.

5.2 Special hazards arising from the substance or mixture

Carbon oxide Flammable

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5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Operators should be specially trained and strictly abide by the operating procedures. Operation and disposal should be carried out in a place with local ventilation or general ventilation facilities. Avoid eye and skin contact and avoid breathing vapor. See Section 8 for personal protective measures. Keep away from fire and heat sources, and smoking is strictly prohibited in the workplace. Use explosion-proof ventilation systems and equipment. If canning is required, the flow rate should be controlled, and there should be a grounding device to prevent the accumulation of static electricity. Avoid contact with incompatible substances such as oxidizing agents (see section 10 for incompatible substances). When handling, it should be lightly loaded and unloaded to prevent damage to packaging and containers. Empty containers may be harmful residues. Wash hands after use and prohibit eating or drinking in the workplace. Equipped with the corresponding variety and quantity of fire fighting equipment and leakage emer

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry environment at room temperature.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Hazard composition and occupational exposure limit:

Components	CAS No.	value	Control parameters	basis
acetic acid	64-19-7	PC-TWA	10 mg/m3	Occupational exposure limit for hazardous factors in the workplace - chemical hazardous factors
		PC-STEL	20 mg/m3	Occupational exposure limit for hazardous factors in the workplace - chemical hazardous factors

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves

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have to satisfy the specifications of Regulation (EU)2016/425 and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN(EU).

Control of environmental exposure

If safety requires, prevent further leakage or spillage. Do not let the product enter the sewer.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	form: liquid color: colourless
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	no data available
f) Initial boiling point and boiling range	no data available
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	Solubility 602.9g/L
n) Water solubility	no data available
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

9.2 Other safety information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Heat, flame and sparks.

10.5 Incompatible materials

Oxidant, soluble carbonate and phosphate, hydroxide, metal, peroxide, permanganate; Such as potassium permanganate, amine, alcohol, nitric acid

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

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LD50 Oral Rat 3310 mg/kg Remarks: (RTECS)

LC50 inhalation - mice - 4 h - 2819 mg/l Remarks: (RTECS)

Transcutaneous: no data

Skin corrosion/irritation

Skin rabbit results: cause burns- 4 h (OECD Test Guideline 404) Remarks: (IUCLID)

Serious eye damage/eye irritation

Eyes - Rabbit Result: Causes burns- 4 h (OECD Test Guideline 405) Remarks: (IUCLID) Causes serious eye damage.

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

Test type: Ames test Test system: Salmonella typhimurium Metabolic activation: with or without metabolic activation Method: OECD Test Guideline 471 Result: Negative Test type: mutagenicity (mammalian cell test): chromosome mutation is negative Test system: Chinese hamster ovary cells Metabolic activation: with or without metabolic activation Method: OECD Test Guideline 473 Result: Negative Test type: micronucleus test Species: rat Cell type: bone marrow Route of exposure: inhalation (vapor) Methods: Mutagenicity (micronucleus test) Result: Negative

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish LC50 - Lepomis mSemi static toxicity test on fish LC50 - Oncorhynchus mykiss ->1000 mg/l - 96 h (OECD Test Guideline 203)

Static toxicity test for Daphnia magna and other aquatic invertebrates EC50 - Daphnia magna ->1000 mg/l - 48 h (OECD Test Guideline 202)

Static test of toxicity to algae EC50 - Skeletonema costatum ->1000 mg/l - 72 h (ISO 10253)

Toxicity to bacteria EC5 - Pseudomonas putida - 2850 mg/l - 16 h Remarks: neutral (maximum allowable toxic concentration) (Lit.) microtox test EC50 - Photobacterium phosphororum - 11 mg/l - 15 min Remarks: (IUCLID)acrchirus - 105 mg / L - 48 h

12.2 Persistence and degradability

Results: 99% - fast biodegradable. (OECD Test Guideline 301D) Remarks: (HSDB) Result: 95% - easily removed from water (OECD Test Guideline 302B)

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

The PBT / vpvb assessment is not available because the chemical safety assessment is not required / carried out

12.6 Other adverse effects

no data available

SECTION 13:**13.1 Disposal considerations****Product**

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur. Observe all federal, state and local regulations when disposing of the substance.

Contaminated packagingPhone: +1 (833) 552-7181 Email: QualityAssurance@aladdinsci.com Website: <https://www.aladdinsci.com/>

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Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 2789

Proper shipping name: Glacial acetic acid

Environmental Hazards: no

Packing group: II

Reportable Quantity(RQ): no data available

Class: 8 (3)

Poison Inhalation Hazard: no data available

IMDG

UN number: 2789

Proper shipping name: Glacial acetic acid

Packing group: II

EMS-No: no data available

IATA

UN number: 2789

Proper shipping name: Glacial acetic acid

Packing group: II

Class: 8 (3)

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: Other information

Prepared By

Regulatory Affairs

ALADDIN SCIENTIFIC CORPORATION

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Revision Summary

SDS sections updated v1

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