

SAFETY DATA SHEET

1. Identification of the substance / preparation and company.

1.1 Product identifier

Product Nr. CL00.1612
Trade name Perchloric acid 70% a.r.
REACH Registration Number 01-2119978750-27
CAS-No. 7601-90-3

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

Identified uses: Reagent for analysis
In compliance with the conditions described in the annex to this safety data sheet.

1.3 Information provided by CHEM-LAB NV product service.

Responsible department: CHEM-LAB NV
Industriezone "De Arend" 2
B-8210 Zedelgem
BELGIUM
Tel. +32 50 28 83 20
Fax. +32 50 78 26 54
e-mail: info@chem-lab.be

1.4 Emergency telephone: 00 (32) 50.28.83.20

2. Hazard identification

2.1 Classification of the substance or the mixture (EG 1272/2008)

Oxidising liquid, Categorie 1, H271
Substance or mixture corrosive to metals, Categorie 1, H290
Acute toxicity, Oral, Categorie 4, H302
Skin corrosion/irritation, Categorie 1A, H314
Specific target organ toxicity - repeated exposure, Categorie 2, H373

For the full text of H-sentences mentioned in this Section, see Section 16

For the full text of R-sentences mentioned in this Section, see Section 16

2.2 GHS-Labeling

GHS-Labeling Labelling (REGULATION (EC) No 1272/2008) (EG 1272/2008)
Hazard pictograms:



Signal word:
Danger :

Hazard statements:

H271 May cause fire or explosion; strong oxidiser.
H290 May be corrosive to metals.

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:

P210 Keep away from heat, sparks, open flames, hot surfaces. No smoking.
 P221 Take any precaution to avoid mixing with combustibles...
 P280 Wear protective gloves, protective clothing, eye protection, face protection.
 P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

Reduced labelling
 Hazard pictograms:



Signal word:
 Danger :

3. Composition / Information on ingredients.

3.1 Substance

CAS-No. 7601-90-3
 EC-Nr 231-512-4
 Index-No 017-006-00-4
 Formula HClO4

Component	Cas-No.	Concentration	Classification (REGULATION (EC) No 1272/2008)
Perchloric acid 70% a.r.	7601-90-3	70+% HClO4	Ox. Liq. 1 (H271) Met. Corr. 1 (H290) Acute Tox. (oral) 4 (H302) Skin Corr. 1A (H314) STOT RE 2 (H373)

Component	Reach Number
Perchloric acid 70% a.r.	01-2119978750-27

For the full text of H-Phrases mentioned in this Section, see Section 16.

3.2 Mixture

Not applicable

4. First aid measures.

4.1 Description of first aid measures

General advice

First-aid personnel: ensure self-protection!

After inhalation: Fresh air. If breathing stops immediately apply mechanical ventilation, if necessary oxygen mask. Immediately call in physician.

After contact with skin: Wash off with plenty of water. Dab with polyethylene glycol 400. Remove contaminated clothing. Immediately call in physician.

After contact with eyes: Rinse out with plenty of water for at least 10 minutes with the eyelid held wide open. Immediately call an ophthalmologist.

After ingestion: Make victim drink plenty of water with calcium gluconate or calcium lactate (if necessary several litres), avoid vomiting (risk of perforation!). Immediately call in physician. Injured persons should rest and be protected from loss of warmth. If a systematic action is suspected, monitoring and treatment in an intensive care unit is urgently required. Caution, ventricular fibrillation due to electrolyte imbalance.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. Fire fighting measures.

5.1 Extinguishing media

Suitable extinguishing media

In adaption to materials stored in the immediate neighbourhood.

Unsuitable extinguishing media

Cool container with spray water from a safe distance. Contain escaping vapours with water. Prevent fire-fighting water from entering surface water or groundwater.

5.2 Special hazards arising from substance or mixture

Non-combustible. Fire-promoting. Keep away from combustible materials. Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Do not stay in dangerous zone without self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

5.4 Further information

no data available

6. Accidental release measures.

6.1 Personal precautions, protective equipment and emergency procedures

Do not inhale vapours/aerosols. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.
For personal protection see section 8.

6.2 Environmental precautions

Do not allow to enter sewerage system.

6.3 Methods and materials for containment and cleaning up

Absorb on vermiculite, sand or a pillow from Chemical Spill Center.

6.4 Reference to other sections

For disposal see section 13.

7. Handling and storage.

7.1 Precautions for safe handling

Work under hood. Do not inhale substance . Avoid generation of vapours/aerosols.
For precautions see section 2.2

7.2 Conditions for safe storage, including any incompatibilities

Closed in a well ventilated place.
Recommended storage temperature see product label.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. Exposure controls - Personal protection.

8.1 Control parameters

8.2 Exposure controls

Engineering measures

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

See section 7.1

Individual protection measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance. Under no circumstances eat or drink at workplace. Work under hood . Do not inhale substance.

Respiratory protections

Required when vapours/aerosols are generated.

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Eye protection

Required.

Hand protection

Required.

Body protection

Required.

Environmental exposure controls

Do not allow to enter sewerage system.

9. Physical and chemical properties.

9.1 Information on basic physical

Appearance

Form:	Liquid
Colour:	Colourless
Odour:	Odourless

Changes in physical state

Melting Point:	-18°C
Boiling point:	198°C
Flash point:	-
Ignation temperature:	-
Mol. Weight:	100.46 g/mol
Density:	1,68 g/ml
pH value:	pH < 1
Solubility in water:	soluble
Explosion limits:	

9.2 Other data

No further relevant information available.

10. Stability and reactivity.

10.1 Reactivity

See section 10.3

10.2 Chemical stability

No further relevant information available.

10.3 Possibility of hazardous reactions

Avoid contact with acids, metals, combustible materials, heat and sun light.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products

No further relevant information available.

11. Toxicological information.

11.1 Information on toxicological effects

Acute oral toxicity
LD50 orl. rat 1100 mg/kg

Acute inhalation toxicity
No further relevant information available.

Acute dermal toxicity
No further relevant information available.

Skin irritation
No further relevant information available.

Eye irritation
No further relevant information available.

Sensitisation
No further relevant information available.

Germ cell mutagenicity
No further relevant information available.

Carcinogenicity
No further relevant information available.

Reproductive toxicity
No further relevant information available.

Teratogenicity
No further relevant information available.

Specific target organ toxicity - single exposure
No further relevant information available.

Specific target organ toxicity - repeated exposure
No further relevant information available.

Aspiration hazard
No further relevant information available.

11.2 Further information

No further relevant information available.

Further data:

Handle in accordance with good industrial hygiene and safety practice..

12. Ecological information.

12.1 Toxicity

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

12.5 Results of PBT and vPvB assessment

No further relevant information available.

12.6 Other adverse effects

Do not allow to enter waters, waste water, or soil!

13. Disposal considerations.

Product: Chemicals must be disposed of in compliance with the respective national regulations. Packaging: Chem-lab product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

14. Transport information.

Land Transport (ADR/RID)

14.1 UN number

UN 1873

14.2 Proper shipping name

Perchloric acid, more than 50%
but not more than 72% acid

14.3 Class	5.1 (8)
14.4 Packing group	I
14.5 Environmentally hazardous	-
14.6 Special precautions for user	no
Tunnel restriction code	(B/E)

Inland waterway transport (ADN)
Not relevant

Air Transport (IATA)

14.1 UN number	UN 1873 Perchloric acid, more than 50% but not more than 72% acid
14.2 Proper shipping name	
14.3 Class	5.1 (8)
14.4 Packing group	I
14.5 Environmentally hazardous	-
14.6 Special precautions for user	no

Sea Transport (IMDG)

14.1 UN number	UN 1873 Perchloric acid, more than 50% but not more than 72% acid
14.2 Proper shipping name	
14.3 Class	5.1 (8)
14.4 Packing group	I
14.5 Environmentally hazardous	-
14.6 Special precautions for user	no

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

15. Regulatory information.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
For this product an assessment was not carried out.

15.2 Chemical Safety Assessment
For this product an assessment was not carried out.

16. Other information.

The information and recommendations in this MSDS are to the best of our knowledge, information and belief accurate at the date of publications. Although utmost care has been taken in the composition of this text, the publisher cannot be held responsible for any damage resulting from any possible error in this publications.

Full text of H-Statements referred to under sections 2 and 3.

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

Exposure scenario 1 (Industrial use)

1. Industrial use Reagent for analysis, (Chemical production)

Sectors of end-use

- SU 3 Industrial uses: Uses of substances as such or in preparations at industrial sites
- SU 9 Manufacture of fine chemicals
- SU10 Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)

Chemical product category

- PC19 Removed from PC list and relocated in the technical function list (Table R.12- 15)24.
- PC21 Laboratory chemicals

Process categories

- PROC 1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
- PROC 2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
- PROC 3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
- PROC 4 Chemical production where opportunity for exposure arises
- PROC 5 Mixing or blending in batch processes
- PROC 8a Transfer of substance or mixture (charging and discharging) at non- dedicated facilities 26
- PROC 8b Transfer of substance or mixture (charging and discharging) at dedicated facilities26
- PROC 9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
- PROC10 Roller application or brushing
- PROC15 Use as laboratory reagent

Environmental Release Categories

- ERC 1 Manufacture of the substance
- ERC 2 Formulation into mixture
- ERC 4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
- ERC 6a Use of intermediate
- ERC 6b Use of reactive processing aid at industrial site (no inclusion into or onto article)

2. Contributing scenarios: Operational conditions and risk management measures

Exposure scenario 2 (Professional use)

1. Industrial use Reagent for analysis, (Chemical production)

Sectors of end-use

- SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Chemical product category

- PC21 Laboratory chemicals

Process categories

- PROC15 Use as laboratory reagent

Environmental Release Categories

- ERC 2 Formulation into mixture
- ERC 6a Use of intermediate
- ERC 6b Use of reactive processing aid at industrial site (no inclusion into or onto article)

2. Contributing scenarios: Operational conditions and risk management measures