

Safety data sheet
according to 1907/2006/EC, Article 31

revised on: 24.04.2023

Version number 10

Creation Date: 01.06.2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name:** Perchloric acid in anhydrous acetic acid 0.1 mol / l**Article number:** 1171**CAS Number:**

Relevant CAS No. see chapter 3

-

EINECS Number: -**Registration number** This product is a mixture. UK REACH registration numbers see section 3.**UFI:** CEW0-Q07G-P00G-S2P4**1.2 Relevant identified uses of the substance or mixture and uses advised against****Life cycle stages**

F Formulation or re-packing

IS Use at industrial Sites

Sector of Use

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU9 Manufacture of fine chemicals

SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

SU24 Scientific research and development

Product category

PC19 Intermediate

PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents

PC21 Laboratory chemicals

PC29 Pharmaceuticals

PC39 Cosmetics, personal care products

PC40 Extraction agents

Process category

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC4 Chemical production where opportunity for exposure arises

PROC5 Mixing or blending in batch processes

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC15 Use as laboratory reagent

Environmental release category

ERC1 Manufacture of the substance

ERC2 Formulation into mixture

ERC3 Formulation into solid matrix

ERC6a Use of intermediate

Application of the substance / the mixture

Industrial use

Laboratory chemicals

Reagent for analysis

1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

Th. Geyer GmbH & Co. KG

Dornierstr. 4 – 6

D-71272 Renningen

Tel.: +49(0)7159-1637-0, Fax:+49 (0)7159/18417

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www.thgeyer.de
sicherheitsdatenblaetter@thgeyer.de

· **Further information obtainable from:** Product management department

· **1.4 Emergency telephone number:**

National Poisons Information Service

City Hospital

Dudley Road

Birmingham B18 7QH

Tel.:Emergency: (00 44) 87 06 00 62 66

Members of the public seeking specific information on poisons should contact:

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS05 corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

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

· **Hazard pictograms**



GHS02



GHS05

· **Signal word** Danger

· **Hazard statements**

H226 Flammable liquid and vapour.

H314 Causes severe skin burns and eye damage.

· **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310 Immediately call a POISON CENTER/doctor.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 64-19-7 EINECS: 200-580-7 Reg.nr.: 01-2119475328-30-XXXX	Acetic acid ⚠ Flam. Liq. 3, H226 ⚠ Skin Corr. 1A, H314 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 90 % Skin Corr. 1B; H314: 25 % ≤ C < 90 % Skin Irrit. 2; H315: 10 % ≤ C < 25 % Eye Irrit. 2; H319: 10 % ≤ C < 25 %	90–<100%
CAS: 7601-90-3 EINECS: 231-512-4	Perchlorsäure ⚠ Ox. Liq. 1, H271 ⚠ Skin Corr. 1A, H314 ⚠ Acute Tox. 4, H302 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 50 % Skin Corr. 1B; H314: 10 % ≤ C < 50 % Skin Irrit. 2; H315: 1 % ≤ C < 10 % Eye Irrit. 2; H319: 1 % ≤ C < 10 % Ox. Liq. 1; H271: C ≥ 50.0001 % Ox. Liq. 2; H272: 1 % ≤ C < 50.0001 %	≥1–<1.1%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
 First aider needs to protect himself.
 Immediately remove any clothing soiled by the product.
- **After inhalation:**
 Remove person from danger area.
 Supply fresh air.
 Seek medical treatment.
- **After skin contact:**
 Flush contaminated skin with soap and plenty of water.
 Immediately remove any clothing soiled by the product.
 Seek immediate medical advice.
- **After eye contact:**
 Protect unharmed eye.
 Rinse opened eye for several minutes under running water. Then consult a doctor.
 Remove any contact lenses if possible.
 Continue rinsing.

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- **After swallowing:**
Rinse mouth thoroughly with water.
A person vomiting while laying on their back should be turned onto their side.
Drink plenty of water and provide fresh air. Call for a doctor immediately.
No neutralisation attempts.
- **Information for doctor:** Please observe safety data sheet/label.
- **4.2 Most important symptoms and effects, both acute and delayed**
Gastric or intestinal disorders
Cramp
Unconsciousness
Nausea
- **Hazards**
Risk of organ damage (liver, kidney)
Strongly irritant to corrosive
Danger of gastric perforation.
- **4.3 Indication of any immediate medical attention and special treatment needed**
Monitor circulation, possible shock treatment.
Give Glucocorticoid-Aerosol in case of lung irritation.
If necessary oxygen respiration treatment.
Symptomatic treatment.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Water spray, powder, carbon dioxide or foam. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Carbon dioxides (CO, CO₂)
Under certain fire conditions, traces of other toxic gases cannot be excluded.
Combustible.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
- **Additional information**
Cool endangered receptacles with water spray.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Keep away from ignition sources.
Avoid contact with eyes and skin.
Use respiratory protective device against the effects of fumes/dust/aerosol.
Ensure adequate ventilation.
Wear protective equipment. Keep unprotected persons away.
Consult an expert.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Cover drains.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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- Use neutralising agent.
- Dispose contaminated material as waste according to section 13.
- Ensure adequate ventilation.
- **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

- Store in cool, dry place in tightly closed receptacles.
- Keep away from heat and direct sunlight.
- Apply the general protection and hygiene measures for the handling with chemicals.
- Ensure good ventilation/exhaustion at the workplace.
- Prevent formation of aerosols.

· Information about fire - and explosion protection:

- Keep ignition sources away - Do not smoke.
- Protect against electrostatic charges.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· Requirements to be met by storerooms and receptacles:

- Provide acid-resistant floor.
- Prevent any seepage into the ground.
- Store only in the original receptacle.

· Information about storage in one common storage facility:

- Store away from oxidising agents.
- Store away from flammable substances.

· Further information about storage conditions:

- Keep container tightly sealed.
- Store receptacle in a well ventilated area.

· Storage class: 3

· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

CAS: 64-19-7 Acetic acid

WEL	Short-term value: 50 mg/m ³ , 20 ppm
	Long-term value: 25 mg/m ³ , 10 ppm

· Additional information: The lists valid during the making were used as basis.

· 8.2 Exposure controls

- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.
- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device. If air-purifying respiratory protection is required according to the risk assessment, wear a respirator with full-face mask with combination filter (US) or with filter type ABEK (EN 14387) filter cartridge. If the respirator is the only protective measure, an ambient air self-contained breathing apparatus with a full face mask must be worn. Respirators and components must be approved to appropriate

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government standards (for example, NIOSH (US) or CEN (EU)). Translated with www.DeepL.com/Translator (free version)

- **Hand protection**



Protective 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

- **Material of gloves**

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.

Butyl rubber, BR

Material thickness > 0,7 mm

- **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.

level 6 for application > 480 min

- **Eye/face protection**



Tightly sealed goggles

- **Body protection:**



Protective work clothing (e. g. safety shoes EN ISO 20345, long-sleeved protective working garments).

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Physical state**

Fluid

- **Colour:**

Colourless

- **Odour:**

Pungent

- **Melting point/freezing point:**

16.6 °C

- **Boiling point or initial boiling point and boiling range**

118 °C

- **Flammability**

Contact with combustible material may cause fire. Flammable.

- **Lower and upper explosion limit**

- **Lower:**

4 Vol %

- **Upper:**

17 Vol %

- **Flash point:**

23 - 60 °C

- **Auto-ignition temperature:**

485 °C (CAS: 64-19-7 Acetic acid)

- **Decomposition temperature:**

Not determined.

- **pH at 20 °C**

~1

- **Viscosity:**

- **Kinematic viscosity**

Not determined.

- **Dynamic at 20 °C:**

1.24 mPas

- **Solubility**

- **water:**

Fully miscible.

- **Partition coefficient n-octanol/water (log value)**

Not determined.

- **Vapour pressure at 20 °C:**

16 hPa

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<ul style="list-style-type: none"> · Density and/or relative density · Density at 20 °C: 1.06 g/cm³ · Relative density: Not determined. · Vapour density: Not determined. 	
<ul style="list-style-type: none"> · 9.2 Other information · Appearance: · Form: Fluid · Important information on protection of health and environment, and on safety. · Ignition temperature: Product is not selfigniting. · Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible. · Solvent content: · Organic solvents: 90-<100 % · VOC (EC): 90-<100 % · Molecular weight: 60.05 g/mol · Change in condition · Evaporation rate: Not determined. 	
<ul style="list-style-type: none"> · Information with regard to physical hazard classes · Explosives: Void · Flammable gases: Void · Aerosols: Void · Oxidising gases: Void · Gases under pressure: Void · Flammable liquids: Flammable liquid and vapour. · Flammable solids: Void · Self-reactive substances and mixtures: Void · Pyrophoric liquids: Void · Pyrophoric solids: Void · Self-heating substances and mixtures: Void · Substances and mixtures, which emit flammable gases in contact with water: Void · Oxidising liquids: Void · Oxidising solids: Void · Organic peroxides: Void · Corrosive to metals: Void · Desensitised explosives: Void 	

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable with proper storage and handling.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Danger of explosion.
Forms explosive gas mixture with air.
- **10.4 Conditions to avoid**
Heat, flames and sparks
Protect from humidity.
- **10.5 Incompatible materials:** Avoid contact with other chemicals.
- **10.6 Hazardous decomposition products:** On fire: see chapter 5

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SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

Oral	LD50	3,310 mg/kg (rat)
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CAS: 64-19-7 Acetic acid

Oral	LD50	3,310 mg/kg (rat)
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Dermal	LD50	1,060 mg/kg (rabbit)
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- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**

· Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

CAS: 64-19-7 Acetic acid

EC50	65 mg/l (Cru) (48 h)
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- **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**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

Observe local (country-specific) regulations and laws

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

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· Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Chemicals must be disposed of in compliance with the respective national regulations.

· European waste catalogue

07 00 00	WASTES FROM ORGANIC CHEMICAL PROCESSES
07 01 00	wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals
07 01 99	wastes not otherwise specified
06 00 00	WASTES FROM INORGANIC CHEMICAL PROCESSES
06 01 00	wastes from the manufacture, formulation, supply and use (MFSU) of acids
06 01 99	wastes not otherwise specified
HP3	Flammable
HP8	Corrosive

· Uncleaned packaging:

· Recommendation: Disposal must be made according to official regulations.

· Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN number or ID number
· ADR, IMDG, IATA

UN2920

· 14.2 UN proper shipping name
· ADR

2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S. (ACETIC ACID, GLACIAL)

· IMDG, IATA

CORROSIVE LIQUID, FLAMMABLE, N.O.S. (ACETIC ACID, GLACIAL)

· 14.3 Transport hazard class(es)
· ADR

· Class

8 (CF1) Corrosive substances.

· Label

8+3

· IMDG

· Class

8 Corrosive substances.

· Label

8/3

· IATA

· Class

8 Corrosive substances.

· Label

8 (3)

· 14.4 Packing group
· ADR, IMDG, IATA

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· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	83
· EMS Number:	F-E,S-C
· Segregation groups	(SGG1) Acids
· Stowage Category	E
· Stowage Code	SW1 Protected from sources of heat. SW2 Clear of living quarters.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S. (ACETIC ACID, GLACIAL), 8 (3), II

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

· Inventory of Hazardous Chemicals

All substances have the value *.

· Directive 2012/18/EU

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.· **Seveso category P5c** FLAMMABLE LIQUIDS· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

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· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

· **National regulations:**

· **Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

Application, use and handling of our products take place out of our control and are solely your responsibility.

· **Relevant phrases**

H226 Flammable liquid and vapour.

H271 May cause fire or explosion; strong oxidiser.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

· **Department issuing SDS:** Product management

· **Contact:** Product management

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

Ox. Liq. 1: Oxidizing liquids – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

· *** Data compared to the previous version altered.**

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Annex: Exposure scenario

- **Short title of the exposure scenario** Chemicals for Laboratory and industrial use
- **Sector of Use**
 - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
 - SU9 Manufacture of fine chemicals
 - SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
 - SU24 Scientific research and development
- **Product category**
 - PC19 Intermediate
 - PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
 - PC21 Laboratory chemicals
 - PC29 Pharmaceuticals
 - PC39 Cosmetics, personal care products
 - PC40 Extraction agents
- **Process category**
 - PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
 - PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
 - PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
 - PROC4 Chemical production where opportunity for exposure arises
 - PROC5 Mixing or blending in batch processes
 - PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
 - PROC15 Use as laboratory reagent
- **Environmental release category**
 - ERC1 Manufacture of the substance
 - ERC2 Formulation into mixture
 - ERC3 Formulation into solid matrix
 - ERC6a Use of intermediate
- **Notes** The product is not intended for private use.
- **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
- **Conditions of use**
- **Duration and frequency** 5 workdays/week.
- **Physical parameters**
The data on the physical - chemical properties in the Exposure Scenario is based on the properties of the preparation.
- **Physical state** Fluid
- **Concentration of the substance in the mixture** Raw material.
- **Other operational conditions** Observe the general safety regulations when handling chemicals.
- **Other operational conditions affecting environmental exposure**
Observe section 6 of the Safety Data Sheet (Accidental release measures).
Use only on hard ground.
- **Other operational conditions affecting worker exposure**
Avoid contact with eyes.
Avoid contact with the skin.
Keep away from combustible material.
Do not breathe gas/vapour/aerosol.
- **Other operational conditions affecting consumer exposure** No special measures required.
- **Other operational conditions affecting consumer exposure during the use of the product** Not applicable.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures**
Consider section 4 of the Safety Data Sheet (First aid measures).
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

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Trade name: Perchloric acid in anhydrous acetic acid 0.1 mol / l

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- **Technical protective measures** Ensure that suitable extractors are available on processing machines
- **Personal protective measures**
 - Do not inhale gases / fumes / aerosols.
 - Avoid contact with the skin.
 - Avoid contact with the eyes.
 - Tightly sealed goggles
 - Protective 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
- **Measures for consumer protection** Ensure adequate labelling.
- **Environmental protection measures**
 - Avoid release to the environment. Obtain special instructions / refer to Safety Data Sheet.
- **Water**
 - Do not allow to reach ground water, water bodies or sewage system.
 - Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.
- **Soil** Prevent contamination of soil.
- **Notes** In case of unintended release of the product: See section 6 of the Safety Data Sheet.
- **Disposal measures**
 - Disposal must be made according to official regulations.
 - Ensure that waste is collected and contained.
- **Disposal procedures**
 - Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Waste type** Partially emptied and uncleaned packaging
- **Exposure estimation**
- **Worker (oral)** Detailed information on the exposure estimation can be found at <http://www.ecetoc.org/tra>.
- **Worker (dermal)** Detailed information on the exposure estimation can be found at <http://www.ecetoc.org/tra>.
- **Worker (inhalation)** Detailed information on the exposure estimation can be found at <http://www.ecetoc.org/tra>.
- **Environment**
 - Detailed information on the estimation of the environmental exposure can be found at <http://ecb.jrc.ec.europa.eu/euses/>.
- **Consumer** Not relevant for this Exposure Scenario.
- **Guidance for downstream users** No further relevant information available.

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