

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Perchloric acid ROTIPURAN® Ultra 70 %

article number: **HN61**

Version: **4.0 en**

Replaces version of: 2022-02-14

Version: (3)

date of compilation: 2016-11-14

Revision: 2024-09-21

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

1.1 Product identifier

| | |
|---------------------------------|--|
| Identification of the substance | Perchloric acid ROTIPURAN® Ultra 70 % |
| Article number | HN61 |
| Index No (GB CLP) | [017-006-00-4] |
| EC number | [231-512-4] |
| CAS number | [7601-90-3] |

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

| | |
|---------------------------|--|
| Relevant identified uses: | Laboratory chemical Laboratory and analytical use |
| Uses advised against: | Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin. Do not use for private purposes (household). Food, drink and animal feedingstuffs. |

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co. KG
Schoemperlenstr. 3-5
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Germany

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e-mail: sicherheit@carlroth.de

Website: www.carlroth.de

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

e-mail (competent person): sicherheit@carlroth.de

1.4 Emergency telephone number

| Name | Street | Postal code/city | Telephone | Website |
|---|-----------|----------------------|--------------|---------|
| National Poisons Information Service City Hospital | Dudley Rd | B187QH Birmingham | 844 892 0111 | |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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Classification acc. to GHS

| Section | Hazard class | Cat-egory | Hazard class and category | Hazard statement |
|---------|--|-----------|---------------------------|------------------|
| 2.13 | Oxidising liquid | 1 | Ox. Liq. 1 | H271 |
| 2.16 | Substance or mixture corrosive to metals | 1 | Met. Corr. 1 | H290 |
| 3.2 | Skin corrosion/irritation | 1A | Skin Corr. 1A | H314 |
| 3.3 | Serious eye damage/eye irritation | 1 | Eye Dam. 1 | H318 |

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

2.2 Label elements

Labelling

Signal word

Danger

Pictograms

GHS03, GHS05



Hazard statements

H271 May cause fire or explosion; strong oxidiser
H290 May be corrosive to metals
H314 Causes severe skin burns and eye damage

Precautionary statements

Precautionary statements - prevention

P220 Keep/store away from clothing/combustible materials
P260 Do not breathe mist/vapours/spray

Precautionary statements - response

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

Hazardous ingredients for labelling: Perchloric acid ...%

2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of $\geq 0,1\%$.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

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SECTION 3: Composition/information on ingredients

3.1 Substances

not relevant (mixture)

3.2 Mixtures

Description of the mixture

| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms | Notes |
|----------------------|---|-----|---|---|-------------|
| Perchloric acid ...% | CAS No 7601-90-3 EC No 231-512-4 Index No 017-006-00-4 | 70 | Ox. Liq. 1 / H271 Met. Corr. 1 / H290 Skin Corr. 1A / H314 Eye Dam. 1 / H318 |   | B GHS-HC |

Notes

B: Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)

| Name of substance | Identifier | Specific Conc. Limits | M-Factors | ATE | Exposure route |
|----------------------|---|--|-----------|-----|----------------|
| Perchloric acid ...% | CAS No 7601-90-3 EC No 231-512-4 | Ox. Liq. 1; H271: $C \geq 50$ % Ox. Liq. 2; H272: $0,000001 \% \leq C < 50$ % Skin Corr. 1A; H314: $C \geq 50$ % Skin Corr. 1B; H314: $10 \% \leq C < 50$ % Skin Irrit. 2; H315: $1 \% \leq C < 10$ % Eye Dam. 1; H318: $C \geq 10$ % Eye Irrit. 2; H319: $1 \% \leq C < 10$ % | - | - | |

Remarks

For full text of abbreviations: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

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Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes hold-
ing eyelids apart and consult an ophthalmologist. Protect uninjured eye.

Following ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately. If swallowed
danger of perforation of the esophagus and the stomach (strong corrosive effects).

4.2 Most important symptoms and effects, both acute and delayed

Corrosion, Risk of blindness, Gastric perforation, Risk of serious damage to eyes

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings!
water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Oxidising property. Non-combustible. Heating may cause an explosion.

Hazardous combustion products

Hydrogen chloride (HCl)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a rea-
sonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not
breathe vapour/spray.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose
of it. The product is an acid. Before discharge into sewage plants the product normally needs to be
neutralised.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

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Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handle and open container with care. Clear contaminated areas thoroughly. Avoid: Aerosol or mist formation.

Measures to prevent fire as well as aerosol and dust generation

Take any precaution to avoid mixing with combustibles.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep only in original container. Keep away from combustible material.

Incompatible substances or mixtures

Observe hints for combined storage. Incompatible materials: see section 10. Keep/store away from clothing/combustible materials. Take any precaution to avoid mixing with combustibles.

Consideration of other advice:

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection. Wear face protection.

Skin protection



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• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

CR: chloroprene (chlorobutadiene) rubber

• material thickness

≥0,5 mm

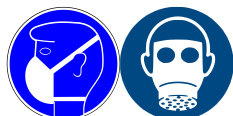
• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: B-P2 (combined filters for acidic gases and particles, colour code: Grey/White).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|---------------------|
| Physical state | liquid |
| Colour | colourless |
| Odour | faintly perceptible |
| Melting point/freezing point | -18 °C |
| Boiling point or initial boiling point and boiling range | 198 °C |
| Flammability | non-combustible |
| Lower and upper explosion limit | not determined |
| Flash point | not determined |
| Auto-ignition temperature | not determined |
| Decomposition temperature | not relevant |
| pH (value) | <1 (20 °C) |
| Kinematic viscosity | not determined |

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Solubility(ies)

Water solubility miscible in any proportion

Partition coefficient

Partition coefficient n-octanol/water (log value): not relevant (inorganic)

Vapour pressure not determined

Density and/or relative density

Density 1,68 g/cm³ at 20 °C

Relative vapour density Information on this property is not available.

Particle characteristics not relevant (liquid)

Other safety parameters

Oxidising properties

9.2 Other information

Information with regard to physical hazard classes:

Corrosive to metals category 1: corrosive to metals

Other safety characteristics:

Miscibility completely miscible with water

SECTION 10: Stability and reactivity

10.1 Reactivity

The mixture contains reactive substance(s). Oxidising property. Substance or mixture corrosive to metals.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Danger of explosion: Alcohols, Lead oxide, Iron, Acetic acid, Acetic anhydride, Ethanol, Ether, Fluorine, Halogenated hydrocarbons, Metal powder, Phenol, Phosphorus oxides (e.g. P₂O₅), Reducing agents,

Violent reaction with: Acetone, Alkali (lye)

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

combustible materials, different plastics, different metals

Release of flammable materials with

Metals, Light metals (due to the release of hydrogen in an acid/alkaline medium)

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10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

• If in eyes

causes burns, Causes serious eye damage, risk of blindness

• If inhaled

cough, pain, choking, and breathing difficulties, pulmonary oedema

• If on skin

causes severe burns, causes poorly healing wounds

• Other information

none

11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

11.3 Information on other hazards

There is no additional information.

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SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

| Aquatic toxicity (acute) of components | | | | | |
|--|-----------|----------|-------------|---------|---------------|
| Name of sub-stance | CAS No | Endpoint | Value | Species | Exposure time |
| Perchloric acid ...% | 7601-90-3 | EC50 | 1.470 mg/l | fish | 96 h |
| Perchloric acid ...% | 7601-90-3 | ErC50 | >435,7 mg/l | algae | 72 h |

| Aquatic toxicity (chronic) of components | | | | | |
|--|-----------|----------|--------|----------------|---------------|
| Name of sub-stance | CAS No | Endpoint | Value | Species | Exposure time |
| Perchloric acid ...% | 7601-90-3 | EC50 | >1 g/l | microorganisms | 30 min |

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

| Bioaccumulative potential of components | | | | |
|---|-----------|---------------|---------|----------|
| Name of substance | CAS No | BCF | Log KOW | BOD5/COD |
| Perchloric acid ...% | 7601-90-3 | >0,12 - <0,14 | | |

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of $\geq 0,1\%$.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



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

Sewage disposal-relevant information

Do not empty into drains.

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Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Properties of waste which render it hazardous

HP 2 oxidising
HP 4 irritant - skin irritation and eye damage
HP 8 corrosive

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number or ID number

| | |
|-----------|---------|
| ADRRID | UN 1873 |
| IMDG-Code | UN 1873 |
| ICAO-TI | UN 1873 |

14.2 UN proper shipping name

| | |
|-----------|-----------------|
| ADRRID | PERCHLORIC ACID |
| IMDG-Code | PERCHLORIC ACID |
| ICAO-TI | Perchloric acid |

14.3 Transport hazard class(es)

| | |
|-----------|---------|
| ADRRID | 5.1 (8) |
| IMDG-Code | 5.1 (8) |
| ICAO-TI | 5.1 (8) |

14.4 Packing group

| | |
|-----------|---|
| ADRRID | I |
| IMDG-Code | I |
| ICAO-TI | I |

14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

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14.8 Information for each of the UN Model Regulations

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) Additional information

| | |
|---------------------------------------|--|
| Proper shipping name | PERCHLORIC ACID |
| Particulars in the transport document | UN1873, PERCHLORIC ACID, 5.1 (8), I, (B/E) |
| Classification code | OC1 |
| Danger label(s) | 5.1+8 |



| | |
|-------------------------------|-----|
| Special provisions (SP) | 60 |
| Excepted quantities (EQ) | E0 |
| Limited quantities (LQ) | 0 |
| Transport category (TC) | 1 |
| Tunnel restriction code (TRC) | B/E |
| Hazard identification No | 558 |
| Emergency Action Code | 2P |

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information

| | |
|----------------------------|-------|
| Classification code | OC1 |
| Danger label(s) | 5.1+8 |



| | |
|---------------------------------|-----|
| Special provisions (SP) | 60 |
| Excepted quantities (EQ) | E0 |
| Limited quantities (LQ) | 0 |
| Transport category (TC) | 1 |
| Hazard identification No | 558 |

International Maritime Dangerous Goods Code (IMDG) - Additional information

| | |
|--|-------------------------------------|
| Proper shipping name | PERCHLORIC ACID |
| Particulars in the shipper's declaration | UN1873, PERCHLORIC ACID, 5.1 (8), I |
| Marine pollutant | - |
| Danger label(s) | 5.1+8 |



| | |
|--------------------------|-----|
| Special provisions (SP) | 900 |
| Excepted quantities (EQ) | E0 |

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| | |
|-------------------------|-----------|
| Limited quantities (LQ) | 0 |
| EmS | F-A, S-Q |
| Stowage category | D |
| Segregation group | 1 - Acids |

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

| | |
|--|-------------------------------------|
| Proper shipping name | Perchloric acid |
| Particulars in the shipper's declaration | UN1873, Perchloric acid, 5.1 (8), I |
| Danger label(s) | 5.1+8 |



| | |
|--------------------------|----|
| Excepted quantities (EQ) | E0 |
|--------------------------|----|

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Seveso Directive

| 2012/18/EU (Seveso III) | | | |
|-------------------------|---------------------------------------|---|-------|
| No | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes |
| P8 | oxidising liquids and solids | 50 200 | 55) |

Notation

55) Oxidising liquids, category 1, 2 or 3, or oxidising solids, category 1, 2 or 3

Deco-Paint Directive

| | |
|--|-------|
| VOC content | 0 % |
| VOC content (Water content was discounted) | 0 g/l |

Industrial Emissions Directive (IED)

| | |
|--|-------|
| VOC content | 0 % |
| VOC content (Water content was discounted) | 0 g/l |

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

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Water Framework Directive (WFD)

| List of pollutants (WFD) | | | | |
|--------------------------|---|--------|-----------|---------|
| Name of substance | Name acc. to inventory | CAS No | Listed in | Remarks |
| Perchloric acid ...% | Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment | | a) | |

Legend

a) Indicative list of the main pollutants

Regulation on the marketing and use of explosives precursors

none of the ingredients are listed

Regulation on drug precursors

none of the ingredients are listed

Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed

Regulation concerning the export and import of hazardous chemicals (PIC)

none of the ingredients are listed

Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

National regulations(GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

none of the ingredients are listed

Restrictions according to GB REACH, Annex 17

| Dangerous substances with restrictions (GB REACH, Annex 17) | | | |
|---|--|--------|----|
| Name of substance | Name acc. to inventory | CAS No | No |
| Perchloric acid | this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC | | 3 |

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

| Country | Inventory | Status |
|---------|------------|----------------------------|
| AU | AIIC | all ingredients are listed |
| CA | DSL | all ingredients are listed |
| CN | IECSC | all ingredients are listed |
| EU | ECSI | all ingredients are listed |
| EU | REACH Reg. | all ingredients are listed |
| JP | CSCL-ENCS | all ingredients are listed |

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| Country | Inventory | Status |
|---------|-----------|-------------------------------------|
| JP | ISHA-ENCS | not all ingredients are listed |
| KR | KECI | all ingredients are listed |
| MX | INSQ | all ingredients are listed |
| NZ | NZIoC | all ingredients are listed |
| PH | PICCS | all ingredients are listed |
| TW | TCSI | all ingredients are listed |
| US | TSCA | all ingredients are listed (ACTIVE) |
| VN | NCI | all ingredients are listed |

Legend

| | |
|------------|---|
| AIIC | Australian Inventory of Industrial Chemicals |
| CSSL-ENCS | List of Existing and New Chemical Substances (CSSL-ENCS) |
| DSL | Domestic Substances List (DSL) |
| ECSI | EC Substance Inventory (EINECS, ELINCS, NLP) |
| IECSC | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ | National Inventory of Chemical Substances |
| ISHA-ENCS | Inventory of Existing and New Chemical Substances (ISHA-ENCS) |
| KECI | Korea Existing Chemicals Inventory |
| NCI | National Chemical Inventory |
| NZIoC | New Zealand Inventory of Chemicals |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances (PICCS) |
| REACH Reg. | REACH registered substances |
| TCSI | Taiwan Chemical Substance Inventory |
| TSCA | Toxic Substance Control Act |

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---------|--|---|-----------------|
| 2.2 | Labelling of packages where the contents do not exceed 125 ml: Signal word: Danger | | yes |
| 2.2 | | Labelling of packages where the contents do not exceed 125 ml: change in the listing (table) | yes |
| 2.2 | | Labelling of packages where the contents do not exceed 125 ml: change in the listing (table) | yes |
| 2.2 | | Labelling of packages where the contents do not exceed 125 ml: change in the listing (table) | yes |
| 2.2 | contains: Perchloric acid ...% | | yes |
| 2.3 | Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or a vPvB. | Results of PBT and vPvB assessment: Does not contain a PBT-/vPvB-substance at a concentration of $\geq 0,1\%$. | yes |
| 2.3 | | Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$. | yes |
| 14.8 | Classification code: 5.1 | Classification code: OC1 | yes |

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| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---------|--|---|-----------------|
| 15.1 | Restrictions according to REACH, Annex XVII | | yes |
| 15.1 | | Dangerous substances with restrictions (REACH, Annex XVII): change in the listing (table) | yes |
| 15.1 | List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list: None of the ingredients are listed. | | yes |
| 15.1 | VOC content: 0 % 0 g/l | VOC content: 0 % | yes |
| 15.1 | | VOC content (Water content was discounted): 0 g/l | yes |
| 15.1 | | National regulations(GB) | yes |
| 15.1 | | List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list: none of the ingredients are listed | yes |
| 15.1 | | Restrictions according to GB REACH, Annex 17 | yes |
| 15.1 | | Dangerous substances with restrictions (GB REACH, Annex 17): change in the listing (table) | yes |
| 15.1 | | National inventories: change in the listing (table) | yes |

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|------------|---|
| ADR | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road) |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BOD | Biochemical Oxygen Demand |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| COD | Chemical oxygen demand |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| EC50 | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval |
| EC No | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| ED | Endocrine disruptor |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| ErC50 | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control |
| Eye Dam. | Seriously damaging to the eye |
| Eye Irrit. | Irritant to the eye |
| GB CLP | The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment |

Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Perchloric acid ROTIPURAN® Ultra 70 %

article number: HN61

| Abbr. | Descriptions of used abbreviations |
|-------------|---|
| | etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended) |
| GB REACH | The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| ICAO-TI | Technical instructions for the safe transport of dangerous goods by air |
| IMDG | International Maritime Dangerous Goods Code |
| IMDG-Code | International Maritime Dangerous Goods Code |
| index No | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 |
| log KOW | n-Octanol/water |
| Met. Corr. | Substance or mixture corrosive to metals |
| NLP | No-Longer Polymer |
| Ox. Liq. | Oxidising liquid |
| PBT | Persistent, Bioaccumulative and Toxic |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| Skin Corr. | Corrosive to skin |
| Skin Irrit. | Irritant to skin |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and very Bioaccumulative |

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text |
|------|---|
| H271 | May cause fire or explosion; strong oxidiser. |
| H290 | May be corrosive to metals. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.