

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 5.0 Revision Date 11.10.2012

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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifiers**

Product name : Phosphomolybdic acid hydrate

Product Number : 221856
Brand : Sigma-Aldrich
CAS-No. : 51429-74-4**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheetCompany : Sigma-Aldrich Company Ltd.
The Old Brickyard
NEW ROAD, GILLINGHAM
Dorset
SP8 4XT
UNITED KINGDOMTelephone : +44 (0)1747 833000
Fax : +44 (0)1747 833313
E-mail address : eurtechserv@sial.com**1.4 Emergency telephone number**

Emergency Phone # : +44 (0)1747 833100

2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Oxidizing solids (Category 3)

Skin corrosion (Category 1B)

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

Contact with combustible material may cause fire. Causes burns.

2.2 Label elements**Labelling according Regulation (EC) No 1272/2008 [CLP]**

Pictogram



Signal word : Danger

Hazard statement(s)

H272

May intensify fire; oxidiser.

H314

Causes severe skin burns and eye damage.

Precautionary statement(s)

P220

Keep/Store away from clothing/ combustible materials.

P280

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

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 or doctor/ physician.

Supplemental Hazard Statements none

According to European Directive 67/548/EEC as amended.

Hazard symbol(s)



R-phrases(s)

R 8

Contact with combustible material may cause fire.

R34

Causes burns.

S-phrases(s)

S17

Keep away from combustible material.

S26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39

Wear suitable protective clothing, gloves and eye/face protection.

S45

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : Molybdophosphoric acid

Formula : $\text{H}_3\text{Mo}_{12}\text{O}_{40}\text{P} \cdot x\text{H}_2\text{O}$

Molecular Weight : 1,825.25 g/mol

Component		Concentration
Phosphomolybdic acid hydrate		
CAS-No.	51429-74-4	-
EC-No.	234-713-5	

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

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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

Cough, Shortness of breath, Headache, Nausea, Vomiting

4.3 Indication of any immediate medical attention and special treatment needed

no data available

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, Molybdenum oxides

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.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

Do not let product enter drains.

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.

6.4 Reference to other sections

For disposal see section 13.

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. Keep away from heat and sources of ignition. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end uses

no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

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

Face shield and safety glasses 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.

Body Protection

Complete suit protecting against chemicals, 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).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance	Form: crystalline Colour: yellow
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	Melting point/range: 79 - 90 °C
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)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	1.62 g/cm ³ at 25 °C
n) Water solubility	no data available
o) Partition coefficient: n-octanol/water	no data available
p) Autoignition temperature	no data available
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

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Organic materials, Powdered metals

10.6 Hazardous decomposition products

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

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

Potential health effects

Inhalation

May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion

May be harmful if swallowed. Causes burns.

Skin

May be harmful if absorbed through skin. Causes skin burns.

Eyes

Causes eye burns.

Signs and Symptoms of Exposure

Cough, Shortness of breath, Headache, Nausea, Vomiting

Additional Information

RTECS: Not available

12. ECOLOGICAL INFORMATION**12.1 Toxicity**

no data available

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

no data available

12.6 Other adverse effects

no data available

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. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**14.1 UN number**

ADR/RID: 3084

IMDG: 3084

IATA: 3084

14.2 UN proper shipping name

ADR/RID: CORROSIVE SOLID, OXIDIZING, N.O.S. (Phosphomolybdic acid hydrate)

IMDG: CORROSIVE SOLID, OXIDIZING, N.O.S. (Phosphomolybdic acid hydrate)

IATA: Corrosive solid, oxidizing, n.o.s. (Phosphomolybdic acid hydrate)

14.3 Transport hazard class(es)

ADR/RID: 8 (5.1)

IMDG: 8 (5.1)

IATA: 8 (5.1)

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

no data available

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

no data available

16. OTHER INFORMATION**Further information**

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