

Safety data sheet
according to 1907/2006/EC, Article 31 Commission
regulation (EU) 2020/878

Printing date 08.05.2023

Version number 7.0 (replaces version 6.0)

Revision: 08.05.2023

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

1.1 Product identifier

• **Trade name:** ortho-Phosphoric acid, 85%, Pharmpur®, Ph Eur, BP, NF

• **Article number:** AC1098

• **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

• **Application of the substance / the preparation:** Laboratory reagent

1.3 Details of the supplier of the safety data sheet

• **Manufacturer/Supplier:**

Scharlab, S.L.

C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa

08181 Sentmenat (Barcelona) SPAIN

Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65

email: scharlab@scharlab.com

Internet Web Site: www.scharlab.com

• **Regional representation:**

Scharlab, S.L.

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email: scharlab@scharlab.com

Internet Web Site: www.scharlab.com

• **Further information obtainable from:** Technical Department

1.4 Emergency telephone number:

Toxicological Information National Institute of Toxicology and Forensic Sciences: + 34 91 562 04 20. The information will be provided (24h/365 days)

Please contact the regional Scharlab distributor/dealer in your country

During normal opening times: Scharlab, S.L. (+34) 93 715 18 11

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

• **Classification according to Regulation (EC) No 1272/2008**



corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

2.2 Label elements

• **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

• **Hazard pictograms**



GHS05

• **Signal word** Danger

• **Hazard-determining components of labelling:**
phosphoric acid

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Hazard statements

H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe dusts or mists.

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.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****3.2 Mixtures****Description:** Aqueous solution**Dangerous components:**

CAS: 7664-38-2	phosphoric acid	50-100%
EINECS: 231-633-2	⚠ Skin Corr. 1B, H314	
Reg.nr.: 01-2119485924-24-XXXX	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.**SECTION 4: First aid measures****4.1 Description of first aid measures****General information:** Immediately remove any clothing soiled by the product.**After inhalation:**

In case of unconsciousness place patient stably in side position for transportation.

Take affected persons into fresh air and keep quiet.

Seek medical treatment in case of complaints.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Seek medical treatment.

After eye contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Drink plenty of water and provide fresh air. Call for a doctor immediately.

Never give anything by mouth to an unconscious person.

Do not induce vomiting, danger of perforation.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
Under certain fire conditions, traces of other toxic gases cannot be excluded.
Phosphorus oxides
- **5.3 Advice for firefighters**
- **Protective equipment:**
Respiratory protection and full chemical protective clothing must be provided for extinguishing work.
Cool exposed containers by water spray or water mist.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Avoid contact with skin, eyes and clothing.
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Do not allow to penetrate the ground/soil.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Do not eat, drink or smoke during use.
Wash hands after handling.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store only in unopened original receptacles.
Suitable material for receptacles and pipes: steel or stainless steel.
Unsuitable material for receptacle: aluminium.

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- **Information about storage in one common storage facility:**
Store away from water.
Store away from foodstuffs.
- **Further information about storage conditions:**
Keep container tightly sealed.
See product label for storage temperature.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
7664-38-2 phosphoric acid
WEL Short-term value: 2 mg/m³
Long-term value: 1 mg/m³
- **DNELs**
DNEL worker, acute. Local effects: Inhalative - 2 mg/m³
DNEL worker, cronic. Local effects: Inhalative - 1 mg/m³
DNEL worker, cronic. Systematic effects: Inhalative - 10.7 mg/m³
DNEL consumer, prolonged. Systematic effects: Oral - 0.1 mg/kg body weight
DNEL consumer, prolonged. Local effects: Inhalative - 0.36 mg/m³
DNEL consumer, prolonged. Systematic effects: Inhalative - 4.57 mg/m³
- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 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:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

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.

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Eye/face protection

Tightly sealed goggles

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties**General Information****Physical state**

Fluid

Colour:

Colourless

Odour:

Odourless

Odour threshold:

Not determined.

Melting point/freezing point:

Undetermined.

Boiling point or initial boiling point and boiling range

158 °C

Flammability

Not applicable.

Lower and upper explosion limit**Lower:**

Not determined.

Upper:

Not determined.

Flash point:

Not applicable.

Decomposition temperature:

Not determined.

pH at 20 °C

<1

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:

2 hPa

Vapour pressure at 50 °C:

16 hPa

Density and/or relative density**Density at 20 °C:**1.69 g/cm³**Relative density**

Not determined.

Vapour density

Not determined.

9.2 Other information**Appearance:****Form:**

Fluid

Important information on protection of health and environment, and on safety.**Ignition temperature:**

Product is not selfigniting.

Explosive properties:

Product does not present an explosion hazard.

Solvent content:**Water:**

15.0 %

Change in condition**Evaporation rate**

Not determined.

Information with regard to physical hazard classes**Explosives**

Void

Flammable gases

Void

Aerosols

Void

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

SECTION 10: Stability and reactivity

- **10.1 Reactivity** Stable under normal conditions. No decomposition if used according to regulations.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
Forms flammable and explosive hydrogen through corrosion of metals.
- **10.3 Possibility of hazardous reactions**
Reacts with strong alkali.
Explosion hazard with nitrates
Violent reactions with strong alkalis and oxidising agents.
With inorganic acid chlorides.
- **10.4 Conditions to avoid** Heat
- **10.5 Incompatible materials:**
Basis
Water
Aluminium and mild steel.
Alkali metals
- **10.6 Hazardous decomposition products:**
Hydrogen
Hydrogen phosphide
Phosphorus oxides (e.g. P₂O₅)

SECTION 11: Toxicological information

- **11.1 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:**
Oral LD50 300-2,000 mg/kg (rat)
- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation** Causes serious eye damage.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties**
None of the ingredients is listed.

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SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**
 - Toxicity to fish
 - LC50 - *Leopomis macrochirus* (Moonfish Blugill) - >100 mg/L - 96 h
 - Toxicity to daphnia and other aquatic invertebrates
 - EC50 - *Daphnia magna* (large sea flea) - >100 mg/L - 48 h
 - Toxicity to algae
 - ErC50 static test - *Desmodesmus subspicatus* (green algae) - >100 mg/L - 72 h
 - Toxicity to bacteria
 - NOEC static test - Activated sludge - >1000 mg/L - 3 h
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
 - The product does not contain substances with endocrine disrupting properties.
- **12.7 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.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
 - Must be specially treated adhering to official regulations.
 - After prior treatment product has to be landfilled or incinerated adhering to the regulations pertaining to the disposal of especially hazardous waste.
 - 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 official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN number or ID number**
 - **ADR, IMDG, IATA**
 - **14.2 UN proper shipping name**
 - **ADR**
 - **IMDG, IATA**
- | |
|--------------------------------|
| UN1805 |
| 1805 PHOSPHORIC ACID, SOLUTION |
| PHOSPHORIC ACID, SOLUTION |

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14.3 Transport hazard class(es)**ADR, IMDG, IATA****Class**

8 Corrosive substances.

Label

8

14.4 Packing group**ADR, IMDG, IATA**

III

14.5 Environmental hazards:**Marine pollutant:**

No

14.6 Special precautions for user

Warning: Corrosive substances.

Hazard identification number (Kemler code):

80

EMS Number:

F-A,S-B

Segregation groups

(SGG1) Acids

Stowage Category

A

14.7 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

UN "Model Regulation":

UN 1805 PHOSPHORIC ACID, SOLUTION, 8, III

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** N/A**15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H314 Causes severe skin burns and eye damage.

Department issuing SDS: Product Safety Department**Contact:** msds@scharlab.com**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

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

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ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (UK REACH)
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
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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Annex: Exposure scenario

- **1 - Short title of the exposure scenario** Industrial use
- **Sector of Use**
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
- **Product category** PC21 Laboratory chemicals
- **Process category**
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC4 Chemical production where opportunity for exposure arises
PROC5 Mixing or blending in batch processes
PROC7 Industrial spraying
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC10 Roller application or brushing
PROC13 Treatment of articles by dipping and pouring
PROC15 Use as laboratory reagent
PROC23 Open processing and transfer operations at substantially elevated temperature
- **Environmental release category**
ERC2 Formulation into mixture
ERC3 Formulation into solid matrix
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC5 Use at industrial site leading to inclusion into/onto article
ERC7 Use of functional fluid at industrial site
- **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
- **2 - Conditions of use**
- **Duration and frequency**
5 workdays/week.
8hrs (full working shift).
- **Physical parameters**
- **Physical state** Fluid
- **Concentration of the substance in the mixture**
The substance is main component.
Covers a percentage of substance in the product up to 100 %.
- **Other operational conditions**
- **Other operational conditions affecting worker exposure**
No special measures required.
Avoid contact with eyes.
Avoid contact with the skin.
- **Other operational conditions affecting consumer exposure** No special measures required.
- **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures**
Workers in the identified processes/risk areas must be trained to:
a) Avoid working without respiratory protection
b) Understand the corrosive properties of the substance being worked with
c) Observe the safest procedures, as specified by the employer
Provide emergency eye wash station and mark its location clearly.
No special measures required.
- **Technical protective measures**
Ensure that suitable extractors are available on processing machines

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Personal protective measures

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

Avoid contact with the eyes.

Tightly sealed goggles

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Boots

Measures for consumer protection Ensure adequate labelling.**Environmental protection measures****Air** No special measures required.**Water**

Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.

Soil No special measures required.**Disposal measures**

Ensure that all wastewater is collected and treated in a wastewater treatment plant.

Liquid product must not be disposed of with household waste. Do not allow to reach sewers / water or soil.

Disposal must be made according to official regulations.

Ensure that waste is collected and contained.

Disposal procedures

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Waste type Partially emptied and uncleaned packaging**3 - Exposure estimation****Worker (dermal)** No significant dermal exposure**Worker (inhalation)**PROC 2: <0.1 (mg/m³)PROC 4: <0.5 (mg/m³)PROC 5: <0.5 (mg/m³)PROC 7: <0.8 (mg/m³)PROC 8b: <0.1 (mg/m³)PROC 9: <0.1 (mg/m³)PROC 10: <0.1 (mg/m³)PROC 13: <0.1 (mg/m³)PROC 15: <0.1 (mg/m³)PROC 23: <0.5 (mg/m³)**Consumer** Not relevant for this Exposure Scenario.**4 - Guidance for downstream users**

Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.

Whether the downstream user uses the substance / the mixture within the scope of the Exposure Scenario can be determined by means of a technical assessment.

For the risk assessment, the tools recommended by ECHA can be used.