

Phosphoric acid

30417-2.5L

Version 1.1

Revision Date 30.04.2017

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

1.1. Product identifier

Product name : Phosphoric acid
SDS-number : 000000020139
Type of product : Mixture
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.

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

Use of the Substance/Mixture : Laboratory chemicals

Uses advised against : none

1.3. Details of the supplier of the safety data sheet

Company : Honeywell Specialty Chemicals Seelze GmbH
Wunstorfer Straße 40
30926 Seelze
Germany
Telephone : (49) 5137-999 0
Telefax : (49) 5137-999 123
For further information, please contact: : PMTEU Product Stewardship:
SafetyDataSheet@Honeywell.com
Honeywell International, Inc.
115 Tabor Road
Morris Plains, NJ 07950-2546
USA

1.4. Emergency telephone number

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)
+1-303-389-1414 (Medical)

Country based Poison Control Center : see chapter 15.1

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Corrosive to metals Category 1
H290 May be corrosive to metals.
Skin corrosion Category 1B
H314 Causes severe skin burns and eye damage.

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2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H290 H314 May be corrosive to metals. Causes severe skin burns and eye damage.
Precautionary statements	:	P234 P260 P280 P284 P301 + P330 + P331 P302 + P352 P304 + P340 P305 + P351 + P338 P308 + P313 Keep only in original container. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/ attention.
Hazardous components which must be listed on the label	:	Orthophosphoric acid

2.3. Other hazards

The product is hygroscopic.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

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3.2. Mixture

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
Orthophosphoric acid	7664-38-2 015-011-00-6 01-2119485924-24 231-633-2	Skin Corr. 1B; H314	$\geq 50\%$ - $\leq 100\%$	1*

1* - For specific concentration limits see Annexes of 1272/2008

Remaining components of this product are non-hazardous and/or are present at concentrations below reportable limits.

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:

First aider needs to protect himself. Immediately take off contaminated clothing and rinse body with plenty of water.

Inhalation:

Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician immediately.

Skin contact:

Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician immediately.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Ingestion:

Rinse mouth with water. Drink 1 or 2 glasses of water. Do NOT induce vomiting. Call a physician immediately.

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

no data available

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

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Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray
Foam
Carbon dioxide (CO₂)
Dry powder

Extinguishing media which shall not be used for safety reasons:

High volume water jet

5.2. Special hazards arising from the substance or mixture

Contact with metals liberates hydrogen gas.
In case of fire hazardous decomposition products may be produced such as:
Oxides of phosphorus

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment. Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not breathe vapours or spray mist. Do not get in eyes, on skin, or on clothing.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6.3. Methods and materials for containment and cleaning up

Ventilate the area.
With acids neutralization takes place under development of heat.
Neutralise with the following product(s):
lime

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soda ash
Soak up with inert absorbent material.
Sweep up and shovel into suitable containers for disposal.

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

Provide sufficient air exchange and/or exhaust in work rooms. Use only acid resistant equipment.

Advice on protection against fire and explosion:

Normal measures for preventive fire protection.

Hygiene measures:

When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Keep working clothes separately. Remove and wash contaminated clothing before re-use. Do not breathe vapours or spray mist. Do not get in eyes, on skin, or on clothing.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:

Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from extreme heat and cold. Do not leave vessels/containers open. Avoid product residues in/on containers.

7.3. Specific end use(s)

no additional data available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
Orthophosphoric acid	EH40 WEL STEL	2 mg/m ³		
Orthophosphoric acid	EH40 WEL TWA	1 mg/m ³		
Orthophosphoric acid	EH40 WEL			Listed
Orthophosphoric acid	EU ELV TWA	1 mg/m ³		Indicative
Orthophosphoric acid	EU ELV STEL	2 mg/m ³		Indicative

STEL - Short term exposure limit
TWA - Time weighted average

DNEL/ PNEC-Values

Component	End-use / Impact	Exposure duration	Value	Exposure routes	Remarks
Orthophosphoric acid	Workers / Acute local effects		2 mg/m ³	Inhalation	
Orthophosphoric acid	Workers / Long-term local effects		1 mg/m ³	Inhalation	
Orthophosphoric acid	Consumers / Long-term local effects		0,73 mg/m ³	Inhalation	

No PNEC data available.

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, safety

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shoes EN-ISO 20345.

Engineering measures

Use with local exhaust ventilation.
acid resisting floor
Emergency sprinkling nozzle

Personal protective equipment

Respiratory protection:

In the case of vapour formation use a respirator with an approved filter.

Hand protection:

Glove material: Natural Latex
Break through time: > 480 min
Glove thickness: 0,6 mm
Lapren®706
Gloves must be inspected prior to use.
Replace when worn.

Remarks: Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer's directions for use should be observed because of great diversity of types .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:

Safety goggles

Skin and body protection:

Complete suit protecting against chemicals
Wear suitable protective equipment.

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form : liquid
Colour : colourless
Odour : odourless

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molecular weight	:	98 g/mol
Freezing point	:	ca. 21 °C
Boiling point/boiling range	:	158 °C at 1.013 hPa
Flash point	:	Not applicable
Flammability (solid, gas)	:	Not applicable
Ignition temperature	:	Not applicable
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Vapour pressure	:	16 hPa at 50 °C
Vapour pressure	:	2 hPa at 20 °C
Density	:	ca. 1,71 g/cm ³ at 20 °C
Bulk density	:	Not applicable
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
pH	:	1,0 at 20 °C
Water solubility	:	completely miscible

9.2 Other Information

The product is hygroscopic.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

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10.2. Chemical stability

ca.300 °C
Decomposition temperature

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.
Corrosive in contact with metals

10.4. Conditions to avoid

Protect from atmospheric moisture and water.

10.5. Incompatible materials

Metals
Powdered metals
Gives off hydrogen by reaction with metals.
Strong bases

10.6. Hazardous decomposition products

In case of fire hazardous decomposition products may be produced such as:
Oxides of phosphorus

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:
no data available

Acute dermal toxicity:
no data available

Acute inhalation toxicity:
no data available

Skin irritation:
Classification: Causes burns.

Eye irritation:
Classification: Causes burns.

Respiratory or skin sensitisation:
Classification: non-sensitizing

Germ cell mutagenicity:
Test Method: Ames test

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Result: negative

Aspiration hazard:
no data available

Other information:
no data available

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:
no data available

Toxicity to aquatic plants:
EC50
Species: *Desmodesmus subspicatus* (green algae)
Value: > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to Microorganisms:
EC50
Species: activated sludge
Value: 250 mg/l

Toxicity to aquatic invertebrates:
Immobilization
Species: *Daphnia magna* (Water flea)
Value: > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

12.2. Persistence and degradability

Biodegradability:
The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Does not bioaccumulate.

12.4. Mobility in soil

no data available

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12.5. Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6. Other adverse effects

Do not flush into surface water or sanitary sewer system.
Neutralisation will reduce ecotoxic effects.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

Dispose according to legal requirements.

Packaging:

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:

Provisions relating to waste:
EC Directive 2006/12/EC; 2008/98/EEC
Regulation No. 1013/2006

For personal protection see section 8.

SECTION 14: Transport information

ADR/RID

UN Number : 1805
Description of the goods : PHOSPHORIC ACID, SOLUTION
Class : 8
Packaging group : III
Classification Code : C1
Hazard Identification : 80
Number
ADR/RID-Labels : 8
Environmentally hazardous : no

IATA

UN Number : 1805
Description of the goods : Phosphoric acid, solution
Class : 8
Packaging group : III
Hazard Labels : 8

IMDG

UN Number : 1805
Description of the goods : PHOSPHORIC ACID SOLUTION
Class : 8

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Packaging group : III
Hazard Labels : 8
EmS Number : F-A, S-B
Marine pollutant : no

SECTION 15: Regulatory information

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

Poison Control Center

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+)35929154233
Croatia	(+3851)23-48-342
Cyprus	no data available
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	no data available
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	no data available
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	

Country	Phone Number
Latvia	+37167042473
Liechtenstein	no data available
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	no data available
Netherlands	030-2748888
Norway	22591300
Poland	no data available
Portugal	808250143
Romania	no data available
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	no data available
Spain	+34915620420
Sweden	112 (begär Gif tinformation);+46104566786
United Kingdom	no data available

Other inventory information

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US. Toxic Substances Control Act
On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Toxic Chemical Control Law (TCCL) List
On the inventory, or in compliance with the inventory

Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

Orthophosphoric acid : H314 Causes severe skin burns and eye damage.

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level
PNEC Predicted no effect level
vPvB Very persistent and very bioaccumulative substance
PBT Persistent, bioaccumulative und toxic substance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a

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guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

This information should not constitute a guarantee for any specific product properties.
