

Perchloric Acid (50% - 70%)

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: Perchloric Acid (50% - 70%)
CAS Number: 7601-90-3
EC Number: 231-512-4

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

Product use: In Laboratory chemical, manufacture of perchlorates, manufacture of chemicals & pharma ingredients, in electronic industry, in diamond polishing

1.3 Details of the supplier of the safety data sheet

Company name: East Harbour Group Ltd
20 Clough Road, Severalls Industrial Park
Colchester, Essex, CO4 9QS
United Kingdom

Telephone: +44 (0) 333 242 0100
Email: info@eastharbourgroup.com

1.4 Emergency telephone number

Emergency telephone: 0800 246 1274

Section 2: Hazardous identification

2.1 Classification of the substance or mixture

Classification of the substance or mixture Classification as per EC Regulation 1272/2008

Oxidizing liquid, Category 1,	H271
Corrosive to Metals, Category 1	H290
Acute toxicity, Category 4, Oral,	H302
Skin corrosion, Category 1A,	H314
Specific target organ toxicity - repeated exposure, Category 2, Thyroid,	H373

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation

Pictogram



GHS03 GHS05 GHS07 GHS08

Perchloric Acid (50% - 70%)

Signal word

Danger

Hazard statementsH271
H290
H302
H314
H373

May cause fire or explosion; strong oxidizer.
May be corrosive to metals
Harmful if swallowed
Causes severe skin burns and eye damage.
May cause damage to organs (Thyroid) through prolonged or repeated exposure

Precautionary statementsP220
P280
P284
P305+P351+P338P361
P351
P310
P403+P233
P501

Keep away from clothing or other combustible materials
Wear protective gloves/protective clothing / eye protection / face protection.
Wear respiratory protection.
IF IN EYES : Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
Take off immediately all contaminated clothing.
Rinse cautiously with water for several minutes.
Immediately call a POISON CENTER or doctor / physician.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local / regional / national / international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT : Not a PBT substance

vPvB : Not a vPvB substance

2.4 Endocrine - disrupting properties

The substance has no Endocrine -disrupting properties according to Regulation (EU) 2017/2100

Section 3: Composition/information on ingredients

3. Composition / Information on Ingredients**3.1 Chemical characterization**

Description

CAS No.

Identification number(s) EC number

Mixture

Perchloric acid solution in water

7601-90-3

231-512-4

Additional information

Molecular Formula

Molecular Weight

Concentration

HClO₄

100.46

50% - 70%

SVHC The substance is not in the list of SVHC substances

Perchloric Acid (50% - 70%)

Section 4: First aid measures

4.1 Description of first aid measures

General information

Consult a physician. Show this safety data sheet to the doctor in attendance.

After inhalation

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician

After skin contact

Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Consult doctor if irritation develops or persists

After eye contact

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

Skin irritation, serious eye damage/eye irritation, and respiratory sensitization

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

Section 5: Fire-fighting measures

5.1 Fire Fighting Media and Instructions:

Suitable extinguishing agents

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture

Chlorine, Hydrogen Chloride gas Explosion may occur under fire condition

5.3 Advice for firefighters

Protective equipment: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Additional information

Use water spray to cool unopened containers.

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Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions

Do not allow material to be released into the drains.

6.3 Methods and material for containment and cleaning up

Contain spillage with a suitable absorbent material, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal

6.4 Reference to other sections

See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

Section 7: Handling and storage

7.1 Precautions for safe handling

Use with adequate ventilation. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Avoid contact with contaminated clothing and other combustible materials.

7.2 Conditions for safe storage, including any incompatibilities Storage Requirements to be met by storerooms and receptacles

Store in a cool, dry, well-ventilated place. Store in a tightly closed container.

Information about storage in one common storage facility

Store away from flammable substances. Store away from reducing agents.

Further information about storage conditions

Keep away from sources of ignition.

7.3 Specific end use(s)

As mentioned in section 1.2

Section 8: Exposure controls/personal protection

Additional information about design of technical facilities

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Refer section 7

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:
Not required.

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8.2 Exposure controls /

Personal protective equipment

General protective and hygienic measures

Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

Respiratory protection

Self-contained respiratory protective device

Protection of hands

Protective glove



Material of gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection

Tightly fitting safety goggles (splash goggles) (EN 166) Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Body protection

Impervious protective clothing

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance	Clear, colourless
Form	Liquid
Colour	Colourless
Odour	Odourless
pH-value at 26 °C	Dependent on concentration. Strongly acidic

Change in condition

Melting point/Melting range	-18 °C
Boiling point/Boiling range	Dependent on
concentration Flash point	Not applicable
Flammability (solid, gaseous)	No data available
Self-igniting	Product is not self-igniting.
Danger of explosion	No data available

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Explosion limits

Oxidising properties

Vapour pressure at 25 °C

Density at 20 °C

Solubility in / Miscibility with water at 25 °C

Partition coefficient (n-octanol/water) at 25 °C

Oxidising

No data available

Dependent on concentration 70% : ~1.67 g/cm³

60% : ~1.54 g/cm³

Completely miscible

No data available

Other information

Corrosive properties

Corrosive to metals

Section 10: Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Thermal decomposition / conditions to be avoided

The product is chemically stable under standard ambient condition. Becomes oxidizing at elevated temperatures (>150 °C).

10.3 Possibility of hazardous reactions

Exothermic reaction with reducing agents.

Explosive when mixed with flammable or combustible material

10.4 Conditions to avoid

No further relevant information available

10.5 Incompatible materials

Bases. Combustible material. Reducing agents. Flammable materials, powdered metals.

Section 11: Toxicological Information

11.1 Information on hazard classes as defined in Regulation (EC) No.1272/2008

Acute toxicity

LD/LC50 values relevant for classification

Oral LD50 < 2 mg/kg bw (mouse) (OECD test guideline 423)

Primary irritant effect

On the skin

Extremely corrosive and destructive to tissue. Causes severe burns

On the eye

Serious eye damage, risk of blindness.

Sensitisation

No data available

CMR effects (carcinogenetic, mutagenicity and toxicity for reproduction)

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Not listed as a carcinogen

Mutagenicity (In vitro test)

Negative for *S. typhimurium* (Ames test)

Toxicity for reproduction

No data available

STOT - Single exposure

No information available

STOT - Repeated exposure

May cause damage to organs through repeated or prolonged exposure: Thyroid

Aspiration hazard

No data available

11.2 Information on other hazards

11.2.1 Endocrine - disrupting properties

The substance has no endocrine-disrupting properties according to Regulation (EU) 2017/2100

11.2.2 Information on other hazards

No further information is available

Section 12: Ecological Information

12.1 Toxicity

Aquatic toxicity

EC50 (48 h) >100 mg/L (*Daphnia magna*) (static) (OCED guideline 202)

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT: The substance is not PBT

vPvB: The substance is not vPvB.

12.6 Endocrine-disrupting properties:

The substance has no Endocrine -disrupting properties according to Regulation (EU) 2017/2100

12.7 Other adverse effects

Do not allow into the drains or discharge into the environment. Neutralization will not reduce ecotoxic effect.

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Section 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Waste to be disposed off in accordance with the local and national regulations. Do not mix with other waste

Uncleaned packaging

Recommendation

Dispose of as not usable product.

Disposal must be made according to official regulations.

Section 14: Transport Information

14. Transport Information

14.1 UN Number

ADR, IMDG, IATA, DOT, TDG

UN 1873

14.2 UN proper shipping name

ADR, IMDG, IATA, DOT, TDG

PRCHLORIC ACID

14.3 Transport hazard class(es)

ADR, IMDG, IATA, DOT, TDG



Class

Subsidiary risk

Label

5.1 Oxidizing substances

8

5.1 + 8

14.4 Packing group

ADR, IMDG, IATA

I

14.5 Environmental hazards

Marine pollutant

No

14.6 Special precautions for user EMS Number

Warning: Oxidizing substances
F-A, S-Q

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

14.8 Transport/Additional information IATA (passenger) Limited quantities (LQ)

Not permitted

ADR

Tunnel restriction code

B/E

Transport category

1

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Limited quantities (LQ) 0
Excepted quantities (EQ) E1

Section 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms Ref section 2

Signal word Danger

Hazard statements Ref section 2

Precautionary statements Ref section 2

Substances of very high concern (SVHC) according to REACH, Article 57

The substance is not listed as SVHC.

15.2 Chemical safety assessment:

A chemical safety assessment was not carried out for this product.

Section 16: Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Abbreviations and acronyms

RID	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO	International Civil Aviation Organisation
ADR	Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG	International Maritime Code for Dangerous Goods
IATA	International Air Transport Association
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
EINECS	European Inventory of Existing Commercial Chemical Substances
CAS	Chemical Abstracts Service (division of the American Chemical Society)
LD50	Lethal dose, 50 percent

Sources

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on classification, labelling and packaging of substances and mixtures, amending and repealing COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 ECHA.