



# Phosphoric acid 85% a.r.

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Issue date: 9/3/2024 Version: 1.1

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

#### 1.1. Product identifier

Product form : Mixture  
Trade name : Phosphoric acid 85% a.r.  
EC Index-No. : 015-011-00-6  
EC-No. : 231-633-2  
CAS-No. : 7664-38-2  
REACH registration No. : 01-2119485924-24  
Product code : CL00.0605  
Type of product : Mixture  
Formula : H<sub>3</sub>PO<sub>4</sub>  
Synonyms : orthophosphoric acid, conc=85% / phosphoric syrup, conc=85% / phosphoric-acid-  
BIG No : 16459

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemical

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

##### Supplier

Chem-Lab nv  
Industriezone 'De arend 2'  
Zedelgem – Belgium  
Belgium  
T +32 50 288320  
[info@chem-lab.be](mailto:info@chem-lab.be) - <https://www.chem-lab.be>

#### 1.4. Emergency telephone number

Emergency number : +32 50 28 83 20

Country	Organisation/Company	Address	Emergency number	Comment
Belgium	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Militaire Reine Astrid	Rue Bruyn 1 1120 Brussels	+32 70 245 245	Please dial: 070 245 245 for any urgent questions about intoxication (free of charge 24/7), if not accessible, dial: 02 264 96 30 (standard fee)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Corrosive to metals, Category 1 H290  
Skin corrosion/irritation, Category 1, Sub-Category 1B H314  
Full text of H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

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### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS05

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H290 - May be corrosive to metals.  
H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP)

: P280 - Wear protective gloves, protective clothing, eye protection, face protection.  
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P309+P311 - IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### 2.3. Other hazards

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general

: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

First-aid measures after inhalation

: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact

: Do not apply (chemical) neutralizing agents without medical advice. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

First-aid measures after eye contact

: Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice.

First-aid measures after ingestion

: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Call Poison Information Centre ([www.big.be/antigif.html](http://www.big.be/antigif.html)). Take the container/vomit to the doctor/hospital. Immediately consult a doctor/medical service. Ingestion of large quantities: immediately to hospital. Do not give chemical antidote. Doctor: gastric lavage is not recommended.

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

Symptoms/effects after inhalation	: Coughing. Dry/sore throat. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. FOLLOWING SYMPTOMS MAY APPEAR LATER: Respiratory difficulties. Risk of lung oedema.
Symptoms/effects after skin contact	: Caustic burns/corrosion of the skin.
Symptoms/effects after eye contact	: Corrosion of the eye tissue.
Symptoms/effects after ingestion	: Burns to the gastric/intestinal mucosa. Nausea. Abdominal pain. Blood in vomit. AFTER INGESTION OF HIGH QUANTITIES: Shock.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Red skin.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Adapt extinguishing media to the environment for surrounding fires.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".

### 5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting	: Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment	: Gloves (EN 374). Face shield (EN 166). Corrosion-proof suit (EN 14605). Dust cloud production: self-contained breathing apparatus (EN 136 + EN 137).
Emergency procedures	: Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes. Large spills/in confined spaces: consider evacuation. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.
Measures in case of dust release	: In case of dust production: keep upwind. In case of dust production: consider evacuation. Dust production: have neighbourhood close doors and windows.

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

### 6.3. Methods and material for containment and cleaning up

For containment	: Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain. Take account of toxic/corrosive precipitation water. Heat exposure: dilute toxic gas/vapour with water spray.
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Methods for cleaning up : Prevent dust cloud formation. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed.

Hygiene measures : Observe strict hygiene.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage temperature : > 20 °C

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: reducing agents, (strong) bases, metals, many substances.

Storage area : Ventilation at floor level. Keep locked up. Unauthorized persons are not admitted. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: closing, corrosion-proof, dry, clean, correctly labelled, meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: stainless steel, polyethylene, glass. MATERIAL TO AVOID: steel, aluminium, iron.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

No additional information available

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

No additional information available

#### 8.1.5. Control banding

No additional information available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

No additional information available

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### 8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

**Eye protection:**

Face shield (EN 166). In case of dust production: protective goggles (EN 166)

#### 8.2.2.2. Skin protection

**Skin and body protection:**

Corrosion-proof clothing (EN 14605). In case of dust production: head/neck protection

**Hand protection:**

Gloves

**Other skin protection**

**Materials for protective clothing:**

Excellent resistance: Butyl rubber. Natural rubber. neoprene (chloroprene rubber). Nitrile rubber. Polyethylene. Viton. Polyvinylchloride (PVC). Poor resistance: Polyvinylalcohol (PVA)

#### 8.2.2.3. Respiratory protection

**Respiratory protection:**

Dust production: dust mask with filter type P3

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

No additional information available

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Appearance	: Liquid.
Molecular mass	: 98 g/mol
Odour	: Odourless.
Odour threshold	: Not available
Melting point	: 21 °C
Freezing point	: Not available
Boiling point	: 158 °C
Flammability	: Not available
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: < 1
Viscosity, kinematic	: Not available
Solubility	: Soluble in water. Soluble in ethanol. Water: complete
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 2.2 hPa (20 °C)
Vapour pressure at 50 °C	: Not available
Density	: 1.71 g/ml

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Relative density	: 1.7
Relative vapour density at 20°C	: Not applicable
Particle characteristics	: Not applicable

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

Minimum ignition energy	: Not applicable
VOC content	: 0 %
Other properties	: Acid reaction

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Violent exothermic reaction with (some) bases. Violent to explosive reaction with many compounds e.g.: with (strong) oxidizers and with (strong) reducers. Reacts exothermically with water (moisture).

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Decomposes on exposure to temperature rise: release of toxic and corrosive gases/vapours (phosphorus oxides). Reacts on exposure to temperature rise with (some) metals: release of highly flammable gases/vapours (hydrogen).

## SECTION 11: Toxicological information

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

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Causes severe skin burns. pH: < 1
Serious eye damage/irritation	: Assumed to cause serious eye damage pH: < 1
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

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### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

No additional information available

#### 11.2.2. Other information

Potential adverse human health effects and symptoms : Causes severe skin burns, Causes serious eye damage.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

Ecology - air : None of the known components is included in the list of substances which may contribute to the greenhouse effect (IPCC). None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Air pollutant. Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Slightly harmful to aquatic organisms. Mild water pollutant (surface water). May cause eutrophication. Slightly harmful to bacteria. pH shift. Toxic to plankton.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Not rapidly degradable

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LC50 - Fish [1]	138 mg/l (Pisces, Pure substance)
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### 12.2. Persistence and degradability

#### Phosphoric acid 85% a.r. (7664-38-2)

Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

### 12.3. Bioaccumulative potential

#### Phosphoric acid 85% a.r. (7664-38-2)

Bioaccumulative potential	Does not contain bioaccumulative component(s).
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### 12.4. Mobility in soil

#### Phosphoric acid 85% a.r. (7664-38-2)

Ecology - soil	No (test) data on mobility of the component(s) available.
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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Product/Packaging disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Remove for physico-chemical/biological treatment.
- Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

### SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
UN 1805	UN 1805	UN 1805	UN 1805	UN 1805
<b>14.2. UN proper shipping name</b>				
PHOSPHORIC ACID, SOLUTION	PHOSPHORIC ACID SOLUTION	Phosphoric acid, solution	PHOSPHORIC ACID, SOLUTION	PHOSPHORIC ACID, SOLUTION
<b>Transport document description</b>				
UN 1805 PHOSPHORIC ACID, SOLUTION, 8, III, (E)	UN 1805 PHOSPHORIC ACID SOLUTION, 8, III	UN 1805 Phosphoric acid, solution, 8, III	UN 1805 PHOSPHORIC ACID, SOLUTION, 8, III	UN 1805 PHOSPHORIC ACID, SOLUTION, 8, III
<b>14.3. Transport hazard class(es)</b>				
8	8	8	8	8
				
<b>14.4. Packing group</b>				
III	III	III	III	III
<b>14.5. Environmental hazards</b>				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

#### 14.6. Special precautions for user

##### Overland transport

- Transport regulations (ADR) : Subject to the provisions  
Classification code (ADR) : C1  
Limited quantities (ADR) : 5I  
Excepted quantities (ADR) : E1  
Packing instructions (ADR) : P001, IBC03, LP01, R001  
Mixed packing provisions (ADR) : MP19  
Portable tank and bulk container instructions (ADR) : T4  
Portable tank and bulk container special provisions (ADR) : TP1

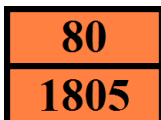


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Tank code (ADR) : L4BN  
Tank special provisions (ADR) : TU42  
Vehicle for tank carriage : AT  
Transport category (ADR) : 3  
Special provisions for carriage - Packages (ADR) : V12  
Hazard identification number (Kemler No.) : 80  
Orange plates :



Tunnel restriction code (ADR) : E

### Transport by sea

Transport regulations (IMDG) : Subject to the provisions  
Special provisions (IMDG) : 223  
Limited quantities (IMDG) : 5 L  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P001, LP01  
IBC packing instructions (IMDG) : IBC03  
Tank instructions (IMDG) : T4  
Tank special provisions (IMDG) : TP1  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-B  
Stowage category (IMDG) : A  
Segregation (IMDG) : SGG1, SG36, SG49  
Properties and observations (IMDG) : Miscible in water. Mildly corrosive to most metals.

### Air transport

Transport regulations (IATA) : Subject to the provisions  
PCA Excepted quantities (IATA) : E1  
PCA Limited quantities (IATA) : Y841  
PCA limited quantity max net quantity (IATA) : 1L  
PCA packing instructions (IATA) : 852  
PCA max net quantity (IATA) : 5L  
CAO packing instructions (IATA) : 856  
CAO max net quantity (IATA) : 60L  
Special provisions (IATA) : A3, A803  
ERG code (IATA) : 8L

### Inland waterway transport

Classification code (ADN) : C1  
Limited quantities (ADN) : 5 L  
Excepted quantities (ADN) : E1  
Carriage permitted (ADN) : T  
Equipment required (ADN) : PP, EP  
Number of blue cones/lights (ADN) : 0

### Rail transport

Transport regulations (RID) : Subject to the provisions  
Classification code (RID) : C1  
Limited quantities (RID) : 5L  
Excepted quantities (RID) : E1  
Packing instructions (RID) : P001, IBC03, LP01, R001  
Mixed packing provisions (RID) : MP19  
Portable tank and bulk container instructions (RID) : T4  
Portable tank and bulk container special provisions (RID) : TP1  
Tank codes for RID tanks (RID) : L4BN  
Special provisions for RID tanks (RID) : TU42  
Transport category (RID) : 3  
Special provisions for carriage – Packages (RID) : W12  
Colis express (express parcels) (RID) : CE8

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Hazard identification number (RID) : 80

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

##### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

##### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

##### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

##### VOC Directive (2004/42)

VOC content : 0 %

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

##### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

### Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Safety Data Sheet (SDS), EU

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.