


Safety Data Sheet

PHOSTEMIC 400 SL - Reg. No: L 10458 (Act No 36 of 1947)

| 1) IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER. | |
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| Product name: | Phostemic 400 SL |
| Other means of identification | Phosphorous acid 400 g/L SL |
| Recommended use: | Fungicide |
| Chemical Name: | Phosphorous acid |
| Recommended use: | Fungicide |
| Restrictions on use: | Agriculture |
| UN number: | 3264 |
| Distributed by: | MERIDIAN AGRITECH P O BOX 436 MODDERFONTEIN TEL 011 8228509 FAX 0866901386 MOBILE: 0834006056 www.agritech.co.za |
| Emergency Number: | POISON CENTRE (UNITAS HOSPITAL) 012 664 1100 WESTERN CAPE POISONS TELEPHONE SERVICE 0861 555 777 RAPID SPILL RESPONSE 0800 775 3305 GRIFFON POISON CENTRE: 082 446 8946 |
| 2) CLASSIFICATION OF THE SUBSTANCE / MIXTURE: | |
| Classification of the substance/mixture: | Acute Toxicity Category 4 (Oral) Acute Toxicity Category 4 (Dermal) Skin Corrosion Category 1A Skin Irritation Category 2 Eye Irritation Category 2 Eye Damage Category 1 STOT SE Category 3 (Respiratory tract) Reproductive Category 2 |
| Label Elements: Globally Harmonized System, EU (GHS): | Pictogram:  Signal Word: Danger <u>Hazard Statements:</u> H302: Harmful if swallowed. H312: Harmful in contact with skin. H314: Causes severe skin burns and eye damage. H315: Causes skin irritation. H318: Causes serious eye damage. H319: Causes serious eye irritation. H335: May cause respiratory irritation. H361: Suspected of damaging fertility or the unborn baby. <u>Precautionary Statements:</u> P262: Do not get in eyes, on skin, or on clothing. P264: Wash face and hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. |

According to Directive 67/548/EEC No. 1272/2008 [CLP]

P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P284: In case of inadequate ventilation wear respiratory protection.
P403+233: Store in a well-ventilated place. Keep container tightly closed.

Hazard Symbols:

C: Corrosive

Xi: Irritant

R-phrase(s):

R5 Heating may cause explosion.

R34 Causes burns.

R36/37/38 Irritating to eyes, respiratory system and skin.

R52 Harmful to aquatic organisms.

S-phrase(s):

S2: Keep out of the reach of children.

S3/9/14 Keep in a cool, well-ventilated place away from caustic soda, chlorates, nitrates, calcium carbide, mild steel, aluminium alloy, brass, tin and galvanized material. Keep away from strong oxidizing agents, strong reducers and water reactive materials.

S13 Keep away from food, drink and animal feedingstuffs.

S23 Do not breathe gas/fumes/vapour/spray.

S24/25 Avoid contact with skin and eyes.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S60 This material and its container must be disposed of as hazardous waste.

S61: Avoid release to the environment. Refer to special instructions/Safety datasheets.

3) COMPOSITION / INFORMATION ON INGREDIENTS:

3.1 Substances:

Not applicable

3.2 Mixtures:

| Chemical name | Concentration | CAS No. | EC No. | Classification according to Regulation EC 1272/2008 (CLP) |
|---------------------|---------------|------------|-----------|--|
| Phosphorous Acid | 400 g/L | 10294-56-1 | 233-663-1 | Acute Tox. Cat. 4 (H302) Skin Corr. Cat. 1A (H314) |
| Potassium Carbonate | 560 g/L | 584-08-7 | 209-529-3 | Skin Irrit. Cat. 2 (H315) Eye Irrit. Cat. 2 (H319) STOT SE Cat. 3 (H335, Respiratory tract) Acute Tox. Cat. 4 (H302) |
| Salicylic Acid | 2 g/L | 69-72-7 | 200-712-3 | Acute Tox. Cat. 4 (H302) Acute Tox. Cat. 4 (H312) Eye Dam. Cat. 1 (H318) Eye Irrit. Cat. 2 (H319) Skin Irrit. Cat. 2 (H315) STOT SE Cat. 3 (H335, Respiratory tract) Repr. Cat. 2 (H361) |

4) FIRST AID MEASURES:

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| <p>Eye contact:</p> <p>Skin contact:</p> <p>Ingestion:</p> <p>Inhalation:</p> <p>Most important symptoms and effects, both acute and delayed:</p> <p>Indication of any immediate medical attention and special treatment needed:</p> | <p>Immediately flush eyes with plenty of water. Remove contact lenses, if worn, and flush eyes with water for at least 20 minutes holding eyelids open. Seek medical assistance if irritation persists.</p> <p>Remove contaminated clothing, leather items and shoes and gently wipe off excess chemical. Wash affected areas thoroughly with non-abrasive soap and water. Do not rub the skin. Seek medical attention if irritation persists. Wash contaminated clothing before re-use.</p> <p>If swallowed DO NOT induce vomiting unless advised to do so by a medical practitioner. Never give anything via mouth to an unconscious person. Seek medical advice immediately. Qualified medical personnel should administer oxygen. If the person is conscious and able, rinse mouth thoroughly with water and give egg whites, large volumes of water or milk to drink. When vomiting occurs, keep head lower than hips to prevent aspiration.</p> <p>Remove victim to well ventilated area and loosen clothing around the neck. Keep victim warm and at rest. Qualified personnel should administer oxygen if breathing is difficult. Immediately seek medical attention.</p> <p>To date no symptoms are known.</p> <p>Symptomatic treatment and supportive therapy as indicated, no known specific antidote. If ingestion occurred, avoid gastric lavage and emesis. The acid should be diluted with large amounts water or milk intake. The ingested acid should be diluted approximately 100-fold.</p> |
| <p>5) FIRE-FIGHTING MEASURES:</p> | |
| <p>Suitable extinguishing media:</p> <p>Unsuitable extinguishing media:</p> <p>Specific Hazards arising from the substance/mixture:</p> <p>Fire-fighting:</p> <p>Protective clothing:</p> | <p>Alcohol-resistant foam, carbon dioxide (CO₂), dry powder.</p> <p>Water spray can be used for cooling of unaffected product, but water contact with the product should be avoided. Water jet, due to contamination/spreading risk.</p> <p>Fire may produce irritating or poisonous vapours, mists or other products of combustion. Avoid breathing fumes.</p> <p>Remove spectators from surrounding area. Use a recommended extinguishing agent. Fight fire from a maximum distance using unmanned hose holders or monitor nozzles. Remove container from affected area if possible without risk. Dike extinguishing media with sand or earth for later disposal, do not allow to reach water or sewer systems. Dispose of debris and contaminated extinguishing water according to regulations. Water can be used to cool unaffected containers but must be contained for later disposal. Avoid pollution of waterways and ground water.</p> <p>Fire-fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.</p> |
| <p>6) ACCIDENTAL RELEASE MEASURES:</p> | |
| <p>Personal precautions, protective equipment and emergency procedures:</p> <p>Environmental precautions:</p> <p>Methods and material for containment and cleaning up:</p> | <p>Do not inhale vapour or spray. Avoid contact with skin and eyes. For personal protection see section 8.</p> <p>Do not contaminate waterways, drains and groundwater. If contamination of waterways, drains, rivers or lakes is unavoidable, warn the local authorities (Police and Department of Water/Environmental affairs) immediately.</p> |

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| | <p>Do not eat, drink or smoke during the clean-up process. Clear area of unprotected personnel and animals. Wear protective gear as mentioned in section 8 below. Contain the spill and stop leak provided it is safe to do so. Soak up minor spills with suitable absorbent, non-combustible material such as sand, sawdust, diatomaceous earth, etc. Shovel or sweep absorbed material and collect in a suitable container which can be labelled and sealed for disposal according to local regulations. Do not flush spilled material into drains or waterways. Should spilled product come into contact with water, dike water and dispose of together with spilled material. Clean contaminated areas and equipment thoroughly with water containing detergent and collect washings for disposal. For large spills, dike spill area and pump off product. Collect washings to avoid any contamination of surface and ground water, water supplies and drains. Deal with spillages immediately.</p> <p>Used absorbent material and washings should be stored in labelled, sealable containers until these can be disposed of according to local regulations. Open burning or dumping of this material is prohibited.</p> |
| 7) HANDLING & STORAGE: | |
| <p>Precautions for Safe Handling:</p> <p>Conditions for Safe Storage, including any incompatibilities:</p> | <p>Do not use near sources of sparks or open flames. Irritating to skin and eyes. Harmful in contact with skin and if swallowed. Avoid contact with eyes and skin. Do not breathe in fumes or spray. Ensure adequate ventilation. Suitable protective equipment should be used as a preventative measure during spraying and mixing. Do not eat, drink, smoke or apply cosmetics while using. Before removing gloves, clean thoroughly with a non-abrasive soap and water. Wash hands thoroughly with non-abrasive soap and water after handling, and before eating, tobacco use, drinking, or using the toilet. Protective clothing should be removed immediately after use washed before reuse. Do not apply directly to areas where surface water is present or to intertidal areas below the mean high-water mark. Dispose of water used to clean equipment suitably to avoid contamination of water sources.</p> <p>Store under lock and key in original container tightly closed and in a dry, cool, well-ventilated area. Store away from sources of ignition and away from foodstuffs, fertilisers and seeds. Keep away from children, uninformed persons and animals. Do not contaminate other pesticides, fertilisers, water, food or feed by storage or disposal. Local regulations should be complied with.</p> |
| 8) EXPOSURE CONTROL / PERSONAL PROTECTION: | |
| <p>Appropriate Engineering Controls:</p> <p>Control Parameters: Occupational exposure limits:</p> <p><u>PERSONAL PROTECTIVE EQUIPMENT:</u> Clothing:</p> <p>Gloves:</p> <p>Eye protection:</p> <p>Respiratory protection:</p> <p>Emergency eye wash:</p> | <p>It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.</p> <p>NA</p> <p>Employee must wear appropriate protective (impervious) clothing to prevent prolonged skin exposure with this substance.</p> <p>Employee must wear appropriate chemical-resistant gloves, preferably PVC or nitrile gloves, to prevent prolonged skin contact with this substance.</p> <p>The use of safety goggles or full-face shield is recommended.</p> <p>Wear suitable respiratory equipment, especially during spraying, such as a face mask.</p> <p>Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide</p> |

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| | an eye wash fountain or appropriate alternative within the immediate work area for emergency use. |
| 9) PHYSICAL & CHEMICAL PROPERTIES: | |
| Appearance: | Clear liquid |
| Odour: | Characteristic |
| Solubility: | Soluble |
| pH: | 4.5 |
| Odour threshold: | Not available |
| Melting point / Freezing point | Not available |
| Initial boiling point and boiling range | Not available |
| Flash point: | N/A. May burn exposed to heat or flames, but does not readily ignite. |
| Evaporation rate: | Not available |
| Flammability (solid, gas) | Not flammable, not combustible. |
| Upper/ lower flammability or explosive limits: | Not available |
| Vapour pressure: | Not available |
| Vapour density: | Not available |
| Relative density: | 1.56 g/ml |
| Partition coefficient: n-octanol/water | Not available |
| Auto-ignition temperature: | Not available |
| Decomposition Temperature: | Not available |
| Viscosity: | Not available |
| 10) STABILITY & REACTIVITY: | |
| Reactivity: | Stable under normal storage conditions. |
| Chemical Stability: | When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture. Thermally and chemically stable. |
| Possibility of hazardous reactions: | Will react to metal with evolution of hydrogen. Thermal decomposition products include highly toxic oxides of phosphorous, flammable hydrogen and phosphine gasses. |
| Conditions to avoid: | Keep the product in a dry, cool place at temperatures below 30°C. Protect from sunlight, open flames, and sources of heat. |
| Incompatible materials: | Avoid contact with caustic soda, chlorates, nitrates, calcium carbide, mild steel, aluminium alloy, brass, tin and galvanized material. The product is incompatible with strong oxidizing agents, strong reducers and water reactive materials. |
| Hazardous decomposition product(s): | Fire may produce irritating or poisonous vapours, mists or other products of combustion. Avoid breathing fumes. |
| 11) TOXICOLOGICAL INFORMATION: | |
| Acute Toxicity: | |
| Oral: | LD ₅₀ 3000 mg/kg |
| Dermal: | LD ₅₀ >5000 mg/kg |
| Inhalation: | LC ₅₀ 5000 mg/L (4h) |
| Skin Corrosion/Irritation: | Moderate irritation |
| Serious Eye Damage/Irritation: | Moderate irritation. Causes burns to exposed areas. |
| Respiratory or Skin Sensitization: | Not a sensitizer |
| Germ Cell Mutagenicity: | NA |
| Carcinogenicity: | NA |
| Reproductive Toxicity: | Suspected of damaging fertility or the unborn baby. |
| STOT-SE: | May cause respiratory irritation. |
| STOT-RE: | NA |
| Aspiration Hazard: | NA |
| 12) ECOLOGICAL INFORMATION: | |
| Ecotoxicity: | |

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| Birds: Fish: Daphnia: Algae: Worms: Bees: | Not available. LC ₅₀ >100 mg/L. Slightly toxic. Not available. Not available. Practically non-toxic. |
| Persistence and Degradability: | DT ₅₀ in soil 16 weeks. |
| Bioaccumulative Potential: | Not available |
| Mobility in Soil: | Not available |
| 13) DISPOSAL CONSIDERATIONS: | |
| Waste Disposal: | Waste should not be re-used. Do not contaminate rivers, dams, water sources, food or feed by disposal. Open dumping or burning of this pesticide is prohibited. Wastes resulting from the use of this product should be disposed of according to local regulations. Do not dispose of undiluted chemical on site. |
| Container Disposal: | Refer to the product label for instructions. Triple rinse empty containers before disposal in the following manner: Invert the container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed to a drip. Thereafter, rinse the container three times with a volume of water equal to a third of that of the container volume. Add rinsing to the contents of the spray tank before destroying the container in the prescribed manner. Empty containers should not be burnt; puncture and flatten containers and dispose at a licensed landfill site according to local regulations. Prevent contamination of water sources, food or feed by disposal. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE. If recycling, replace cap and take containers to the designated recycling point. If containers cannot be recycled, they should be disposed of together with the waste chemical according to local regulations. |
| 14) TRANSPORTATION INFORMATION: | |
| Road Transport ADR / IRD: | UN NUMBER: 3264 UN Proper Shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphorous acid) Transport Hazard Class: 8 Corrosives Packaging group: III Labelling no: 8 Environmental Hazards: Not applicable Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling. |
| Maritime Transport IMDG / IMO: | UN NUMBER: 3264 UN Proper Shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphorous acid) Transport Hazard Class: 8 Corrosives Packaging group: III Labelling no: 8 Environmental Hazards: Not applicable Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling. |
| Air Transport ICAO / IATA: | UN NUMBER: 3264 UN Proper Shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphorous acid) Transport Hazard Class: 8 Corrosives Packaging group: III Labelling no: 8 Environmental Hazards: Not applicable Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling. |
| Transport in Bulk (according to Annex II of MARPOL 73/78 and the IBC Code): | Not applicable |
| 15) REGULATORY INFORMATION: | |
| Safety, health and environmental regulations/legislation specific for the substance/mixture: | For the user of this plant-protective product applies: 'To avoid risks to man and the environment, comply with the instructions for use.' (Directive 1999/45/EC, Article 10, No. 1.2) |
| Chemical Safety Assessment: | Advice on product handling can be found in sections 7 and 8 of this safety data sheet. |
| 16) OTHER INFORMATION: | |

All information and instructions provided in this Safety Data Sheet (SDS) are based on the current state of scientific and technical knowledge at the date indicated on the present SDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear.

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Date of issue: 12/09/2018

Abbreviations and acronyms:

1. CAS number: Chemical Abstracts Service number.
2. CLP: Classification, Labelling, Packaging.
3. LD₅₀: Lethal Dose for 50% of the test population.
4. LC₅₀: Lethal Concentration for 50% of the test population.
5. DT₅₀: Half-life
6. GHS: Globally Harmonised System (of Classification and Labelling of Chemicals).
7. STOT: Specific Target Organ Toxicity.
8. SE: Single Exposure.

Literature References:

- GHS: www.ccohs.ca/oshanswers/chemicals/ghs.html
- ECHA: <https://echa.europa.eu/search-chemicals>