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

Printing date 07.06.2021 *Version number 2.0* *Revision: 02.06.2021*

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

· ***1.1 Product identifier***

· ***Trade name:*** Perchloric acid, 70%, for analysis, ExpertQ®, ACS, ISO

· ***Article number:*** AC1760

· ***Registration number***
A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

· ***1.2 Relevant identified uses of the substance or mixture and uses advised against***
No further relevant information available.

· ***Application of the substance / the preparation:*** Laboratory reagent

· ***1.3 Details of the supplier of the safety data sheet***

· ***Manufacturer/Supplier:***
Scharlab, S.L.
C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa
08181 Sentmenat (Barcelona) SPAIN
Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65
email: scharlab@scharlab.com
Internet Web Site: www.scharlab.com

· ***Regional representation:***
Scharlab, S.L.
C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa
08181 Sentmenat (Barcelona) SPAIN
Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65
email: scharlab@scharlab.com
Internet Web Site: www.scharlab.com

· ***Further information obtainable from:*** technical department

· ***1.4 Emergency telephone number:***
Toxicological Information National Institute of Toxicology and Forensic Sciences: + 34 91 562 04 20. The information will be provided (24h/365 days)
Please contact the regional Scharlab distributor/dealer in your country
During normal opening times: Scharlab, S.L. (+34) 93 715 18 11

SECTION 2: Hazards identification

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

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

GHS03 flame over circle

Ox. Liq. 1 H271 May cause fire or explosion; strong oxidiser.

GHS05 corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

(Contd. on page 2)

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

Printing date 07.06.2021 *Version number 2.0* *Revision: 02.06.2021*

Trade name: Perchloric acid, 70%, for analysis, ExpertQ®, ACS, ISO

(Contd. of page 1)

· ***2.2 Label elements***
· ***Labelling according to Regulation (EC) No 1272/2008***
The product is classified and labelled according to the CLP regulation.
· ***Hazard pictograms***

GHS03 GHS05 GHS07

· ***Signal word*** Danger

· ***Hazard-determining components of labelling:***
perchloric acid
· ***Hazard statements***
H271 May cause fire or explosion; strong oxidiser.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
· ***Precautionary statements***

P283	Wear fire resistant or flame retardant clothing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P321	Specific treatment (see on this label).
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.

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

SECTION 3: Composition/information on ingredients

· ***3.2 Chemical characterisation: Mixtures***
· ***Description:*** Aqueous solution

· ***Dangerous components:***

CAS: 7601-90-3	perchloric acid	70.0%
EINECS: 231-512-4	Flam. Liq. 3, H226; Ox. Liq. 1, H271; Skin Corr. 1A, H314; Acute Tox. 4, H302	

· ***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:*** Immediately remove any clothing soiled by the product.
· ***After inhalation:*** In case of unconsciousness place patient stably in side position for transportation.
· ***After skin contact:*** Immediately wash with water and soap and rinse thoroughly.
· ***After eye contact:***
Rinse opened eye for several minutes under running water. Then consult a doctor.
· ***After swallowing:*** Drink plenty of water and provide fresh air. Call for a doctor immediately.

(Contd. on page 3)

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

Printing date 07.06.2021 *Version number 2.0* *Revision: 02.06.2021*

Trade name: Perchloric acid, 70%, for analysis, ExpertQ®, ACS, ISO

(Contd. of page 2)

· ***4.2 Most important symptoms and effects, both acute and delayed***
No further relevant information available.
· ***4.3 Indication of any immediate medical attention and special treatment needed***
No further relevant information available.

SECTION 5: Firefighting measures

· ***5.1 Extinguishing media***
· ***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***
No further relevant information available.
· ***5.3 Advice for firefighters***
· ***Protective equipment:*** No special measures required.

SECTION 6: Accidental release measures

· ***6.1 Personal precautions, protective equipment and emergency procedures***
Wear protective equipment. Keep unprotected persons away.
· ***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:***
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 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***
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· ***Information about fire - and explosion protection:*** Protect from heat.

· ***7.2 Conditions for safe storage, including any incompatibilities***
· ***Storage:***
· ***Requirements to be met by storerooms and receptacles:*** Store in a cool location.
· ***Information about storage in one common storage facility:*** Not required.
· ***Further information about storage conditions:***
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· ***7.3 Specific end use(s)*** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· ***8.1 Control parameters***
· ***Additional information about design of technical facilities:*** No further data; see item 7.

(Contd. on page 4)

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

Printing date 07.06.2021 *Version number 2.0* *Revision: 02.06.2021*

Trade name: Perchloric acid, 70%, for analysis, ExpertQ®, ACS, ISO

(Contd. of page 3)

· ***Ingredients with limit values that require monitoring at the workplace:***
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· ***Additional information:*** The lists valid during the making were used as basis.

· ***8.2 Exposure controls***
· ***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.
· ***Protection of hands:***

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· ***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:***
Safety glasses

Tightly sealed goggles

SECTION 9: Physical and chemical properties

· ***9.1 Information on basic physical and chemical properties***
· ***General Information***
· ***Appearance:***

Form:	Fluid
Colour:	Colourless
· ***Odour:***	Odourless
· ***Odour threshold:***	Not determined.
· ***pH-value:***	Not determined.
· ***Change in condition***	
Melting point/freezing point:	-112 °C
Initial boiling point and boiling range:	39 °C

(Contd. on page 5)

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

Printing date 07.06.2021 *Version number 2.0* *Revision: 02.06.2021*

Trade name: Perchloric acid, 70%, for analysis, ExpertQ®, ACS, ISO

(Contd. of page 4)

· ***Flash point:***	Not applicable.
· ***Flammability (solid, gas):***	Not applicable.
· ***Decomposition temperature:***	Not determined.
· ***Auto-ignition temperature:***	Product is not selfigniting.
· ***Explosive properties:***	Product does not present an explosion hazard. Heating may cause an explosion.
· ***Explosion limits:***	
Lower:	Not determined.
Upper:	Not determined.
· ***Vapour pressure at 20 °C:***	39.1 hPa
· ***Density at 20 °C:***	1.5348 g/cm³
· ***Relative density***	Not determined.
· ***Vapour density***	Not determined.
· ***Evaporation rate***	Not determined.
· ***Solubility in / Miscibility with water:***	Fully miscible.
· ***Partition coefficient: n-octanol/water:***	Not determined.
· ***Viscosity:***	
Dynamic:	Not determined.
Kinematic:	Not determined.
· ***Solvent content:***	
Water:	30.0 %
· ***9.2 Other information***	No further relevant information available.

SECTION 10: Stability and reactivity

· ***10.1 Reactivity*** No further relevant information available.
· ***10.2 Chemical stability***
· ***Thermal decomposition / conditions to be avoided:***
No decomposition if used according to specifications.
· ***10.3 Possibility of hazardous reactions*** No dangerous reactions known.
· ***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 dangerous decomposition products known.

SECTION 11: Toxicological information

· ***11.1 Information on toxicological effects***
· ***Acute toxicity***
Harmful if swallowed.
· ***LD/LC50 values relevant for classification:***

7601-90-3 perchloric acid

Oral LD50 1100 mg/kg (rat)
· ***Primary irritant effect:***
· ***Skin corrosion/irritation***
Causes severe skin burns and eye damage.
· ***Serious eye damage/irritation***
Causes serious eye damage.

(Contd. on page 6)

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

Printing date 07.06.2021 *Version number 2.0* *Revision: 02.06.2021*

Trade name: Perchloric acid, 70%, for analysis, ExpertQ®, ACS, ISO

(Contd. of page 5)

· ***Respiratory or skin sensitisation*** Based on available data, the classification criteria are not met.
· ***Additional toxicological information:***
· ***CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)***
· ***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.

SECTION 12: Ecological information

· ***12.1 Toxicity***
· ***Aquatic 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.
· ***Additional ecological information:***
· ***General notes:***
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.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
· ***12.5 Results of PBT and vPvB assessment***
· ***PBT:*** Not applicable.
· ***vPvB:*** Not applicable.
· ***12.6 Other adverse effects*** No further relevant information available.

SECTION 13: Disposal considerations

· ***13.1 Waste treatment methods***
· ***Recommendation***
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· ***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***
· ***ADR, IMDG, IATA*** UN1873
· ***14.2 UN proper shipping name***
· ***ADR*** 1873 PERCHLORIC ACID
· ***IMDG, IATA*** PERCHLORIC ACID
· ***14.3 Transport hazard class(es)***

· ***ADR***

· ***Class*** 5.1 Oxidising substances.

(Contd. on page 7)

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

Printing date 07.06.2021 *Version number 2.0* *Revision: 02.06.2021*

Trade name: Perchloric acid, 70%, for analysis, ExpertQ®, ACS, ISO

(Contd. of page 6)

· **Label** 5.1+8

· **IMDG**

· **Class** 5.1 Oxidising substances.
· **Label** 5.1/8

· **IATA**

· **Class** 5.1 Oxidising substances.
· **Label** 5.1 (8)
· **14.4 Packing group**
· **ADR, IMDG, IATA** I
· **14.5 Environmental hazards:**
· **Marine pollutant:** No
· **14.6 Special precautions for user** Warning: Oxidising substances.
· **Hazard identification number (Kemler code):** 558
· **EMS Number:** F-A,S-Q
· **Segregation groups** Acids
· **Stowage Category** D
· **Segregation Code** SG16 Stow "separated from" class 4.1
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.
· **Transport/Additional information:**

· **ADR**
· **Limited quantities (LQ)** 0
· **Transport category** 1
· **Tunnel restriction code** B/E
· **UN "Model Regulation":** UN 1873 PERCHLORIC ACID, 5.1 (8), I

SECTION 15: Regulatory information

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

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category** P8 OXIDISING LIQUIDS AND SOLIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 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.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

(Contd. on page 8)

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

Printing date 07.06.2021 *Version number 2.0* *Revision: 02.06.2021*

Trade name: Perchloric acid, 70%, for analysis, ExpertQ®, ACS, ISO

(Contd. of page 7)

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.

· ***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.

· ***Classification according to Regulation (EC) No 1272/2008***
The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

· ***Department issuing SDS:*** product safety department
· ***Contact:*** msds@scharlab.com
· ***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 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)
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
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

(Contd. on page 9)

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

Printing date 07.06.2021 *Version number 2.0* *Revision: 02.06.2021*

Trade name: Perchloric acid, 70%, for analysis, ExpertQ®, ACS, ISO

(Contd. of page 8)

Annex: Exposure scenario 1

· ***1 - Short title of the exposure scenario*** Laboratory use
· ***Product category*** PC21 Laboratory chemicals
· ***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
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 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 category*** ERC2 Formulation into mixture
· ***Description of the activities / processes covered in the Exposure Scenario***
See section 1 of the annex to the Safety Data Sheet.
· ***2 - Conditions of use***
· ***Worker*** No direct exposure.
· ***Environment***
Maximum allowable site tonnage based on release following total wastewater treatment removal (kg/day): 5000
Maximum amount per site ≤ 50 ton/año
Receiving river flow rate ≥ 1.8E4 m3/d
Asumed domestic sewage treatment plant flow ≥ 2000 m3/day.
Municipal sewage treatment plant is assumed.
· ***Physical parameters***
· ***Physical state*** Fluid
· ***Concentration of the substance in the mixture*** The substance is main component.
· ***Other operational conditions***
· ***Other operational conditions affecting environmental exposure*** No special measures required.
· ***Other operational conditions affecting worker exposure*** No special measures required.
· ***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*** No special measures required.
· ***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
· ***Measures for consumer protection*** Ensure adequate labelling.
· ***Environmental protection measures***
· ***Air*** No special measures required.
· ***Water***
Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.

(Contd. on page 10)

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

Printing date 07.06.2021 *Version number 2.0* *Revision: 02.06.2021*

Trade name: Perchloric acid, 70%, for analysis, ExpertQ®, ACS, ISO

(Contd. of page 9)

· ***Soil*** No special measures required.
· ***Disposal measures***
Ensure that all wastewater is collected and treated in a wastewater treatment plant.
Disposal must be made according to official regulations.
Ensure that waste is collected and contained.
· ***3 - Exposure estimation***
· ***Worker (oral)*** No significant oral exposure
· ***Worker (dermal)*** No significant dermal exposure
· ***Worker (inhalation)*** No significant inhalative exposure
· ***Environment***
The maximum exposure to expect on freshwater (pelagic) 2.77E-3 mg/L. RCR: 0.129
The maximum exposure to expect on fresh water (sediment) 0.022 mg/L. RCR: <0.01
The maximum exposure to expect on marine water (pelagic) 2.77E-4 mg/L. RCR: 0.129
The maximum exposure to expect on marine water (sediment) 2.21E-3 mg/L. RCR: <0.01
The maximum exposure to expect on agricultural soil 2.65E-5 mg/L. RCR: 0.126
The highest environmental exposure to be expected in purification plants is 0.025 mg / L.
Release route:
Water: 0.05 kg/día
Air: 50 kg/día
Soil: 0.5 kg/día
· ***Consumer*** Not relevant for this Exposure Scenario.
· ***4 - Guidance for downstream users***
Environment:
If a DU has OC/RMMs outside specifications in the ES, then the DU can evaluate whether he works inside the boundaries set by the ES through scaling in EUSES.
The main driving parameters are:
- Local amount used (tonnage)
- Release factor prior to on-site treatment
- On-site wastewater treatment presence and efficiency
- Dillution factor
Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
For the risk assessment, the tools recommended by ECHA can be used.

(Contd. on page 11)

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

Printing date 07.06.2021 *Version number 2.0* *Revision: 02.06.2021*

Trade name: Perchloric acid, 70%, for analysis, ExpertQ®, ACS, ISO

(Contd. of page 10)

Annex: Exposure scenario 2

· ***1 - Short title of the exposure scenario*** Industrial use
· ***Sector of Use*** SU24 Scientific research and development
· ***Product category*** PC21 Laboratory chemicals
· ***Process category***
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
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC15 Use as laboratory reagent
· ***Environmental release category***
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
· ***Description of the activities / processes covered in the Exposure Scenario***
See section 1 of the annex to the Safety Data Sheet.
· ***2 - Conditions of use***
· ***Worker*** No direct exposure.
· ***Environment***
Maximum allowable site tonnage based on release following total wastewater treatment removal (kg/day): 2500
Maximum amount per site ≤ 50 ton/año
Receiving river flow rate ≥ 1.8E4 m3/d
Asumed domestic sewage treatment plant flow ≥ 2000 m3/day.
Municipal sewage treatment plant is assumed.
· ***Physical parameters***
· ***Physical state*** Fluid
· ***Concentration of the substance in the mixture*** The substance is main component.
· ***Other operational conditions***
· ***Other operational conditions affecting environmental exposure*** No special measures required.
· ***Other operational conditions affecting worker exposure*** No special measures required.
· ***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*** No special measures required.
· ***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
· ***Measures for consumer protection*** Ensure adequate labelling.
· ***Environmental protection measures***
· ***Air*** No special measures required.
· ***Water***
Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.
· ***Soil*** No special measures required.
· ***Disposal measures***
Ensure that all wastewater is collected and treated in a wastewater treatment plant.
Disposal must be made according to official regulations.

(Contd. on page 12)

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

Printing date 07.06.2021 *Version number 2.0* *Revision: 02.06.2021*

Trade name: Perchloric acid, 70%, for analysis, ExpertQ®, ACS, ISO

(Contd. of page 11)

Ensure that waste is collected and contained.
· ***3 - Exposure estimation***
· ***Worker (oral)*** No significant oral exposure
· ***Worker (dermal)*** No significant dermal exposure
· ***Worker (inhalation)*** No significant inhalative exposure
· ***Environment***
The maximum exposure to expect on freshwater (pelagic) 2.88E-4 mg/L. RCR: 0.013
The maximum exposure to expect on fresh water (sediment) 2.3E-3 mg/L. RCR: <0.01
The maximum exposure to expect on marine water (pelagic) 2.86E-5 mg/L. RCR: 0.013
The maximum exposure to expect on marine water (sediment) 2.28E-4 mg/L. RCR: <0.01
The maximum exposure to expect on agricultural soil 1.51E-3 mg/L. RCR: 0.072
The highest environmental exposure to be expected in purification plants is 0 mg / L.
Release route:
Water: 0 kg/día
Air: 25 kg/día
Soil: 0.25 kg/día
· ***Consumer*** Not relevant for this Exposure Scenario.
· ***4 - Guidance for downstream users***
Environment:
If a DU has OC/RMMs outside specifications in the ES, then the DU can evaluate whether he works inside the boundaries set by the ES through scaling in EUSES.
The main driving parameters are:
- Local amount used (tonnage)
- Release factor prior to on-site treatment
- On-site wastewater treatment presence and efficiency
- Dillution factor
Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
For the risk assessment, the tools recommended by ECHA can be used.