

# MATERIAL SAFETY DATA SHEET

MANUFACTURER: ORGANIC FERTILIZER MANUFACTURERS BOTSWANA



| <b>NPK Granular Mixtures Plus Organic</b> |                         |                       |
|---|-------------------------|-----------------------|
| <b>SOP No: NPK10012018</b>                | <b>REVISION No: 003</b> | <b>EFFECTIVE DATE</b> |
|   |                         | <b>10/1/2018</b>      |

## Contact Details

|                        |   |
|------------------------|---|
| Supplier's Name:       | Organic Fertilizer Manufacturers Botswana |
| Address:               | P.O. Box AD702 ADD<br>Kgale<br>Gaborone   |
| Emergency Telephone:   | (267) 76065264                            |
| Information Telephone: | (267) 76065264                            |
| Date prepared:         | 10/1/2018                                 |

## SECTION: 1 CHEMICAL IDENTIFICATION

|                 |                       |
|-----------------|-----------------------|
| Product:        | NPK Granular mixtures |
| Chemical Class: | Fertilizer            |

## SECTION: 2 INGREDIENTS / IDENTITY INFORMATION

|              |   |
|--------------|---|
| Composition: | All solids chemical and organic fertilizer mixtures and blends NPK (Total % N+P+K 10.20.10 plus Organic, 7.14.7 plus Organic, 14.28.14 plus Organic, 4.2.1 (28) plus Organic, 17.17.17 plus Organic, 2.3.2 (30) plus Organic, 2.3.2 (22) plus Organic, 4.2.1 (28) plus Organic, 2.3.4 (30) plus Organic.  |
| Ingredients: | Granulated mixture of two or three of nitrogenous (3-34% N), phosphatic (3-21% P), potassic (4-33% K), Calkonutrium and Organic Granules. It may contain 0.25-1% Zn, 0.1-0.5% B, 1% Cu and Urea, $\text{NO}_3^-$ , $\text{NH}_4^+$ , $\text{HPO}_4^-$ , $\text{H}_2\text{PO}_4^-$ , $\text{K}^+$ , $\text{Cl}^-$ , $\text{SO}_4^-$ , $\text{Ca}^{++}$ , $\text{Mg}^{++}$ , and in small quantities $\text{OCl}^-$ , $\text{H}_2\text{BO}_3^-$ , $\text{Zn}^{++}$ , $\text{Cu}^{++}$ . |

N/A = Not Applicable

N/D = Not Determined

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## SECTION: 3 PHYSICAL / CHEMICAL CHARACTERISTICS

|                      |  |
|----------------------|--|
| Physical State:      | Dry Prills / Granules  |
| Boiling Point:       | N/A  |
| Vapour Pressure:     | N/A  |
| Specific Gravity:    | N/A  |
| Percent Volatile:    | N/A  |
| Melting Point:       | N/A  |
| Solubility in Water: | Highly soluble, hygroscopic  |
| Appearance:          | White to Black granular, prilled or chipped material (Diameter 0.5 50 5 mm) with some dust present |

## SECTION: 4 FIRE AND EXPLOSION HAZARD DATA

|                                   |  |
|-----------------------------------|--|
| Stability:                        | Stable under recommended storage and handling conditions. Has a high resistance to detonation  |
| Flash Point:                      | N/A  |
| Flammable Limits:                 | Combustible when exposed to high heat, will burn in a fire   |
| Extinguishing Media:              | Water. Unless otherwise instructed by the local fire brigade. Do not use chemical extinguishers, foams or attempt to smother the fire. To be determined by surrounding materials. Material must be cooled and broken up in a fire situation. |
| Special Fire Fighting Procedures: | Use extinguishing media appropriate for surrounding fire, use self-contained breathing units. Thermal decomposition may evolve ammonia.  |

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## SECTION: 5 HEALTH HAZARD DATA

|                          |  |
|--------------------------|--|
| Routes of exposure:      | Eye, skin, inhalation, ingestion   |
| Eyes:                    | Hazardous in case of eye contact   |
| Skin:                    | May cause irritation from abrasion   |
| Inhalation:              | Dust may irritate nose, throat and the respiratory tract which may cause coughing  |
| Ingestion:               | Swallowing large amounts may cause irritation and gastrointestinal disorders in extreme cases.   |
| Health hazards           | No known side effects have been associated with repeated or prolonged exposure   |
| Carcinogenicity          | N/A  |
| Emergency and first Aid: | <b>Eyes:</b> Flush with cool water for 15 minutes. Obtain medical attention if condition persists. Irritating, but does not injure eye tissue.<br><b>Skin:</b> In case of contact, immediately flush with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms appear.<br><b>Inhalation:</b> If inhaled, remove to fresh air area. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.<br><b>Ingestion:</b> Do not induce vomiting. If ingested, seek medical attention as soon as possible. |

## SECTION: 6 PRECAUTIONS FOR SAFE HANDLING AND USE

|  |  |
|--|--|
| If material is released or spilled:              | Spills may be easily cleaned up by sweeping up as much solid as possible and washing remaining spill with copious amounts of water.                      |
| Waste and Disposal Method:                       | Waste must be disposed of in accordance with local, provincial and national environmental control regulations. Recover, reclaim or recycle if practical. |
| Precautions to be taken in Handling and Storing: | Store in cool, dry place away from Children, domestic animals, food and feed products.   |

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## SECTION: 7 STABILITY AND REACTIVITY

|                          |  |
|--------------------------|--|
| Stability:               | The product is stable. Avoid contact with moisture.  |
| Hazardous decomposition: | On exposure to intense heat the material may yield ammonia, chlorine, sublimated ammonium chloride fumes (smoke) oxides of nitrogen. |
| Hazardous reaction:      | Keep away from strong oxidizers and strong reducers which may cause nitration (Keep away from strong bases and acids).               |

## SECTION: 8 ECOLOGICAL INFORMATION

|   |  |
|---|--|
| Users should ensure that they comply with local, provincial and national environment legislation. |  |
| Environmental affects:  | Toxic to aquatic organisms in low concentrations |

## SECTION: 9 CONTROL MEASURES

|  |   |
|--|---|
| Respiratory Protection:                    | Dust mask necessary.  |
| Ventilation:                               | Use ventilation to keep exposure to airborne contaminants below the exposure limit.                             |
| Protective Gloves:                         | Protective gloves necessary (Impervious)  |
| Eye Protection:                            | Protective eye-ware necessary   |
| Other Protective Clothing<br>Or Equipment: | Full length chemical resistant overalls / apron,<br>dust mask   |
| Work/Hygienic Practices:                   | Wash hands after handling compounds and<br>before eating, smoking, using lavatory and at the<br>end of the day. |

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