

**meta-Phosphoric acid p.a., pieces**

article number: **CN91**  
Version: **GHS 1.0 en**

date of compilation: 2018-03-08

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

**1.1 Product identifier**

Identification of the substance	<b>meta-Phosphoric acid</b>
Article number	CN91
Registration number (REACH)	This information is not available.
EC number	253-433-4
CAS number	37267-86-0

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

<b>Identified uses:</b>	laboratory chemical laboratory and analytical use
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**1.3 Details of the supplier of the safety data sheet**

Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:** +49 (0) 721 - 56 06 0**Telefax:** +49 (0) 721 - 56 06 149**e-mail:** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)**Website:** [www.carlroth.de](http://www.carlroth.de)

Competent person responsible for the safety data sheet : Department Health, Safety and Environment

**e-mail (competent person)** : [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

**1.4 Emergency telephone number**

Emergency information service **Poison Centre Munich: +49/(0)89 19240**

## SECTION 2: Hazards identification

**2.1 Classification of the substance or mixture****Classification acc. to GHS**

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC. This substance does not meet the criteria for classification.

**2.2 Label elements****Labelling GHS**

not required

**Signal word** not required

**2.3 Other hazards**

There is no additional information.

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### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Name of substance	meta-Phosphoric acid
EC number	253-433-4
CAS number	37267-86-0
Molecular formula	( HPO <sub>3</sub> ) <sub>n</sub>

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures



##### General notes

Take off contaminated clothing.

##### Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

##### Following skin contact

Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

##### Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

##### Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

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

Irritation, Cough, Breathing difficulties

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

none

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media



##### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings  
water spray, foam, dry extinguishing powder, carbon dioxide (CO<sub>2</sub>)

##### Unsuitable extinguishing media

water jet

**meta-Phosphoric acid p.a., pieces**article number: **CN91****5.2 Special hazards arising from the substance or mixture**

Non-combustible.

**Hazardous combustion products**

In case of fire may be liberated: phosphorus oxides (PxOy)

**5.3 Advice for firefighters**

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Avoid contact with skin and eyes.

**6.2 Environmental precautions**

Keep away from drains, surface and ground water.

**6.3 Methods and material for containment and cleaning up****Advices on how to contain a spill**

Covering of drains.

**Advices on how to clean up a spill**

Take up mechanically.

**Other information relating to spills and releases**

Place in appropriate containers for disposal.

**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**

Avoid dust formation. When not in use, keep containers tightly closed.

**Advice on general occupational hygiene**

Keep away from food, drink and animal feedingstuffs.

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

Keep container tightly closed. Store in a dry place.

**Incompatible substances or mixtures**

Observe hints for combined storage.

**Consideration of other advice****• Ventilation requirements**

Use local and general ventilation.

**• Specific designs for storage rooms or vessels**

Recommended storage temperature: 15 – 25 °C.

**7.3 Specific end use(s)**

No information available.

**meta-Phosphoric acid p.a., pieces**article number: **CN91****SECTION 8: Exposure controls/personal protection****8.1 Control parameters****National limit values****Occupational exposure limit values (Workplace Exposure Limits)**

Data are not available.

**8.2 Exposure controls****Individual protection measures (personal protective equipment)****Eye/face protection**

Use safety goggle with side protection.

**Skin protection****• hand protection**

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

**• type of material**

NBR (Nitrile rubber)

**• material thickness**

&gt;0,11 mm

**• breakthrough times of the glove material**

&gt;480 minutes (permeation: level 6)

**• other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

**Respiratory protection**

Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P2 (filters at least 94 % of airborne particles, colour code: White).

**Environmental exposure controls**

Keep away from drains, surface and ground water.

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### SECTION 9: Physical and chemical properties

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

##### Appearance

Physical state	solid (acc. to product description)
Colour	colourless
Odour	odourless
Odour threshold	No data available

##### Other physical and chemical parameters

pH (value)	~ 2 (33 g/l, 20 °C)
Melting point/freezing point	200 – 250 °C
Initial boiling point and boiling range	>500 °C
Flash point	not applicable
Evaporation rate	no data available
Flammability (solid, gas)	These information are not available
<u>Explosive limits</u>	
• lower explosion limit (LEL)	this information is not available
• upper explosion limit (UEL)	this information is not available
Explosion limits of dust clouds	these information are not available
Vapour pressure	<0.001 hPa at 20 °C
Density	2.2 – 2.4 g/cm <sup>3</sup> at 20 °C
Vapour density	This information is not available.
Relative density	Information on this property is not available.
<u>Solubility(ies)</u>	
Water solubility	>1,500 g/l at 20 °C
<u>Partition coefficient</u>	
n-octanol/water (log KOW)	This information is not available.
Auto-ignition temperature	Information on this property is not available.
Decomposition temperature	no data available
Viscosity	not relevant (solid matter)
Explosive properties	Shall not be classified as explosive
Oxidising properties	none

#### 9.2 Other information

There is no additional information.

**meta-Phosphoric acid p.a., pieces**article number: **CN91****SECTION 10: Stability and reactivity****10.1 Reactivity**

This material is not reactive under normal ambient conditions.

**10.2 Chemical stability**

Hygroscopic solid.

**10.3 Possibility of hazardous reactions**

Violent reaction with: Alkalis, Alcohols, Alkaline earth metal, Metals, Acids, Strong oxidiser, Hydrogen peroxide

**10.4 Conditions to avoid**

Humidity.

**10.5 Incompatible materials**

aluminium, iron, Steel

**10.6 Hazardous decomposition products**

Hazardous combustion products: see section 5.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Shall not be classified as acutely toxic.

**Skin corrosion/irritation**

Shall not be classified as corrosive/irritant to skin.

**Serious eye damage/eye irritation**

Shall not be classified as seriously damaging to the eye or eye irritant.

**Respiratory or skin sensitisation**

Shall not be classified as a respiratory or skin sensitiser.

**Summary of evaluation of the CMR properties**

Shall not be classified as germ cell mutagenic, carcinogenic nor 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.

**Symptoms related to the physical, chemical and toxicological characteristics****• If swallowed**

data are not available

**• If in eyes**

data are not available

**• If inhaled**

Irritating to respiratory system, cough, breathing difficulties

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- **If on skin**

data are not available

- **Other information**

None

## SECTION 12: Ecological information

### 12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

#### Aquatic toxicity (acute)

Endpoint	Value	Species	Exposure time
LC50	3 - 3.25 mg/l	bluegill ( <i>Lepomis macrochirus</i> )	96 h
EC50	>375 mg/l	daphnia magna	48 h

### 12.2 Process of 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 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods



Consult the appropriate local waste disposal expert about waste disposal.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

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### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

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

## SECTION 14: Transport information

<b>14.1</b>	UN number	<b>3453</b>
<b>14.2</b>	UN proper shipping name	<b>PHOSPHORIC ACID, SOLID</b>
	Hazardous ingredients	Meta-Phosphoric acid
<b>14.3</b>	Transport hazard class(es)	
	Class	8 (corrosive substances)
<b>14.4</b>	Packing group	III (substance presenting low danger)
<b>14.5</b>	Environmental hazards	none (non-environmentally hazardous acc. to the dangerous goods regulations)

**14.6 Special precautions for user**

Provisions for dangerous goods (ADR) should be complied within the premises.

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**

The cargo is not intended to be carried in bulk.

**14.8 Information for each of the UN Model Regulations**

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

UN number	3453
Proper shipping name	PHOSPHORIC ACID, SOLID
Particulars in the transport document	UN3453, PHOSPHORIC ACID, SOLID, 8, III, (E)
Class	8
Classification code	C2
Packing group	III
Danger label(s)	8



Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
Transport category (TC)	3
Tunnel restriction code (TRC)	E
Hazard identification No	80
<b>Emergency Action Code</b>	<b>2X</b>

- **International Maritime Dangerous Goods Code (IMDG)**

UN number	3453
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Proper shipping name	PHOSPHORIC ACID, SOLID
Particulars in the shipper's declaration	UN3453, PHOSPHORIC ACID, SOLID, 8, III
Class	8
Marine pollutant	-
Packing group	III
Danger label(s)	8



Special provisions (SP)	-
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
EmS	F-A, S-B
Stowage category	A
Segregation group	1 - Acids

- **International Civil Aviation Organization (ICAO-IATA/DGR)**

UN number	3453
Proper shipping name	Phosphoric acid, solid
Particulars in the shipper's declaration	UN3453, Phosphoric acid, solid, 8, III
Class	8
Packing group	III
Danger label(s)	8



Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg

## SECTION 15: Regulatory information

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

#### National inventories

Substance is listed in the following national inventories:

Country	National inventories	Status
AU	AICS	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed

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Country	National inventories	Status
JP	CSCL-ENCS	substance is listed
KR	KECI	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed

### Legend

AICS	Australian Inventory of Chemical Substances
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
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
PICCS	Philippine Inventory of Chemicals and Chemical Substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

## 15.2 Chemical Safety Assessment

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

## SECTION 16: Other information

### 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 européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DGR	Dangerous Goods Regulations (see IATA/DGR)
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
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
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)

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Abbr.	Descriptions of used abbreviations
vPvB	very Persistent and very Bioaccumulative

**Key literature references and sources for data**

- UN Recommendations on the Transport of Dangerous Good
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

**List of relevant phrases (code and full text as stated in chapter 2 and 3)**

not relevant.

**Disclaimer**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.