

1. Identification

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| Product Code: | 10160-0 | |
| Product Name: | P-51 | |
| Trade Name: | P-51 | |
| Company Name: | Stoller South Africa (Pty) Ltd Stand No. 3, Erf 469, Khokamoya Industrial Park Katoen, White River, 1240 | Phone Number: +27 (0) 13 007 1678 |
| Web site address: | www.stoller-africa.co.za | |
| Email address: | info_africa@stoller-africa.com | |
| Emergency Contact: | Spill Tech | |
| Information: | | +27 (0) 86 100 0366 |
| Synonyms: | Liquid mineral foliar fertilizer (exclusively agricultural use). | |

2. Hazard Identification

Corrosive to metals, Category 1
Acute Toxicity, Oral Category 4



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| GHS Signal Word: | Danger |
| GHS Hazard Phrases: | H290 - May be corrosive to metals. H302 - Harmful if swallowed. |
| GHS Precaution Phrases: | P102 - Keep out of reach of children. P103 - Read label before use. P234 - Keep only in original container. P260 - Do not breathe dust/fumes/gas/mist/vapours/spray P264 - Wash thoroughly after handling P280 - Wear protective gloves/protective clothing/eye protection/face protection. |
| GHS Response Phrases: | P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304+340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+351+388 - IF IN EYES: Rinse cautiously with water for several minutes contact lenses, if present and easy to do. Continue rinsing. P310 - Immediately call POISON CONTRE or doctor/physician. |
| GHS Storage and Disposal Phrases: | P405 - Store locked up. P501 - Dispose of the contents/container in accordance with current legislation. |
| Other hazards that do not result in a rating: | Unavailable. |
| Other information: | Health effects are not expected with the normal use of this product. |

3. Composition and Information on the Ingredients

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| Product type: | Mixture |
| Ingredients or Impurities that contribute to danger: | |
| Common chemical or technical name: | Concentration (g/kg): |
| Phosphorus-based compound | 516.3 |
| Nitrogen-based compound | 10 |

4. First Aid Measures

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| First Aid Measures: | |
| Inhalation: | Remove the victim to a cool, ventilated place, loosening clothes and keeping her at rest. Seek medical assistance if necessary. |
| Skin contact: | Remove contaminated clothing and shoes. Wash the affected areas with soap and water. Seek medical help. |
| Eye contact: | Wash immediately with large amount of water, for at least 10 minutes keeping the eyelids open. Remove lenses from contact if possible. Seek medical help if any symptoms persist. |
| Ingestion: | Repeatedly rinse the mouth with water (only if the victim is conscious) and then drink plenty of water. DO NOT cause vomiting. Seek medical assistance if necessary. |
| Most important symptoms and effects acute or late: | Causes severe skin burns and eye damage. |
| Notes for the doctor: | Treatment is symptomatic and should include measures to correct electrolyte, metabolic and analgesia disorders if necessary. |

5. Fire-Fighting Measures

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| Appropriate extinguishing media: | Use dry chemical powder, carbon dioxide (CO ₂), water or foam. |
| Inadequate means of extinction: | Do not use direct water jet on the product. |
| Specific hazards of the substance or mixture: | Evacuate the area and fight the fire at a safe distance. |
| Fire fighting team protection measures: | Complete protective clothing and self-contained breathing equipment. |

6. Control Measures for Spillage or Leakage

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| Personal Precautions, Protective Equipment and Emergency Procedures: | |
| For staff who are not part of the emergency services: | Wear personal protective equipment. Get people to safety. Avoid contact with eyes and skin. |
| For emergency service personnel: | Use appropriate personal protective equipment (see section 8). |
| Precautions for the environment: | Prevent the product from reaching watercourses, rivers, lakes and sewers. |
| Methods and materials for stating and containment: | unavailable. |
| Isolation of the area: | Immediately isolate the spill or leak area. |



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| Methods and materials for cleaning: | Collect mechanically. Dispose in container for disposal in accordance with current legislation. On paved floor, seek to stop the runoff with sand, expanded vermiculate or similar material. If the soil is reached, remove the contaminated layers of earth until it reaches the uncontaminated soil, collect this material and place in a sealed and properly identified container. In the event of spillage in water bodies, immediately stop the capture for human or animal consumption, contact the nearest environmental agency and the company's emergency center. |
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7. Handling and Storage

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| Safe Handling Precautions: | |
| Prevention of worker exposure: | Appropriate technical measures and work operations should be a priority over the use of personal protective equipment. |
| Fire and explosion prevention: | unavailable. |
| Precautions and guidelines for safe handling: | Handle according to good industrial hygiene and safety practices. Example: not eating, not drinking and not smoking in the work areas; wash hands after handling the chemical; remove contaminated clothing and protective equipment before entering feeding areas and always wear appropriate personal protective equipment (PPE's). |
| Appropriate hygiene measures: | Keep away from food and drink. Wash hands before any break at the end of the working period. During the working period do not eat, drink, smoke or take any medications. Remove contaminated clothing immediately. |
| Inappropriate hygiene measures: | Do not eat, drink or smoke while handling the product. |
| Secure Storage Conditions: | |
| Suitable conditions: | Store the product in a ventilated area away from heat and flames. The storage area must be a dry, covered or protected place against direct exposure to sunlight. Keep in a dry, ventilated place. Conditions that should be avoided, including any incompatibility: avoid excessive heat and moisture. |
| Conditions that should be avoided, including any incompatibility: | unavailable. |
| Packaging Materials: | |
| Recommended: | It should be stored in corrosion-proof, leak-proof, rigid and clearly labeled containers. |
| Inadequate: | unavailable. |

8. Exposure Control and Individual Protection

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| Control Parameters: | | | | | | |
| Occupational Exposure Limits (PPM): | Substance: | NR 15 | OSHA By | TLV -TWA | TLV - STEL | NIOSH |
| | Phosphorus-based compound | No.E. | 1mg/m ³ | 1mg/m ³ | 3 mg/m ³ | No.E. |
| | N.E. - Unspecified | | | | | |

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| Biological indicators: | unavailable |
| Other limits and values: | unavailable |
| Engineering control measures: | Keep emergency shower and eye wash near the workplace. |
| Personal Protection Measures: | |
| Protection of eyes/face and head: | Wear chemical safety glasses or face protector when risk of splashing the product occurs. |
| Skin protection: | Wear gloves and clothing suitable according to personal hygiene standards. |
| Respiratory protection: | In case of inadequate ventilation, use respiratory protection. |
| Hand protection: | Wear waterproof gloves. |
| Thermal hazards: | unavailable. |
| Other information: | unavailable. |

9. Physical and Chemical Properties

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| Aspect: | |
| Fitness: | Liquid. |
| Form: | Homogeneous suspension. |
| Colour: | Clear |
| Odor: | Characteristic odor. |
| Odor limit: | unavailable. |
| pH: | < 1.0 |
| Melting point/freezing point: | unavailable. |
| Initial boiling point: | unavailable. |
| Boiling temperature range: | unavailable. |
| Flash point: | unavailable. |
| Evaporation rate: | unavailable. |
| Flammability (solid, gas): | Not applicable. |
| Lower flammability limit or explosiveness: | unavailable. |
| Maximum flammability or superior explosiveness: | unavailable. |
| Steam pressure: | unavailable. |
| Steam density: | unavailable. |
| Relative density: | 1,63 g/mL. |
| Water solubility at 25°C: | soluble. |
| Water participation coefficient: | unavailable. |
| Autoignition temperature: | unavailable. |
| Decomposition temperature: | unavailable. |
| Viscosity: | unavailable. |

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| Other information: | unavailable. |
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10. Stability and Reactivity

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| Chemical stability: | Stable in proper conditions of use and storage. |
| Reactivity: | None known if used properly. |
| Possibility of dangerous reactions: | No dangerous reaction expected under normal conditions of use. |
| Conditions to avoid: | Heat exposure. Direct exposure to sunlight and high temperatures. |
| Incompatible materials: | unavailable. |
| Hazardous decomposition products: | Under normal storage and use conditions should not form dangerous decomposition products. |

11. Toxicological Information

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| Acute toxicity: | The product is not classified for this danger according to GHS criteria. |
| Skin corrosion/irritation: | Causes severe skin burns and eye damage. |
| Serious eye damage/eye irritation: | The product is not classified for this danger according to GHS criteria. |
| Respiratory or skin sensitisation: | The product is not classified for this danger according to GHS criteria. |
| Germ cell mutagenicity: | The product is not classified for this danger according to GHS criteria. |
| Carcinogenicidade: | The product is not classified for this danger according to GHS criteria. |
| Reproduction clarity: | The product is not classified for this danger according to GHS criteria. |
| Beauty for specific target organs - single exposure: | The product is not classified for this danger according to GHS criteria. |
| Clarity for specific target organs - repeated exposure: | The product is not classified for this danger according to GHS criteria. |
| Aspiration hazard: | The product is not classified for this danger according to GHS criteria. |
| Other information: | |

12. Ecological Information

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| Ecotoxicity: | unavailable. |
| Persistence and degradability: | unavailable. |
| Bioaccumulative potential: | unavailable. |
| Other adverse effects: | unavailable. |

13. Considerations on Final Provision

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| Product: | Treatment, storage, transportation and disposal must comply with applicable National, Provincial and Local regulations. For more information on return and appropriate destination of the product, contact Stoller South Africa. |
| Used packing: | Do not reuse empty packaging. Send for disposal or recycling, through companies licensed and authorized to perform such services. |

14. Transport Information

National and International Regulations:

PRODUCT NOT FRAMED AS DANGEROUS FOR TRANSPORT.

15. Regulatory Information

Specific Regulations on Safety, Health and Environment for Chemicals:

Regulatory Information

The "person in charge" of a facility or vessel, as soon as he or she has knowledge a release of a hazardous substance, report the release immediately to Spill Tech. The number is +27 (0) 86 100 0366, or +27 (0) 83 253 6618.

16. Other Information

Important Information Not Described in previous sections:

This SDS was developed based on current knowledge of the chemical and provides information on protection, safety, health and the environment. It is warned that the handling of any chemical requires prior knowledge of its hazards by the user. It is up to the company that is a product user to promote the training of its employees and contractors. Company formulating and registrant of the product: Stoller.

Meaning of abbreviations:

ANTT - National Land Transport Agency
 ATE - Estimated Acute Toxicity,
 BCF - Bioconcentration Factor,
 CAS - Chemical Abstracts Service,
 CE50 or EC50 - Effective concentration 50%,
 CL50 or LC50 - Lethal concentration 50%,
 DL50 or LD50 - Lethal dose 50%,
 DNEL - Derived No-Effect Level,
 ETAm - Acute Toxicity Estimation (mixture),
 GHS - Globally Harmonised System for the classification and labelling of chemicals,
 ICAO / IATA - "International Air Transport Association",
 IMDG / IMO - "International Maritime Organization",
 NIOSH – National Institute of Occupational and Safety,
 NR 15 - Regulatory Standard 15 - Unhealthy activities and operations,
 OSHA - Occupational Safety & Health Administration,
 PEL - Permissible exposure limit,
 PNEC - Predicted No-Effect Concentration,
 PPM - Parts of steam or gas per million parts of contaminated air, STEL - Short-Term Exposure Limit,
 TLV - Occupational Exposure Limit,
 TWA - Weighted Average Time,