

SAFETY DATA SHEET



according to Regulation (EC) No 1907/2006 (REACH) as amended

PERIODIC ACID 50% SOLUTION

Creation date

29th November 2022

Revision date

Version

1.0

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

1.1. Product identifier

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Substance / mixture

mixture

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

Mixture's intended use

Chemical synthesis, chemical production for printing industry. For industrial use.

Mixture uses advised against

No data available.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Name or trade name

Vinyl Kft.

Address

Adler Károly u. 19., Miskolc, 3524

Phone

Hungary

+3646432633

E-mail

ehsq@vinyl.hu

1.4. Emergency telephone number

Toxikológiai Információs Központ, levelezési cím: 1097 Budapest, Nagyvárad tér 2., Magyarország, tel. +36 80 20 11 99, (0-24 óra).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Ox. Sol. 2, H272

Skin Corr. 1C, H314

Eye Dam. 1, H318

Aquatic Acute 1, H400

Aquatic Chronic 1, H410

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse effects on human health and the environment

The product has no other known specific hazards for human or environment.

2.2. Label elements

Hazard pictogram



Signal word

Danger

Hazardous substances

Orthoperiodic acid

Hazard statements

H272

May intensify fire; oxidiser.

H314

Causes severe skin burns and eye damage.

H410

Very toxic to aquatic life with long lasting effects.

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.

P273

Avoid release to the environment.

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P280 Wear eye protection.
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 doctor.
P391 Collect spillage.
P405 Store locked up.
P501 Dispose of container to in accordance with national regulations.

2.3. Other hazards

Results of PBT and vPvB assessment: No data available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
CAS: 10450-60-9 EC: 233-937-0	Orthoperiodic acid	50	Ox. Sol. 1, H271 Skin Corr. 1C, H314 Eye Dam. 1, H318 STOT RE 1, H372 (thyroid gland) Aquatic Acute 1, H400 (M=1)	
CAS: 7732-18-5 EC: 231-791-2	AQUA	50	not classified as dangerous	

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

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

If inhaled

- Move person into fresh air.
- If not breathing, give artificial respiration.
- Consult a physician.

If on skin

- Take off contaminated clothing and shoes immediately.
- Wash off with soap and plenty of water.
- Consult a physician.

If in eyes

- Rinse thoroughly with plenty of water for at least 15 minutes.
- Immediately call a POISON CENTER or doctor.

If swallowed

- Do not induce vomiting.
- Never give anything by mouth to an unconscious person.
- Rinse mouth with water.
- Consult a physician.

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4.2. Most important symptoms and effects, both acute and delayed

If inhaled

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract. Causes cough, shortness of breath, headache and nausea.

If on skin

Causes severe skin burns.

If in eyes

Causes serious eye damage.

If swallowed

Material is extremely destructive to tissue of the mucous membranes. Causes cough, shortness of breath, headache and nausea.

4.3. Indication of any immediate medical attention and special treatment needed

No special treatment needed; treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

May cause fire or explosion; strong oxidiser. In case of fire, dangerous decomposition products may be generated (hydrogen iodide, oxygen gas).

5.3. Advice for firefighters

Wear full protective clothing and self-contained breathing apparatus. In case of major fire and large quantities, evacuate area.

Fight fire remotely due to the risk of explosion. Cool the fire affected containers with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Allow only well-trained experts wearing suitable protective clothing to abide in the field of accident.

For emergency responders:

Use personal protective equipment. Do not breathe gas/mist/vapours/spray. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2. Environmental precautions

Dispose of the spillage and the resulting waste according to the applicable environmental regulations. Do not allow the product and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.

6.3. Methods and material for containment and cleaning up

Collect the spilled product with non-combustible absorbent, then place into a suitable, closed, properly labelled chemical waste container for removal/disposal.

6.4. Reference to other sections

For further and detailed information see Sections 8 and 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Observe conventional hygiene precautions. Avoid contact with skin and eyes. Do not breathe gas/mist/vapours/spray. Care should be taken to prevent any chemical form coming into contact with the skin or eyes and from contaminating personal clothing. Wash body thoroughly after open handling of product. Keep working clothes separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

Technical measures:

Ensure adequate ventilation. Precautions against fire and explosion: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take any precaution to avoid mixing with combustibles.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage condition:

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. The substance is light-sensitive and hygroscopic.

Incompatible materials: See Section 10.5

Packaging material: No special prescriptions.

7.3. Specific end use(s)

Chemical synthesis, chemical production for printing industry. For industrial use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL values

Consumer/ Worker - Local - Oral exposure - Short term (acute) - no data available

Consumer/ Worker - Local - Oral exposure - Long term (chronic) - no data available

Consumer/ Worker - Local - Dermal exposure - Short term (acute) - no data available

Consumer/ Worker - Local - Dermal exposure - Long term (chronic) - no data available

Consumer/ Worker - Local - Inhalative exposure - Short term (acute) - no data available

Consumer/ Worker - Local - Inhalative - Long term (chronic) - no data available

Consumer/ Worker - Systemic - Oral exposure - Short term (acute) - no data available

Consumer/ Worker - Systemic - Oral exposure - Long term (chronic) - no data available

Consumer/ Worker - Systemic - Dermal exposure - Short term (acute) - no data available

Consumer/ Worker - Systemic - Dermal exposure - Long term (chronic) - no data available

Consumer/ Worker - Systemic - Inhalative exposure - Short term (acute) - no data available

Consumer/ Worker - Systemic - Inhalative - Long term (chronic) - no data available

PNEC values

Compartment - Value - Note(s)

Freshwater - no data - no notes

Marine water - no data - no notes

Freshwater sediment - no data - no notes

Marine water sediment - no data - no notes

Sewage Treatment Plant (STP) - no data - no notes

Intermittent release - no data - no notes

Secondary poisoning - no data - no notes

Soil - no data - no notes

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8.2. Exposure controls

In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

Appropriate engineering controls:

In pursuance of work is proper foresight needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin.

Individual protection measures, such as personal protective equipment: Do not breathe gas/mist/vapours/spray. Wash hands before breaks and at the end of workday. Wash contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety practice.

The information regarding personal protective equipment is only for informative purposes. A complete risk assessment is required before the use of the product for the determination of the appropriate personal protective equipment, taking local circumstances into account.

Eye/face protection

Use appropriate protective glasses (EN 166), and face shield.

Skin protection

Use complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hand protection:

Use appropriate protective gloves (EN 374). Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Respiratory protection

here risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators tested and approved under appropriate government standards such as CEN (EU).

Thermal hazard

No thermal hazards known.

Environmental exposure controls

Avoid runoff into storm sewers and ditches which lead to waterways.

More information

The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions, an expert's advice is necessary before deciding upon further protective measures.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	clear
Odour	data not available
Melting point/freezing point	122 °C, 124-127 °C (122 °C - 100 % Periodic acid)
Boiling point or initial boiling point and boiling range	data not available
Flammability	data not available (may intensify fire; oxidiser)
Lower and upper explosion limit	data not available
Flash point	data not available
Auto-ignition temperature	data not available
Decomposition temperature	130-140 °C (100 % Periodic acid)
pH	data not available
Kinematic viscosity	data not available
Solubility in water	3000 g/l (20 °C) (100 % Periodic acid)
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	data not available
Density and/or relative density	
Density	1,4 g/cm ³ (100 % Periodic acid)
Relative vapour density	7,9 (100 % Periodic acid)
Particle characteristics	data not available

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The manufacturer did not carry out any tests on this parameter for the product or the results of the tests are not available at the time of publication of the data sheet.

9.2. Other information

Oxidizing properties: strong oxidiser

Formula: H₅IO₆ (Periodic acid)

Molecular weight: 227.94 g/mol (Periodic acid)

SECTION 10: Stability and reactivity

10.1. Reactivity

No reactivity known.

10.2. Chemical stability

Stable at normal temperature and under general work conditions.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take any precaution to avoid mixing with combustibles.

10.5. Incompatible materials

No incompatible materials known.

10.6. Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

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

No ecotoxicological tests have been performed on the product, so we provide the data on the components.

Acute toxicity

Summaries of the information derived from the test conducted: No data available.

Relevant toxicological properties:

Irritation/corrosion (overexposure): May be harmful if inhaled.

Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract, eyes and skin.

Causes burns, cough, shortness of breath, headache and nausea. No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Information on likely routes of exposure: Ingestion, inhalation, skin contact, eye contact.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure: Causes severe skin burns and eye damage.

Interactive effects: No data available.

Absence of specific data: No information.

Skin corrosion/irritation

Causes severe skin burns.

Serious eye damage/irritation

Causes serious eye damage.

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.

Toxicity for specific target organ - single exposure

Based on available data, the classification criteria are not met.

Toxicity for specific target organ - repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

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11.2. Information on other hazards

not available

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

No ecotoxicological tests have been performed on the product, so we provide the data on the components.

Acute toxicity: Very toxic to aquatic life.

Chronic toxicity: Very toxic to aquatic life with long lasting effects.

Do not let product enter sewers, water courses or soil.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

PBT substance , vPvB substance - not determined.

12.6. Endocrine disrupting properties

No data available.

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal according to the local regulations.

Information regarding the disposal of the product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

List of Waste Code: No waste disposal key according to the List of Waste Code (LoW code) can be determined for this product, as only the purpose of application defined by the user enables an allocation. The LoW code number has to be determined after a discussion with a waste disposal specialist.

Information regarding the disposal of the packaging: Dispose according to the relevant regulations. The uncleaned packaging has to be disposed in the same manner as the product.

Physical/chemical properties that may affect waste treatment options shall be specified: No data available.

Sewage disposal: No data available.

Special precautions for any recommended waste treatment: No data available.

SECTION 14: Transport information

14.1. UN number or ID number

UN 3098

14.2. UN proper shipping name

OXIDIZING LIQUID, CORROSIVE, N.O.S.

14.3. Transport hazard class(es)

5.1 Oxidizing substances

14.4. Packing group

III - substances presenting low danger

14.5. Environmental hazards

ADR/RID: ENVIRONMENTALLY HAZARDOUS. IMDG: Marine pollutant.

14.6. Special precautions for user

No relevant information available.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

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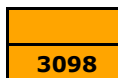
Additional information

Hazard identification No.

UN number

Classification code

Safety signs



OC1

5.1+8+hazardous for the environment



Air transport - ICAO/IATA

Packaging instructions passenger

551

Cargo packaging instructions

555

Marine transport - IMDG

EmS (emergency plan)

F-A, S-Q

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.
- LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)
The product does not contain any substance included in annex XIV.
- REGULATION (EC) No 1907/2006 ANNEX XVII
No restrictions can be applied to the mixture or to substances contained in the mixture.
- Regulation (EU) No 649/2012 (PIC) There are no substances listed in this regulation.
- REGULATION (EU) 2019/1148 - Explosive precursors
The mixture does not contain explosives precursors in concentrations equal to or greater than 1%.
- National regulations: No further information available.
- Other regulations, limitations and prohibitive regulations
-The mixture does not contain SVHC substances in concentration equal to or greater than 0.1% by weight.
- Regulation (EC) n. 1005/2009: substances that deplete the ozone layer
The mixture does not contain substances that deplete the ozone layer.

15.2. Chemical safety assessment

No information.

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

- | | |
|------|--|
| H271 | May cause fire or explosion; strong oxidiser. |
| H272 | May intensify fire; oxidiser. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| H372 | Causes damage to thyroid gland through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Guidelines for safe handling used in the safety data sheet

- | | |
|----------------|--|
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P280 | Wear eye protection. |
| 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 doctor. |
| P391 | Collect spillage. |

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- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P273 Avoid release to the environment.
- P405 Store locked up.
- P501 Dispose of container to in accordance with national regulations.

Other important information about human health protection

not available

Key to abbreviations and acronyms used in the safety data sheet

- ADR European agreement concerning the international carriage of dangerous goods by road
- AGW Occupational Exposure Limits
- BCF Bioconcentration Factor
- CAS Chemical Abstracts Service
- CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
- EINECS European Inventory of Existing Commercial Chemical Substances
- EK Identification code for each substance listed in EINECS
- EmS Emergency plan
- EU European Union
- EuPCS European Product Categorisation System
- IATA International Air Transport Association
- IBC International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
- ICAO International Civil Aviation Organization
- IMDG International Maritime Dangerous Goods
- INCI International Nomenclature of Cosmetic Ingredients
- ISO International Organization for Standardization
- IUPAC International Union of Pure and Applied Chemistry
- log Kow Octanol-water partition coefficient
- MAK Maximum workplace concentration
- MARPOL International Convention for the Prevention of Pollution from Ships
- OEL Occupational Exposure Limits
- PBT Persistent, Bioaccumulative and Toxic
- ppm Parts per million
- REACH Registration, Evaluation, Authorisation and Restriction of Chemicals
- RID Agreement on the transport of dangerous goods by rail
- UN Four-figure identification number of the substance or article taken from the UN Model Regulations
- UVCB Substances of unknown or variable composition, complex reaction products or biological materials
- VOC Volatile organic compounds
- vPvB Very Persistent and very Bioaccumulative

- Aquatic Acute Hazardous to the aquatic environment
- Aquatic Chronic Hazardous to the aquatic environment (chronic)
- Eye Dam. Serious eye damage
- Ox. Sol. Oxidising solid
- Skin Corr. Skin corrosion
- STOT RE Specific target organ toxicity - repeated exposure

Training guidelines

not available

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

not available

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Statement

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.