



Safety Data Sheet

Date of Issue: 05.08.2020

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1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : ECP Limited
Address : PO Box 34125, Birkenhead, Auckland 0746
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Emergency phone number : 0800 243 622 (24 hours)

Product	Perchloric acid 60%			Code	A9622	
CAS#	HSNO#	UN #	DG Class/es	Packing group #	Tracking	Handlers Certificate
7601-90-3	HSR002632	1873	5.1	I	5.1A	5.1A

Recommended use : Laboratory Investigations

2: Hazards identification

2.1 Classification of the substance or mixture

Oxidizing liquids Category 1 (H271)
Substances/mixtures corrosive to metal Category 1 (H290)
Acute oral toxicity Category 4 (H302)
Skin Corrosion/irritation Category 1 A (H314)
Serious Eye Damage/Eye Irritation Category 1 (H318)
Specific target organ toxicity - (repeated exposure) Category 2 (H373)

2.2 GHS Label elements, including precautionary statements

Hazard Pictogram



SIGNAL WORD : DANGER

Hazard Statements

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

Precautionary Statements

Prevention

P210 : Keep away from heat.
P220 : Keep/Store away from clothing/ combustible materials.
P221 : Take any precaution to avoid mixing with combustibles.
P264 : Wash skin thoroughly after handling.

P270 : Do not eat, drink or smoke when using this product.
 P280 : Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P283 : Wear fire/flame resistant/retardant clothing.

Response

P301 + P312 : IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
 P301 + P330 + P331 : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353 : IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P304 + P340 : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 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.
 P310 : Immediately call a POISON CENTER or doctor/ physician.
 P321 : Specific treatment (see supplemental first aid instructions on this label).
 P363 : Wash contaminated clothing before reuse.
 P370 + P378 : In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
 P371 + P380 + P375 : In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Storage

P405 : Store locked up.

Disposal

P501 : Dispose of contents/container to an approved waste disposal plant.

Other Hazards

: None known

3: Composition/information on ingredients

3.1 Mixtures

Synonyms : PCA
 Formula : HClO₄
 Molecular weight : 100.46 g/mol

Component	CAS-No	EC-No	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Perchloric acid	7601-90-3	EEC No. 231-512-4	60-70	Ox. Liq. 1 (H271) Met. Corr. 1 (H290) Acute Tox. 4 (H302) Skin Corr. 1A (H314) Eye Dam. 1 (H318) STOT RE 2 (H373)

4: First aid measures

4.1 Description of first aid measures

General Advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Call a physician immediately.

Ingestion

Do not induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.

Inhalation

If not breathing, give artificial respiration. Remove from exposure, lie down. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately.

Self-Protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

4.2. Most important symptoms and effects, both acute and delayed

Causes burns by all exposure routes. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or oesophagus should be investigated.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

CO 2, dry chemical, dry sand, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. The product cause burns of eyes, skin and mucous membranes. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.). Hazardous Combustion Products Hydrogen chloride gas.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2. Environmental precautions

Should not be released into the environment.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

7: Handling and storage

7.1. Precautions for safe handling

Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe vapors or spray mist. Do not ingest. Keep away from clothing and other combustible materials.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Corrosives area.

7.3. Specific end use(s)

Use in laboratories

8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

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.

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.

Full contact

Material: Butyl rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 60 min

Body Protection

Complete suit protecting against chemicals. 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 full-face particle respirator type or 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.

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- a) Appearance
Form : liquid, clear
Colour : colourless
- b) Melting point/freezing point : -18 °C
- c) Initial boiling point and boiling range : ca.203 °C at 1,013 hPa
- d) Flash point : 113 °C - closed cup
- e) Vapour pressure : 6.8 mmHg @ 25 °C
- f) Relative density : 1.535 g/cm³ at 25 °C
- g) Water solubility : Completely miscible
- h) Viscosity : 3.5 mPa.s @ 20 °C
- i) Oxidizing Properties : Oxidizer

10: Stability and reactivity

10.1. Reactivity

Yes

10.2. Chemical stability

Oxidizer: Contact with combustible/organic material may cause fire.

10.3. Possibility of hazardous reactions

Hazardous Polymerization : Hazardous polymerization does not occur.
Hazardous Reactions : None under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat. Combustible material. 10.5. Incompatible materials
Strong oxidizing agents. Powdered metals. Organic materials. Amines. Alcohols. Strong
reducing agents. Combustible material.

10.6. Hazardous decomposition products

Hydrogen chloride gas.

11: Toxicological information

11.1. Information on toxicological effects

Product Information

(a) acute toxicity.

Oral : Category 4
Dermal : No data available
Inhalation : No data available

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Perchloric acid	LD50 = 1100 mg/kg (Rat)		

(b) skin corrosion/irritation : Category 1 A

(c) serious eye damage/irritation : Category 1

(d) respiratory or skin sensitization

Respiratory : No data available
Skin : No data available

- (e) germ cell mutagenicity : No data available
- (f) carcinogenicity : No data available
There are no known carcinogenic chemicals in this product
- (g) reproductive toxicity : No data available
- (h) STOT-single exposure : No data available
- (i) STOT-repeated exposure : Category 2
Target Organs : Thyroid.
- (j) aspiration hazard : No data available

Symptoms / effects, both acute and delayed

Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or oesophagus should be investigated.

12: Ecological information

12.1. Toxicity

Ecotoxicity effects Do not empty into drains.

12.2. Persistence and degradability

Persistence Soluble in water, Persistence is unlikely, based on information available.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely

12.4. Mobility in soil

The product is water soluble and may spread in water systems Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB assessment

No data available for assessment.

12.6. Other adverse effects

- Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

- Persistent Organic Pollutant

This product does not contain any known or suspected substance

- Ozone Depletion Potential

This product does not contain any known or suspected substance.

13: Disposal considerations

13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Dispose of as unused product.

14: Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	1873	1873	1873
14.2	UN Proper Shipping name	PERCHLORIC ACID	PERCHLORIC ACID	Perchloric acid
14.3	Transport Hazard Class	5.1 (8)	5.1 (8)	5.1 (8)
14.4	Packaging group	I	I	I
14.5	Environmental Hazards	No	No	No
14.6	Special precautions for user	No data available		

15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

HSNO Group Standard Approval: Outside of Group Standard

Tracking Required : 5.1.1A

Approved Handler Cert. : 5.1.1A

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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