



**Profert (Pty) Ltd**  
Material Safety Data Sheet (MSDS)

1. Product and Company identification

Identification of the substance or preparation

Product name	- <b>Phosphoric acid</b> (Liquid)	Serial Number : P011
Material uses	- Fertilizer	Date issued : Jan 2012
Synonyms	- Orthophosphoric acid - Profos 23P	Pages : 4
Supplier address	- Profert (Pty) Ltd 43 Ross Street Potchefstroom 2531 Tel nr : +27 18 293 3530	

2. Composition / Information on ingredients

Composition	- 52/53% Phosphorous pent oxide ( $P_2O_5$ ), Phosphorous 23% P.
Molecular formula	- $H_3PO_4$
Appearance	- Pale straw colour, viscous liquid, slight sediment.

3. Hazards identification

Corrosive	- Contact with liquid causes severe damage to skin and eyes.
Effects and symptoms	- Causes burns to skin, eyes and gastrointestinal tract. Mist irritant to the respiratory tract. Fluid build-up on the lung (Pulmonary oedema) may occur up to 48 hours after exposure and could prove fatal.

4. First Aid measures

Specific immediate treatment	
Inhalation	- Remove patient from exposure, keep warm and at rest. Obtain medical attention. Do not use mouth-to-mouth, if victim has inhaled or ingested the substance. Apply artificial respiration if breathing has ceased or shows signs of failing. Use a pocket mask with a one-way valve.
Ingestion	- DO NOT induce vomiting. Never give anything by mouth to an unconscious person. If not unconscious wash out mouth with water and give a cup of water to drink. Get medical attention if symptoms appear.
Skin contact	- In case of contact, immediately flush skin with plenty of water for at least 20 minutes. Remove contaminated clothing and shoes. Keep warm and quiet. Get medical attention if symptoms appear.
Eye contact	- In case of contact, immediately flush eyes with plenty of water for at least 20 minutes. Hold eyelids open while washing. Check for and remove any contact lenses. Get medical attention if symptoms appear.
Further professional medical assistance	- Symptomatic treatment and supportive therapy as indicated. Administer oxygen if necessary. Cold wet compresses should be applied to the affected areas to relieve pain. Following severe exposure the patient should be kept under medical review for at least 48 hours as delayed Pulmonary oedema may develop.

## 5. Fire-fighting measures

Extinguishing Media	
Special fire-fighting procedures	- Non-Combustible. Requirements should be determined by surrounding materials. Above 300 °C toxic oxides of phosphorous fumes are emitted.
Protection of fire-fighters	- Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

## 6. Accidental release measures

Personal precautions	- As a minimum use gloves and eye/face protection.
On site precautions	- Isolate hazard area. Stop leak if possible without risk. Remove sources of heat and flame. Notify occupational and environmental Authorities. Keep unauthorized and unprotected personnel from entering the area.
Environmental precautions and clean-up methods	- Prevent entry into waterways, sewers, basements or confined areas. Stop leak if possible without risk. Keep portable emergency pump available on site.
Spill kit	- Drizit (An oil absorbent) to be kept on site.
Small spillages	- Neutralize by adding alkaline material (Soda ash, Lime) with extreme care. Absorb with an inert material (e.g., vermiculite, dry sand, earth). Do not use combustible materials, such as saw dust. Pump or shovel into well labelled containers for disposal. Wash spillage area with large amounts of water.
Large spillages	- Recover if practicable. Dam or dyke large spillages. Pump or shovel into well labelled containers for disposal. If not practicable, neutralize by adding alkaline material (Soda ash, Lime) with extreme care. Wash spillage area with large amounts of water.

Note: See section 8 for personal protective equipment and section 13 for waste disposal.

## 7. Handling and Storage

Handling	- Avoid contact with eyes / skin and do not breathe mist / vapour.
Storage	- Keep in original container if possible, away from strong bases and metals. Keep containers indoors and tightly closed (Crystallisation may occur in cold weather).
Packaging materials	- Use original container.

## 8. Exposure Controls / Personal Protection

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|--------------------------|--|
| Skin and body protection | - Full length chemical resistant overalls / apron, exhaust ventilation and the use of barrier cream are recommended. |
| Hand protection          | - Gloves (Impervious)  |
| Eye protection           | - Goggles and dust masks are required if fume levels are above the OEL.  |



## 9. Physical and chemical properties

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|-----------------------|--|
| Appearance            | - Colourless clear syrupy liquid.                    |
| Boiling Point         | - 171 °C   |
| Freezing Point        | - 28 °C  |
| Specific Gravity (SG) | - 1.68   |
| Vapour Pressure       | - 0,023 mm Hg at 20 °C                               |
| Viscosity             | - < 2 mPa.s (in 10 g/litre solution) at 25 °C        |
| Solubility            | - Miscible with water, Other - miscible with ethanol |

## 10. Stability and Reactivity

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|----------------------------------|--|
| Hazardous reaction               | - May react violently if in contact with bases and with metals forming Hydrogen. |
| Hazardous decomposition products | - Produces a potential explosive when mixed with Nitro methane.                  |

## 11. Toxicological information

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|--------------------|--|
| Eye contact        | - May cause permanent damage if eye is not immediately irrigated. Painful burning, redness or blurred vision.  |
| Skin contact       | - May cause severe burns. Painful burns and redness.   |
| Inhalation         | - May cause corrosion, pain, vomiting, burns to the mouth and throat and perforation of the Oesophagus. Inhalation of the fumes may cause fluid build-up on the lung (Pulmonary oedema) may occur up to 24 hours after exposure and could prove fatal. |
| Ingestion          | - Will cause corrosion of and damage to the gastrointestinal tract. Sore throat, stomach pain, nausea.   |
| Long term exposure | - The severity of acute effects is such that repeated or prolonged exposure is unlikely.   |

## 12. Ecological information

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|---|------------------------------|
| Users should ensure that they comply with local, provincial and national environmental legislation. |                              |
| Environmental affects, behaviour and fate   | - Toxic to aquatic organism. |

### 13. Disposal considerations

Method of disposal	- Waste must be disposed of in accordance with local, provincial and national environmental control regulations. Recover, reclaim or recycle if practicable.
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### 14. Transport information

Hazchem Code	- 2R
UN number	- 1805
Group	- 111
Class	- 8
ERG number	- 154
EAC	- 60

### 15. Regulatory information

EEC Hazard Classification	- 8
Risk and Safety phrases	- Users should ensure that they comply with any relevant local, provincial and national legislation. Risk and Safety Phrases according to ECC Directive 67/548/ECC. Keep out of reach of children.
S 26	- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 34	- Causes burns
Users should ensure that they comply with any relevant local, provincial and national legislation.	

### 16. Other information

This MSDS summarises at the date of issue our best knowledge of the health, safety and environmental hazard information related to the product and in particular how to safely handle, use, store and transport the product. Since Profert (Pty) Ltd cannot anticipate or control the conditions under which the product may be handled, used, stored or transported, each user must, prior to usage, review this MSDS in the context of how the user intends to handle, use, store or transport the product and beyond, and communicate such information to all relevant parties.

We shall not assume any liability for the accuracy or completeness of the information contained herein or any advice given unless there has been gross negligence on our part. Profert (Pty) Ltd emphasizes safe use of all materials, promotes sustainable practices and encourages preservation of the environment.