

## Pyrophosphoric acid

Version number: GHS 2.0  
 Replaces version of: 2020-02-18 (GHS 1)

Revision: 2021-11-30

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

#### 1.1 Product identifier

Identification of the substance	<b>Pyrophosphoric acid</b>
Registration number (REACH)	this information is not available
CAS number	2466-09-3
Article number	A0008914

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

Relevant identified uses	General use
Uses advised against	Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin.

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

Chemos GmbH & Co. KG  
 Sonnenring 7  
 84032 Altdorf  
 Germany

Telephone: +49 871-966346-0  
 Telefax: +49 871-966346-13  
 e-mail: chemos@chemos.de  
 Website: <http://www.chemos.de/>

e-mail (competent person) chemos@chemos.de

#### 1.4 Emergency telephone number

Emergency information service +49 89 1 92 40

Poison centre				
Country	Name	Postal code/ city	Telephone	Telefax
United Kingdom	National Poison Information Centre Medical Toxicology Unit	SE14 5ER London	+44 171 635 91 91	

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.10	acute toxicity (oral)	4	Acute Tox. 4	H302
3.2	skin corrosion/irritation	1	Skin Corr. 1	H314
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318

For full text of abbreviations: see SECTION 16.

## Pyrophosphoric acid

Version number: GHS 2.0  
 Replaces version of: 2020-02-18 (GHS 1)

Revision: 2021-11-30

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

- Signal word                      danger

- Pictograms

GHS05, GHS07



- Hazard statements

H302                      Harmful if swallowed.

H314                      Causes severe skin burns and eye damage.

- Precautionary statements

P260                      Do not breathe dust/fume/gas/mist/vapours/spray.

P280                      Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331      IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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.

P501                      Dispose of contents/container to industrial combustion plant.

### 2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Name of substance                      Pyrophosphoric acid

Identifiers

CAS No                                      2466-09-3

Specific Conc. Limits	M-Factors	ATE	Exposure route
-	-	500 mg/kg	oral

Molecular formula                      H4O7P2

Molar mass                                178 g/mol

## Pyrophosphoric acid

Version number: GHS 2.0  
Replaces version of: 2020-02-18 (GHS 1)

Revision: 2021-11-30

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

##### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

##### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

##### Following skin contact

Rinse skin with water/shower.

##### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

##### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

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

Symptoms and effects are not known to date.

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

none

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media

Water, Foam, ABC-powder

Unsuitable extinguishing media

Water jet

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

Hazardous combustion products

Phosphorus oxides (P<sub>x</sub>O<sub>y</sub>)

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

### SECTION 6: Accidental release measures

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

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

## Pyrophosphoric acid

Version number: GHS 2.0  
Replaces version of: 2020-02-18 (GHS 1)

Revision: 2021-11-30

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

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

Advice on how to contain a spill

Covering of drains, Take up mechanically

Advice on how to clean up a spill

Take up mechanically.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Take precautionary measures against static discharge. Use only in well-ventilated areas. Ground/bond container and receiving equipment.

- Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

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

Managing of associated risks

- Explosive atmospheres

Removal of dust deposits.

- Ventilation requirements

Use local and general ventilation.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

### 7.3 Specific end use(s)

See section 16 for a general overview.

## Pyrophosphoric acid

Version number: GHS 2.0  
Replaces version of: 2020-02-18 (GHS 1)

Revision: 2021-11-30

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
GB	dust		WEL		10					i	EH40/2005
GB	dust		WEL		4					r	EH40/2005

##### Notation

Ceiling-C	ceiling value is a limit value above which exposure should not occur
i	inhalable fraction
r	respirable fraction
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours
	time-weighted average (unless otherwise specified)

#### 8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

In the case of wanting to use the gloves again, clean them before taking off and air them well.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

Particulate filter device (EN 143).

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

### SECTION 9: Physical and chemical properties

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

Physical state	solid
Colour	colourless
Odour	characteristic
Melting point/freezing point	61 – 63 °C

## Pyrophosphoric acid

Version number: GHS 2.0  
Replaces version of: 2020-02-18 (GHS 1)

Revision: 2021-11-30

Boiling point or initial boiling point and boiling range	not determined
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	not applicable
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	not applicable
Kinematic viscosity	not relevant
Solubility(ies)	not determined

### Partition coefficient

Partition coefficient n-octanol/water (log value)	not relevant (inorganic)
---	--------------------------

Vapour pressure	not determined
-----------------	----------------

### Density and/or relative density

Density	not determined
Relative vapour density	information on this property is not available

Particle characteristics	no data available
--------------------------	-------------------

## 9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
--	--

### Other safety characteristics

Solid content	100 %
---------------	-------

## Pyrophosphoric acid

Version number: GHS 2.0  
Replaces version of: 2020-02-18 (GHS 1)

Revision: 2021-11-30

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

#### 10.2 Chemical stability

See below "Conditions to avoid".

#### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

#### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

#### 10.5 Incompatible materials

There is no additional information.

#### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

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

##### Classification according to GHS (1272/2008/EC, CLP)

##### Acute toxicity

Harmful if swallowed.

##### - Acute toxicity estimate (ATE)

Oral 500 mg/kg

##### Skin corrosion/irritation

Causes severe skin burns and eye damage.

##### Serious eye damage/eye irritation

Causes serious eye damage.

##### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

##### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

##### Carcinogenicity

Shall not be classified as carcinogenic.

##### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

##### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

##### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

##### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

**Pyrophosphoric acid**

Version number: GHS 2.0  
Replaces version of: 2020-02-18 (GHS 1)

Revision: 2021-11-30

**11.2 Information on other hazards**

There is no additional information.

**SECTION 12: Ecological information****12.1 Toxicity**

Shall not be classified as hazardous to the aquatic environment.

**12.2 Persistence and degradability**

Data are not available.

**12.3 Bioaccumulative potential**

Data are not available.

**12.4 Mobility in soil**

Data are not available.

**12.5 Results of PBT and vPvB assessment**

Data are not available.

**12.6 Endocrine disrupting properties**

Information on this property is not available.

**12.7 Other adverse effects**

Data are not available.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

Waste treatment-relevant information

Recycling/reclamation of other inorganic materials.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagegings

It is a dangerous waste; only packagegings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

**Remarks**

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

**SECTION 14: Transport information****14.1 UN number or ID number**

ADR/RID/ADN UN 3260

IMDG-Code UN 3260

ICAO-TI UN 3260

**14.2 UN proper shipping name**

ADR/RID/ADN CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

IMDG-Code CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.



## Pyrophosphoric acid


Version number: GHS 2.0  
Replaces version of: 2020-02-18 (GHS 1)

Revision: 2021-11-30

ICAO-TI	Corrosive solid, acidic, inorganic, n.o.s.
Technical name	Pyrophosphoric acid
<b>14.3 Transport hazard class(es)</b>	
ADR/RID/ADN	8
IMDG-Code	8
ICAO-TI	8
<b>14.4 Packing group</b>	
ADR/RID/ADN	II
IMDG-Code	II
ICAO-TI	II
<b>14.5 Environmental hazards</b>	non-environmentally hazardous acc. to the dangerous goods regulations
<b>14.6 Special precautions for user</b>	
Provisions for dangerous goods (ADR) should be complied within the premises.	
<b>14.7 Maritime transport in bulk according to IMO instruments</b>	
The cargo is not intended to be carried in bulk.	

### Information for each of the UN Model Regulations

#### **Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information**

Classification code	C2
Danger label(s)	8
	
Special provisions (SP)	274
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 kg
Transport category (TC)	2
Tunnel restriction code (TRC)	E
Hazard identification No	80
Emergency Action Code	2X


#### **International Maritime Dangerous Goods Code (IMDG) - Additional information**

Marine pollutant	-
Danger label(s)	8
	
Special provisions (SP)	274
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 kg

## Pyrophosphoric acid

Version number: GHS 2.0  
Replaces version of: 2020-02-18 (GHS 1)

Revision: 2021-11-30

EmS	F-A, S-B
Stowage category	B
Segregation group	1 - Acids
<b>International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information</b>	
Danger label(s)	8
	
Special provisions (SP)	A3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	5 kg

### SECTION 15: Regulatory information

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

##### Relevant provisions of the European Union (EU)

###### Deco-Paint Directive

VOC content	0 %
-------------	-----

###### Industrial Emissions Directive (IED)

VOC content	0 %
-------------	-----

###### National inventories

Country	Inventory	Status
AU	AICS	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed
KR	KECI	substance is listed
NZ	NZIoC	substance is listed
TW	TCSI	substance is listed

###### Legend

AICS	Australian Inventory of Chemical Substances
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
TCSI	Taiwan Chemical Substance Inventory

#### 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

## Pyrophosphoric acid

Version number: GHS 2.0  
Replaces version of: 2020-02-18 (GHS 1)

Revision: 2021-11-30

### SECTION 16: Other information

#### Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
3.1		CAS No: change in the listing (table)	yes
9.1	Appearance		yes
9.1	Other safety parameters		yes
9.1		Lower and upper explosion limit: not determined	yes
9.1	Evaporation rate: not determined		yes
9.1	Explosion limits of dust clouds: not determined		yes
9.1		Decomposition temperature: not relevant	yes
9.1		Kinematic viscosity: not relevant	yes
9.1	- n-octanol/water (log KOW): this information is not available	Partition coefficient n-octanol/water (log value): not relevant (inorganic)	yes
9.1		Density and/or relative density	yes
9.1	Vapour density: this information is not available		yes
9.1	Viscosity: not relevant (solid matter)		yes
9.1	Explosive properties: none		yes
9.1	Oxidising properties: none		yes
9.1		Particle characteristics: no data available	yes
9.2		Information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant	yes
9.2		Other safety characteristics	yes
11.2		Information on other hazards: There is no additional information.	yes
12.6	Other adverse effects: Data are not available.	Endocrine disrupting properties: Information on this property is not available.	yes
14.1	UN number: 3260	UN number or ID number	yes
14.1		ADR/RID/ADN: UN 3260	yes
14.1		IMDG-Code: UN 3260	yes

## Pyrophosphoric acid

Version number: GHS 2.0  
Replaces version of: 2020-02-18 (GHS 1)

Revision: 2021-11-30

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.1		ICAO-TI: UN 3260	yes
14.2	UN proper shipping name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.	UN proper shipping name	yes
14.2		ADR/RID/ADN: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.	yes
14.2		IMDG-Code: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.	yes
14.2		ICAO-TI: Corrosive solid, acidic, inorganic, n.o.s.	yes
14.3	Class: 8 (corrosive substances)		yes
14.3		ADR/RID/ADN: 8	yes
14.3		IMDG-Code: 8	yes
14.3		ICAO-TI: 8	yes
14.4	Packing group: II (substance presenting medium danger)	Packing group	yes
14.4		ADR/RID/ADN: II	yes
14.4		IMDG-Code: II	yes
14.4		ICAO-TI: II	yes
14.7	UN number: 3260		yes
14.7	Proper shipping name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.		yes
14.7	Class: 8		yes
14.7	Packing group: II		yes
14.7	UN number: 3260		yes
14.7	Proper shipping name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.		yes
14.7	Class: 8		yes
14.7	Packing group: II		yes
14.7	UN number: 3260		yes
14.7	Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s.		yes

## Pyrophosphoric acid

Version number: GHS 2.0  
Replaces version of: 2020-02-18 (GHS 1)

Revision: 2021-11-30

Section	Former entry (text/value)	Actual entry (text/value)	Safety-rel- evant
14.7	Class: 8		yes
14.7	Packing group: II		yes
16		Abbreviations and acronyms: change in the listing (table)	yes
16	Key literature references and sources for data: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU. Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).	Key literature references and sources for data: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU. Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).	yes

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN	Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code

## Pyrophosphoric acid

Version number: GHS 2.0  
Replaces version of: 2020-02-18 (GHS 1)

Revision: 2021-11-30

Abbr.	Descriptions of used abbreviations
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.