



Specialized in chemicals

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Material Safety Data Sheet

Phosphorus, red

Section 1: Chemical Product and Company Identification

1.1 Product identifiers

Trade name: Phosphorus, red

Molecular formula: P

CAS Nr: 7723-14-0

Molecular weight: 30.97

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

Identified uses : For laboratory tests and assays only, as described in the European Pharmacopoeia.

1.3 Details of the supplier of the safety data sheet

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Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable solids (Category 1), H228

Chronic aquatic toxicity (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

F Highly flammable R11

R16

R52/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word Danger

Hazard statement(s)

H228 Flammable solid.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P273 Avoid release to the environment.

Supplemental Hazard

Statements

none

2.3 Other hazards - none

Section 3: Composition/information on ingredients

3.1 Substances

Formula : P

Molecular Weight : 30,97 g/mol

CAS-No. : 7723-14-0

EC-No. : 231-768-7

Index-No. : 015-002-00-7

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Red phosphorus		
CAS-No. 7723-14-0 EC-No. 231-768-7 Index-No. 015-002-00-7	Flam. Sol. 1; Aquatic Chronic 3; H228, H412	<= 100 %

Hazardous ingredients according to Directive 1999/45/EC

Component	Classification	Concentration
Red phosphorus		
CAS-No. 7723-14-0 EC-No. 231-768-7 Index-No. 015-002-00-7	F, R11 - R16 - R52/53	<= 100 %

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

Section 4: First Aid Measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

no data available

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Oxides of phosphorus

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

6.4 Reference to other sections

For disposal see section 13.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.Keep away from sources of ignition

- No smoking.Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Heat sensitive.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8: Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de,

test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

a) Appearance Form: powder

Colour: red brown

b) Odour no data available

c) Odour Threshold no data available

d) pH ca.3 at 10 g/l at 37 °C

e) Melting point/freezing point Melting point/range: 280 °C - lit.

f) Initial boiling point and boiling range no data available

g) Flash point not applicable

h) Evaporation rate no data available

i) Flammability (solid, gas) The substance or mixture is a flammable solid with the category 2.

j) Upper/lower flammability or explosive limits no data available

k) Vapour pressure 0,04 hPa at 21 °C

l) Vapour density no data available

m) Relative density 2,34 g/mL at 25 °C

n) Water solubility 0,3 g/l at 20 °C - slightly soluble

o) Partition coefficient: noctanol/water no data available

p) Auto-ignition temperature > 300 °C at 1.013 hPa

q) Decomposition temperature no data available

r) Viscosity no data available

s) Explosive properties no data available

t) Oxidizing properties no data available

9.2 Other safety information

no data available

Section 10: Stability and Reactivity Data

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Sulphur compounds, Oxidizing agents, Copper, Oxygen, Bases

10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

Section 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - female - > 15.000 mg/kg

(OECD Test Guideline 401)

Skin corrosion/irritation

Skin - rabbit

Result: No skin irritation - 24 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - rabbit

Result: No eye irritation - 24 h

(OECD Test Guideline 405)

Respiratory or skin sensitisation

Buehler Test - guinea pig

Result: Does not cause skin sensitisation.

(OECD Test Guideline 406)

Germ cell mutagenicity

Hamster

fibroblast

Result: negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

RTECS: TH3495000

Depending on the intensity and duration of exposure, effects may vary from mild irritation to severe destruction of tissue., Vomiting, Diarrhoea, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12: Ecological Information

12.1 Toxicity

Toxicity to fish static test LC50 - Danio rerio (zebra fish) - 33,2 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 10,5 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) - 18,3 mg/l - 72 h (OECD Test Guideline

201)

Toxicity to bacteria Respiration inhibition EC50 - Sludge Treatment - > 1.000 mg/l - 3 h (OECD Test Guideline 209)

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

Harmful to aquatic life with long lasting effects.

Section 13: Disposal Considerations

13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

Section 14: Transport Information

14.1 UN number

ADR/RID: 1338

IMDG: 1338

IATA: 1338

14.2 UN proper shipping name

ADR/RID: PHOSPHORUS, AMORPHOUS

IMDG: PHOSPHORUS, AMORPHOUS

IATA: Phosphorus, amorphous

14.3 Transport hazard class(es)

ADR/RID: 4.1

IMDG: 4.1

IATA: 4.1

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

14.6 Special precautions for user

No data available

Section 15: Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

Section 16: Other Information

Full text of H-Statements referred to under sections 2 and 3.

Aquatic Chronic Chronic aquatic toxicity

Flam. Sol. Flammable solids

H228 Flammable solid.

H412 Harmful to aquatic life with long lasting effects.

Full text of R-phrases referred to under sections 2 and 3

F Highly flammable

R11 Highly flammable.

R16 Explosive when mixed with oxidizing substances.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.