

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

Printing date 29.12.2023

Version number 3.00 (replaces version 2.00)

Revision: 29.12.2023

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

- **Product identifier**
- **Trade name:** Phosphoric acid, concentrated
- **Article number:** 7034
- **Registration number** The substance is exempt from REACH-registration.
- **UFI:** HA3X-U1QM-P00G-32ED
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the mixture** Ingredient for pharmaceutical drugs
- **Uses advised against** No relevant information available.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
CAELO
Caesar & Loretz GmbH
Herderstr. 31
D-40721 Hilden
GERMANY
- **Further information obtainable from:**
E-mail: info@caelo.de
Tel.: +49210349940 (during regular opening hours)
- **Emergency telephone number:**
Poison Information Center Bonn
Venusberg-Campus 1, 53127 Bonn
Tel: +49 (0) 228-192400

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Skin Corr. 1B H314 Causes severe skin burns and eye damage.
- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05

- **Signal word** Danger
- **Hazard statements**
H314 Causes severe skin burns and eye damage.
- **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.

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| | |
|----------------|--|
| P102 | Keep out of reach of children. |
| P103 | Read carefully and follow all instructions. |
| 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. |

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Determination of endocrine-disrupting properties** Not applicable.

3 Composition/information on ingredients

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

| | | |
|-------------------|--|-------|
| CAS: 7664-38-2 | phosphoric acid | 85.0% |
| EINECS: 231-633-2 | Skin Corr. 1B, H314 | |
| | Specific concentration limits: Skin Corr. 1B; H314: C ≥ 25 % | |
| | Skin Irrit. 2; H315: 10 % ≤ C < 25 % | |
| | Eye Irrit. 2; H319: 10 % ≤ C < 25 % | |
- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **After inhalation:**

Bring the person out of the contaminated area to fresh air.
Call a doctor immediately.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**

Remove contaminated clothing immediately.
Immediately wash with polyethylene glycol 400.
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**

Rinse opened eye for several minutes under running water.
Seek medical advice, even if no immediate symptoms are observed.
- **After swallowing:**

Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
- **Most important symptoms and effects, both acute and delayed**

Etching effects
Irritation

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Coughing
Breathing difficulty
Risk of blindness
Cramp

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

All regular extinguishing media can be used.

Use fire extinguishing methods suitable to surrounding conditions.

· **Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

· **Advice for firefighters**

· **Protective equipment:** In case of fire wear suitable protective clothes and respiratory protection.

· **Additional information**

Prevent from entering into drains. Fire residues must be disposed in accordance with official regulations.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Send for recovery or disposal in suitable receptacles.

· **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.

7 Handling and storage

· **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· **Information about fire - and explosion protection:** Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Tightly closed. Store at a dry place. At room temperature (+15°C to +25°C).

Do not store in metal containers.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:** Store receptacle in a well ventilated area.

· **Storage class:** TRHS 510: 8 B Non-combustible corrosive substances

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- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
 - CAS: 7664-38-2 phosphoric acid**
 - OEL Short-term value: 2 mg/m³
 - Long-term value: 1 mg/m³
 - IOELV
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Appropriate engineering controls** No further data; see item 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:** Respiratory with filter.
- **Hand protection** Protective gloves
- **Material of gloves**
 - Nitrile rubber, NBR
 - 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/face protection** Tightly sealed goggles
- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Fluid
- **Colour:** Colourless
- **Odour:** Odourless
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** 21 °C
- **Boiling point or initial boiling point and boiling range** 158 °C
- **Flammability** Not applicable.
- **Lower and upper explosion limit**
- **Lower:** Not determined.

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| | |
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| · Upper: | Not determined. |
| · Flash point: | Not applicable. |
| · Decomposition temperature: | Not determined. |
| · pH at 20 °C | 0.5 |
| · Viscosity: | |
| · Kinematic viscosity | Not determined. |
| · Dynamic: | Not determined. |
| · Solubility | |
| · water: | Fully miscible. |
| · Partition coefficient n-octanol/water (log value) | Not determined. |
| · Vapour pressure at 20 °C: | 23 hPa (CAS: 7732-18-5 water, distilled, conductivity or of similar purity) |
| · Density and/or relative density | |
| · Density at 20 °C: | 1.7 g/cm ³ |
| · Relative density | Not determined. |
| · Vapour density | Not determined. |
| · Other information | |
| · Appearance: | |
| · Form: | Fluid |
| · Important information on protection of health and environment, and on safety. | |
| · Auto-ignition temperature: | Product is not selfigniting. |
| · Explosive properties: | Product does not present an explosion hazard. |
| · Solvent content: | |
| · Water: | 15.0 % |
| · VOC (EC) | 0.00 % |
| · Solids content: | 0.0 % |
| · Change in condition | |
| · Evaporation rate | Not determined. |
| · Information with regard to physical hazard classes | |
| · Explosives | Void |
| | Void |
| · Flammable gases | Void |
| | Void |
| · Aerosols | Void |
| | Void |
| · Oxidising gases | Void |
| | Void |
| · Gases under pressure | Void |
| | Void |
| · Flammable liquids | Void |
| | Void |
| · Flammable solids | Void |
| | Void |

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| | |
|--|------|
| · Self-reactive substances and mixtures | Void |
| | Void |
| · Pyrophoric liquids | Void |
| | Void |
| · Pyrophoric solids | Void |
| | Void |
| · Self-heating substances and mixtures | Void |
| | Void |
| · Substances and mixtures, which emit flammable gases in contact with water | Void |
| | Void |
| · Oxidising liquids | Void |
| | Void |
| · Oxidising solids | Void |
| | Void |
| · Organic peroxides | Void |
| | Void |
| · Corrosive to metals | Void |
| | Void |
| · Desensitised explosives | Void |
| | Void |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** Violent reactions with strong alkalis and oxidising agents.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Metals
- **Hazardous decomposition products:** Phosphorus oxides (e.g. P₂O₅)

11 Toxicological information

- **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:**
CAS: 7664-38-2 phosphoric acid
Oral LD50 1,530 mg/kg (rat)
Dermal LD50 2,740 mg/kg (rabbit)
- **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.

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- **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.
 - **Information on other hazards**
 - **Endocrine disrupting properties**
On the basis of the available data, the substance does not meet the criteria for the identification of substances having properties of interference with the endocrine system, in accordance with Article 59, paragraph 1 of the REACH Regulation and the criteria established in the Delegated Regulation (EU) 2017 / 2100 of the Commission or in Commission Regulation (EU) 2018/605.
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12 Ecological information

- **Toxicity**
 - **Aquatic toxicity:**
CAS: 7664-38-2 phosphoric acid
LC50 100 mg/L /96h (Fish)
 - **Persistence and degradability** No further relevant information available.
 - **Bioaccumulative potential** No further relevant information available.
 - **Mobility in soil** No further relevant information available.
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
 - **Endocrine disrupting properties**
Based on the available data, the substance does not meet the criteria for the identification of substances with properties affecting the endocrine system according to Article 59(1) of the REACH Regulation and the criteria of the Commission Delegated Regulation (EU) 2017/2100 or in the Commission Regulation (EU) 2018/605.
The product does not contain substances with endocrine disrupting properties.
 - **Other adverse effects**
 - **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.
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.
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13 Disposal considerations

- **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 local regulations.

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14 Transport information

| | |
|---|---|
| · UN number or ID number | UN1805 |
| · ADR, IMDG, IATA | |
| · UN proper shipping name | |
| · ADR | 1805 PHOSPHORIC ACID, SOLUTION |
| · IMDG | PHOSPHORIC ACID, SOLUTION |
| · IATA | Phosphoric acid, solution |
| · Transport hazard class(es) | |
| · ADR, IMDG, IATA | |
| · Class | 8 Corrosive substances. |
| · Label | 8 |
| · Packing group | |
| · ADR, IMDG, IATA | III |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Warning: Corrosive substances. |
| · Hazard identification number (Kemler code): | 80 |
| · EMS Number: | F-A,S-B |
| · Segregation groups | SGG1 - Acids |
| · Maritime transport in bulk according to IMO instruments | Not applicable. |
| · Transport/Additional information: | |
| · ADR | |
| · Limited quantities (LQ) | 5L |
| · Transport category | 3 |
| · Tunnel restriction code | E |
| · IMDG | |
| · Limited quantities (LQ) | 5L |
| · UN "Model Regulation": | UN 1805 PHOSPHORIC ACID, SOLUTION, 8, III |

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV) Not listed
- 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.
- National regulations:
- Storage of hazardous substances in in nonstationary vessels (TRGS 510) (Germany)
TRHS 510: 8 B Non-combustible corrosive substances
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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16 Other information

The information provided is based on our current level of knowledge. This MSDS has been compiled and is exclusively for this product intended.

· **Reasons for alterations** This version replaces all old versions.

· **Relevant phrases**

H314 Causes severe skin burns and eye damage.

· **Version number of previous version:** 2.00

· **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)

MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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