

MATERIAL SAFETY DATA SHEET

• PT. NUANSA KIMIA SEJATI • ☎93589712

Date of issue : 10.08.1997

According to EC Directive 91/155/EEC

1. Identification of substance/preparation and of the company/undertaking

Identification of the product

Product Name : Phosphoric acid, 85%

Use of the substance/preparation

: Chemical Production/Process, reagent analysis, pharmaceutical

Company/undertaking identification

Company : * CHINA *

Emergency telephone no : Please contact PT. Nuansa Kimia Sejati Phone: +62-21-55767226 or 021 70125001

2. Composition/information on ingredients

Synonyms : Orthophosphoric acid; White phosphoric acid

CAS-NO : 7664-38-2

EC No : 231-633-2

Chemical formula : H₃PO₄

3. Hazards identification

Causes burns

4. First aid measures

After inhalation : Fresh air, call in physician

After skin contact : wash off with plenty of water. Dab with Poly Ethylene Glycol 400. Immediately remove contaminated clothing

After eyes contact : rinse out with plenty of water with the eyelid held wide open for at least 10 minutes. Immediately call in ophthalmologist if necessary.

After swallowing : make victim drink plenty of water if necessary several liters, avoid vomiting (risk of perforation). Immediately call in physician. Do not attempt to neutralize.

5. Fire-fighting measures

Suitable extinguishing media :

In adaption to materials stored in the immediate neighbourhood.

Special Risks :

Non Combustible, Ambient fire may liberate hazardous vapours. The following may develop in even of fire : Phosphorous oxide.

Special Protective equipment for fire fighting :

Do not stay in dangerous zone without self contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Other information :

Prevent fire fighting water from entering surface water or groundwater.

Contain escaping vapours with water

6. Accidental release measures

Person related precautionary measures :

Do not inhale vapours/aerosols. Avoid substance contact . Ensure supply of fresh air in enclosed

Environmental protection measures :

Do not allow to enter sewerage system

Procedure of cleaning / absorption

Take up with liquid absorbent and neutralizing material (e.g. Chemizorb 101595). Forward to disposal. Cleaned up affected area.

7. Handling and storage

Handling

No Further requirements.

Storage

Tightly closed. Dry. Above + 15°C.

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8. Exposure controls/personal protection

Specific control parameter

EC

Name	Ortho - Phosphoric Acid
Value	1 mg/m ³

Personal protective equipment :

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substance handled.
The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection : required when vapours/aerosol are generated. Filter P1 (acc. to DIN 3181) for solid particle of inert substances.

Eyes protection : required

Hand protection :

In full contact

Glove material	Nitrile rubber
Layer thickness	0.11 mm
Breakthrough time	> 480 Mn

In splash contact

Glove material	Nitrile rubber
Layer thickness	0.11 mm
Breakthrough time	> 480 Min

The protective gloves to be used must comply with the specification of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 741 Dermatril ®L (full contact) and 741 Dermatril ®L (splash contact). The breakthrough time state above were determined by KCL in laboratory test acc. to EN 374 with samples of the recommended gloves type.

This recommendation apply only to the product stated in the material safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving or mixing with other substance and under condition deviating from those stated in EN374. Pls. contact the supplier of CE-approved gloves.

Acid resistant protective clothing

Industrial hygiene :

Immediately change contaminated clothing. Apply skin protective barrier cream. Wash hands and face after working with substance.

9. Physical and chemical properties

Form	: Liquid
Colour	: Colourless
Odour	: Odourless
pH Value (20°C) at 100 g/l H ₂ O	: < 0.5
Viscosity kinematic (25°C)	: 30.5 mm ² /s
Melting point	: -21 °C
Boiling point	: 158 °C (decomposition)
Ignition temperature	: not combustible
Flash point	: not flammable
Explosion limits	
Lower	: not applicable
Upper	: not applicable
Vapour pressure (20°C)	: 2 hPa
Density (20°C)	: 1.71 g/cm ³
Solubility in water (20°C)	: soluble

10. Stability and reactivity

Condition to be avoided

Strong heating

Substances to be avoided

Metals, metal alloys : formed could be hydrogen.

Hazardous decomposition products

In the event of fire. See chapter 5

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Further information

Hygroscopic;

Incompatible with iron/iron containing compounds, steel, aluminium and their compounds.

Hydrogen may form upon contact with metals (danger of explosions!).

11. Toxicological information

Acute toxicity

LC₅₀ (inhalation, rat): >0.21 mg/L / 4 h (IUCLID) (calculated on the pure substance)

LD₅₀ (oral, rat): 1530 mg/kg (IUCLID) (calculated on the pure substance)

LD₅₀ (dermal, rabbit) : 2740 mg/kg (calculated on the pure substance)

Specific symptoms in animal studies :

Eye irritation test (rabbit) : burn (IUCLID)

Skin irritation test (rabbit) : burn (OECD 404)

Subacute to chronic toxicity

Sensitization :

Experience in man : No sensitizing potential.

Bacterial mutagenicity : ames test ; Negative.

Further Toxicological information

Applicable to the toxicologically determinant component :

After inhalation of dust : irritations symptoms in the respiratory tract

After skin contact : burn

After eyes contact : Conjunctivitis, burns. Risk of blindness

After swallowing : burn, strong pain (risk of perforation).

Systemic effects; shock. Spasms.

Further Data

The product should be handled with the care usual when dealing with chemicals

12. Ecological information

Biological degradation

Inorganic substance. Does not cause biological oxygen deficit.

Ecotoxic effects :

Biological effects :

Harmful effect on aquatic organisms. Caustic even in diluted form. Harmful effect due to pH shift.

Fish toxicity :Gambusia affinis LC₅₀ : 138 mg/L /96 h (calculated on the pure substance)

Aquatic organisms LC₅₀ : 100-1000 mg/l/96 h (calculated on the pure substance)

Bacterial toxicity : activated sludge EC₅₀ : 270 mg/l (calculated on the pure substance)

Further ecological data:

Do not allow to enter waters, waste water or soil.

13. Disposal Considerations

Product

Chemicals must be disposed of in compliance with the respective national regulations.

Packaging

The product packaging must be disposed of in compliance with the country - specific regulations.

14. Transport information

Road & rail ADR, RID

UN 1805 Phosphorsaeure, fluessig, 8, III

Inland waterway AND, ADNR not tested

Sea IMDG code

UN 1805 Phosphoric acid, liquid, 8. III

EMS F-A S-B

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Air CAO, PAX

Phosphoric acid liquid, 8, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.

15. Regulatory information

Labeling according to EC directives :

Symbols	C	Corrosive
R-Phrases	34	Cause burns
S-Phrases	26-36/37/39-45	

In case of contact with eyes, rinse immediately with plenty of water, and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

EC No	207-838-8	EC Label
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16. Other information

Text of any R phrases referred to under heading 2:

34 Cause burns

Reason for alternation General update

Regional Representative This information is given on the authorized material safety data sheet in your country

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.