

MATERIAL SAFETY DATA SHEET

Status as per 01.07.2005

1. Identification of the substance / preparation and company

Product details

Product number: 12004

Ident No.: P2062900

Product name: **Orthophosphoric <25% aqueous solution**

Use of substance / preparation: Chemical Reagent

Manufacturer / supplier details

Supplier/ manufacturer Mikrogen GmbH, Floriansbogen 2-4, D-82061 Neuried

Tel.: +49 (0) 89 54801-0 Fax.: +49 (0) 8954801-100

email: mikrogen@mikrogen.de

2. Composition / information on ingredients

Chemical characterisation

Acid

Chemical name: orthophosphoric acid

CAS Number: N/A (soluble in water)

EC Number: N/A

Hazardous ingredients:

Orthophosphoric acid: <25%
CAS Number: 7664-382
Symbol: Xi
Risk (R) Phrases R36/38
S Phrases S24/25

EC Number: 231-633-2

3. Hazard identification

Irritating to skin and eyes.

4. First-aid measures

- **In case of contact with eyes** flush thoroughly with water for at least 10 minutes. Seek MEDICAL HELP.
- **In case of inhalation** remove yourself from the hazardous area, rest, and keep warm. In serious cases, or if the victim has been exposed to the fumes for a long time, SEEK MEDICAL HELP
- **In case of contact with skin** wash it off the affected areas of skin with plenty of water. Remove contaminated clothing and wash before wearing again. SEEK MEDICAL HELP, unless the victim has only been exposed to the substance for a short time.
- **In case of ingestion** rinse your mouth out thoroughly with water, drink plenty of water and SEEK MEDICAL HELP

5. Fire-fighting measures

Particular hazards:

Not inflammable. Can give off toxic fumes in the event of fire (phosphorus oxides)

Suitable extinguisher

Should be consistent with the surroundings.

Wear breathing apparatus to enter the hazardous area. Do not discharge extinguisher water into watercourses or the water table.

6. Accidental release measures

Wear the relevant protective clothing.

Use absorbent material to soak it all up, transfer to a container and organise a waste disposal company to remove it. Wash the contaminated area thoroughly with water and detergent.

In the case of a large spillage, add sand or soil as binders. Both solids and liquids should then be transferred to containers. Any residue should be treated in the same way as small spillages.

7. Handling and storage

Handling:

Avoid contact with eyes and skin. Wash hands and face thoroughly after working with the material. You should remove contaminated clothing and wash before wearing again.

Unsuitable materials: various metals.

Storage:

Store at room temperature (15 to 25 °C is recommended). Keep container tightly closed and protect from direct sunlight and humidity.

8. Exposure limit and personal protective equipment

British exposure limits:

OES – Orthophosphoric acid

Long term: 1mg/m³ Short term 2 mg/m³ (IOELV)

Personal protective equipment:

Depending on the amount being processed, technical measures to control and prevent contact must be given priority. These measures could comprise covering the processing areas or mechanical ventilation.

- Ventilation:**Fume cupboard necessary if fumes or vapour given off.
- Breathing equipment:**Independent breathing equipment necessary if fumes or vapour occur.
- Gloves:**Rubber or plastic. Corroded or leaking gloves must be removed and replaced immediately.
- Eye protection:**Safety goggles or face mask.
- Other precautions:**Plastic apron, plastic sleeves and plastic boots – if working with large quantities

9. Physical and chemical properties

General information:

Form	liquid
Colour	colourless
Odour	odourless

Data relevant to health, safety and the environment:

Boiling point	>100 °C
Density (g/ml)	1.2-1.4
Solubility in water	miscible in any proportion
pH	< 1 (100 g/l H ₂ O)
Flammability:	Not inflammable

10. Stability and reactivity

Stable.

- Unsuitable materials:** iron or compounds containing iron, steel, and aluminium
- Substances to avoid:** alkaline solutions, metals (forms hydrogen), metal oxides, organic nitro compounds.

The possibility of a reaction with other substances cannot be excluded

Hazardous decomposition products: phosphorus oxides.

11. Toxicological information

- In case of inhalation: irritation of the mucous membrane, coughing and breathing problems
- In case of contact with skin: irritation and burning effects
- In case of contact with eyes: conjunctivitis, burns
- In case of ingestion: burns, intense pain (risk of perforation!), shock, fits.

Further information

No details

12. Ecological information

There is the possibility that it may be harmful to the environment if it is not handled and disposed of by experts. The harmful effect is caused by a drift in the pH.

Other ecological information:

Phosphorus compounds can contribute to eutrophication of watercourses, depending on their concentration.

Remarks:

Do not discharge into watercourses, drains or the ground!

13. Disposal considerations

Chemical residues are generally classified as hazardous waste and as such come under regulations controlled by local authorities. Contact your local official waste disposal facility for advice, or rinse out empty containers thoroughly before using again.

14. Transport information

Not governed by land and inland navigation transport regulations (ADR)!

15. Regulatory information

Classification and labelling in accordance with EC directives

Symbol: Xi Irritant

R phrases: R36 / 38 Irritating to eyes and skin

S phrases: S24 / 25 Avoid contact with eyes and skin

In the case of contact with eyes, rinse out thoroughly with plenty of water and seek medical advice. At work wear suitable protective clothing, protective gloves and protective goggles / face mask. In case of an accident or of feeling unwell see a doctor immediately (if possible show this Material Data Safety Sheet).

EC No: N/A

16. Other information

Status as per: 01.07.2005

Issued: 29.08.2005

Wording of all R phrases from chapter 2

R36 / 38 Irritating to eyes and skin