

Phosphoric acid**04107-5L**

Version 1.1

Revision Date 02/18/2020

Print Date 05/29/2023

SECTION 1. IDENTIFICATION

Product name : Phosphoric acid

Number : 000000020139

Product Use Description : Laboratory chemicals

Manufacturer or supplier's details : Honeywell Specialty Chemicals Seelze GmbH
Wunstorfer Straße 40
Seelze, 30926

For more information call : 1-800-368-0050
+1-231-726-3171(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
: **Transportation (CHEMTREC): 1-800-424-9300 or**
: **+1-703-527-3887**
:
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : liquid

Color : colourless

Odor : odourless

Classification of the substance or mixture

Classification of the substance or mixture : Corrosive to metals, Category 1
Skin corrosion, Category 1B
Serious eye damage, Category 1

GHS Label elements, including precautionary statements

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Symbol(s)

:



Signal word

: Danger

Hazard statements

: May be corrosive to metals.
Causes severe skin burns and eye damage.

Precautionary statements

: **Prevention:**
Keep only in original container.
Wash skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.**Response:**

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/ doctor.

Wash contaminated clothing before reuse.

Absorb spillage to prevent material damage.

Storage:

Store locked up.

Store in corrosive resistant container with a resistant inner liner.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTSFormula : H₃PO₄

Chemical nature : Mixture

Chemical name	CAS-No.	Concentration
Phosphoric acid	7664-38-2	>=70.00 - <90.00 %
Water	7732-18-5	>=10.00 - <20.00 %

SECTION 4. 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 : Do NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. Call a physician immediately.

Notes to physician

Most important symptoms/effects, acute and : No information available.

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delayed
Indication of immediate : Treat symptomatically.
medical attention and
special treatment needed, if
necessary

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Cool closed containers exposed to fire with water spray.
Do not allow run-off from fire fighting to enter drains or water courses.
- Specific hazards during firefighting : Contact with metals liberates hydrogen gas.
In case of fire hazardous decomposition products may be produced such as:
Oxides of phosphorus
- Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- 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.
- 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.
- Methods and materials for containment and cleaning : Ventilate the area.
With acids neutralization takes place under development of

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up

heat.
Neutralise with the following product(s):
lime
soda ash
Soak up with inert absorbent material.
Sweep up and shovel into suitable containers for disposal.

SECTION 7. HANDLING AND STORAGE**Handling**

Precautions for safe handling : Wear personal protective equipment.
Use only in well-ventilated areas.
Keep container tightly closed.
When diluting, add acids to water, never the other way around.
On dilution or dissolving in water, considerable heating always occurs.
Do not breathe vapours or spray mist.
Do not get in eyes, on skin, or on clothing.

Advice on protection against fire and explosion : Contact with metals liberates hydrogen gas.

Storage

Conditions for safe storage, including any incompatibilities : Store in upright position only.
Keep container tightly closed in a dry and well-ventilated place.
Store away from incompatible substances.
Protect from physical damage.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.
Do not breathe vapours or spray mist.
Do not get in eyes, on skin, or on clothing.

Engineering measures : Use with local exhaust ventilation.

Eye protection : Safety goggles

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- Hand protection : Protective gloves
Gloves must be inspected prior to use.
Replace when worn.
- Skin and body protection : Acid-resistant protective clothing
Rubber or plastic apron
Rubber or plastic boots
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
- 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.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Phosphoric acid	7664-38-2	STEL : Short term exposure limit	3 mg/m3	2008	ACGIH:US. ACGIH Threshold Limit Values, as amended
Phosphoric acid	7664-38-2	TWA : Time weighted average	1 mg/m3	2008	ACGIH:US. ACGIH Threshold Limit Values, as amended
Phosphoric acid	7664-38-2	REL : Recommended exposure limit (REL):	1 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended

SAFETY DATA SHEET

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Phosphoric acid	7664-38-2	STEL : Short term exposure limit	3 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
Phosphoric acid	7664-38-2	PEL : Permissi ble exposure limit	1 mg/m3	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
Phosphoric acid	7664-38-2	STEL : Short term exposure limit	3 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Phosphoric acid	7664-38-2	TWA : Time weighted average	1 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Color	: colourless
Odor	: odourless
Odor threshold	: Note: no data available
pH	: 1.0 at , 20 °C
Freezing point	: ca. 21 °C
Boiling point/boiling range	: 158 °C at 1,013 hPa

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Flash point	: Note: Not applicable
Evaporation rate	: Note: no data available
Flammability	: Not applicable
Lower explosion limit	: Note: Not applicable
Upper explosion limit	: Note: Not applicable
Vapor pressure	: 16 hPa at 50 °C(122 °F) 2 hPa at 20 °C(68 °F)
Density	: ca. 1.71 g/cm ³ at 20 °C
Water solubility	: Note: completely miscible
Partition coefficient: n-octanol/water	: Note: no data available
Ignition temperature	: Note: Not applicable
Viscosity, dynamic	: Note: no data available
Viscosity, kinematic	: Note: no data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Molecular weight	: 98 g/mol

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Bulk density : Note: Not applicable

Corrosivity : Note: Corrosive to metals

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Hazardous polymerisation does not occur.
Corrosive in contact with metals

Conditions to avoid : Protect from atmospheric moisture and water.

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

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

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : Note: no data available

Acute inhalation toxicity : Note: no data available

Acute dermal toxicity : Note: no data available

: Acute toxicity estimate: 3,224 mg/kg
Method: Calculation method

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Skin irritation

Phosphoric acid

: Species: Rabbit
Result: Corrosive

Genotoxicity in vitro

: Test Method: Ames test
Result: negative

:

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish

: Note: no data available

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

Toxicity to algae

: EC50: > 100 mg/l
Exposure time: 72 h
Species: Desmodesmus subspicatus (green algae)
Method: OECD Test Guideline 201

Toxicity to bacteria

: EC50: 250 mg/l
Species: activated sludge**Elimination information (persistence and degradability)**

Bioaccumulation

: Note: Does not bioaccumulate.

Biodegradability

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

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Further information on ecology**Ecotoxicology Assessment**

Results of PBT 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).

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

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT UN/ID No. : UN 1805
Proper shipping name : PHOSPHORIC ACID SOLUTION
Class : 8
Packing group : III
Hazard Labels : 8

IATA UN/ID No. : UN 1805
Description of the goods : PHOSPHORIC ACID SOLUTION
Class : 8
Packaging group : III
Hazard Labels : 8
Packing instruction (cargo aircraft) : 856
Packing instruction (passenger aircraft) : 852
Packing instruction (passenger aircraft) : Y841

IMDG UN/ID No. : UN 1805
Description of the goods : PHOSPHORIC ACID SOLUTION
Class : 8
Packaging group : III

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Hazard Labels : 8
EmS Number : F-A, S-B
Marine pollutant : no
IMDG Code segregation group 1 – ACIDS,

SECTION 15. REGULATORY INFORMATION**Inventories**

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. Existing Chemicals Inventory (KECI) : 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 (IECSC) : 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

National regulatory information

US. EPA CERCLA : The following component(s) of this product is/are subject to

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Hazardous Substances (40 CFR 302) : release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):

Reportable quantity: 5000 lbs
: Phosphoric acid 7664-38-2

SARA 302 Components : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards : Acute Health Hazard

California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Massachusetts RTK : Phosphoric acid 7664-38-2

New Jersey RTK : Phosphoric acid 7664-38-2

Pennsylvania RTK : Phosphoric acid 7664-38-2

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 3	3
Flammability	: 0	0
Physical Hazard	: 0	
Instability	:	0

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

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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 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.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 09/30/2016

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group