

MSDS – MATERIAL SAFETY DATA SHEET

SWITCH

1. IDENTIFICATION OF THE SUBSTANCE

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| Product Identification: | Brown/Green Liquid |
| Use: | A trace element and natural plant hormone mixture for foliar application, fertigation or pivot application. |
| UN No: | Not regulated |
| Supplier: | Pepperfresh, Zimbabwe |
| RSA reg no. | act 36/1947: |
| Zim reg no. | |
| Zambia reg no. | |
| Emergency number: | +27 84 566 1558 |

2. COMPOSITION/ INFORMATION ON INGREDIENTS

CHEMICAL COMPOSITION:

| | |
|-----------------|--------------|
| Magnesium (Mg) | (9.80 g/kg) |
| Sulphur (S) | (13.00 g/kg) |
| Zinc* (Zn) | (4.50 g/kg) |
| Iron* (Fe) | (2.25 g/kg) |
| Copper* (Cu) | (2.75 g/kg) |
| Manganese* (Mn) | (6.30 g/kg) |
| Boron (B) | (2.65 g/kg) |
| Molybdenum (Mo) | (0.40 g/kg) |

*EDTA Chelated

Other Ingredients: Contains Seaweed (Ecklonia Maxima) Extracts

3. HAZARDS IDENTIFICATION

Emergency Overview

- May cause mild eye and skin irritation.
- Mildly harmful if excessive quantities have been ingested.

Potential Health Effects

Inhalation:
Not harmful if inhaled.

Ingestion:
Mildly harmful if ingested.

Skin Contact:
Causes mild skin irritation. Not significantly absorbed through the intact skin.

Eye Contact:
Causes mild irritation to eyes.

Chronic Exposure:
None observed where product is used under conditions of good industrial hygiene.

Aggravation of Pre-existing Conditions:
No information found.

4. FIRST AID MEASURES

Inhalation:
Remove from exposure to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Keep person at rest and warm. Treat symptomatically and supportively as and when required. Obtain medical advice if necessary.

Ingestion:
Have victim rinse mouth thoroughly with water. Give 1/2 to one glass of water or milk to dilute the material if victim is alert and not convulsing. Do NOT induce vomiting. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomit, rinse mouth and administer more water. Never give anything by mouth to an unconscious person. Seek medical advice immediately.

Skin Contact:
Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation develops or persists. Wash clothing before re-use.

Eye Contact:
Immediately flush eyes with cold water for at least 15 minutes, lifting lower and upper eyelids occasionally. Do NOT allow victim to rub or keep eyes closed. Get medical attention immediately.

Note to Physician:
Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Fire:
Not considered to be a fire hazard. Advise fire brigade of any hazard. Suitable for most extinguishing media.

Fire Extinguishing Media:
Extinguish with water spray, carbon dioxide, foam, and dry chemical.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full-face piece operated in the pressure demand or other positive pressure mode. Fire may produce irritating or poisonous vapours, mists or toxic gasses.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area of spill. Avoid breathing dust. Clear the affected area and protect people. Wear appropriate personal protective equipment as specified in Section 8.

Small Spills: Wash away with plenty of water. Do not contaminate waterways, sewers basements or confined areas.

Large Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. Following product

recovery, flush area with water. Do not contaminate waterways, sewers, basements or confined areas. Place all spill residues in an appropriate container and dispose of in accordance with local regulations.

7. HANDLING AND STORAGE

Handling:

Wash thoroughly after handling. Do not get in eyes, on skin or on clothing. Do not ingest or inhale. Use with adequate ventilation. Observe all warnings and precautions listed for the product.

Personal protection:

Protective equipment must be worn: PVC gloves, waterproof apron, safety boots and a full-face shield. Avoid breathing dust or vapours.

Flammability:

The product poses no flammability hazard.

Storage:

Keep in tightly closed container in a shaded, well-ventilated area, away from heat, sparks and other sources of ignition. Protect against physical damage and frost. Do not contaminate water, food, or feed by storage or disposal.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation system:

In general, dilution ventilation is a satisfactory health hazard control for this substance. Always ensure that the ventilation is adequate in order to maintain the air concentrations below the exposure standards and as low as reasonably possible. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.

Skin Protection:

Wear suitable personal protective equipment i.e. overalls, rubber gloves and boots.

Eye Protection:

Use chemical safety goggles and/or full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Respiratory:

It is recommended that a dust mask must be worn when handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

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| Physical state: | Liquid |
| Colour: | Brown/green |
| Odour: | None |
| Solubility: | NA |
| pH : | 6.5 |
| Boiling Point: | > 100 °C |
| Bulk density: | 1.05 |
| Shelf life: | 3 years |

10. STABILITY AND REACTIVITY

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| Stability: | Stable under ordinary conditions of use and storage. |
| Conditions to avoid: | High temperatures and excessive UV exposure |
| Incompatibilities: | None known. |
| Hazardous Polymerisation: | Will not occur. |
| Thermal Decomposition: | Toxic fumes (oxides of sulphur and manganese) are released when the product decomposes on heating. |
| Reactivity: | Avoid contact with strong bases, strong oxidising agents which may decompose and metals which can corrode. |

11. TOXICOLOGICAL INFORMATION

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| Swallowed: | Ingestion may cause nausea, vomiting, cramps and diarrhoea. Irritation to mouth and throat. |
| Eye: | An irritant to eyes. |
| Skin: | Mildly irritating to skin. |
| Inhaled: | No additional information. |

12. ECOLOGICAL INFORMATION

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| Environmental Fate: | All nutrients present are found in nature and are persistent. |
| Environmental Toxicity: | The product is water soluble and thus aquatically mobile. High concentrations in watercourses may be injurious to aquatic life. |

13. DISPOSAL CONSIDERATIONS

Contaminated absorbents, surplus product (in diluted form), etc., should be buried in approved landfill. Comply with any local legislation applying to waste disposal. Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to an approved waste facility. Dispose of container and unused contents in accordance with local requirements.

14. TRANSPORT INFORMATION

Non-Hazardous.

15. REGULATORY INFORMATION

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| EC Classification: | No information found. |
| National legislation: | Pending |

16. OTHER INFORMATION

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS 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.

It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with this product. If the recipient subsequently produces formulation(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

The information contained herein is provided in good faith but makes no representation as to its comprehensiveness or accuracy. A properly trained person using this product intends this document only as a guide to the appropriate handling of the material. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.