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# Material Safety Data Sheet

## 1. Identification of the substance/preparation and of the company/undertaking

**Identification of the substance or preparation**

**Product Name** Maxwell Bullet 6-5-10+6Fe

**Use of substance/preparation** Fertiliser

**Company/undertaking identification**

**Manufacturer/Supplier**
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## 2. Composition/information on ingredients

**Substance/Preparation: Preparation**

These products may contain some or all of the following ingredients. Ammonium sulphate, urea, mono and di-ammonium phosphate, normal (single) superphosphate, triple superphosphate, Ferrous Sulphate, potassium chloride (muriate of potash), potassium sulphate, Lignite, organic base, calcium sulphate, and coating materials, such as oil, amine, clay or talc, and secondary nutrients .

## 3. Hazards Identification

### 3.1 Regulatory Classification

The preparation is not classified as dangerous according to EC Directive 67/548/EEC and 1999/45/EC

### 3.2 Physiochemical Hazards

These fertilisers are not themselves hazardous

### 3.3 Human Health

Products are of a low toxicity but prolonged skin or eye contact may cause some irritation.
*Ingestion:* Small quantities are unlikely to cause toxic effects.
Large quantities may give rise to gastro-intestinal disorders.
*Inhalation:* Low toxicity dust but high concentration of air-borne material may cause irritation of the nose and upper respiratory tract with symptoms such as sore throat and coughing. Generally regarded as a nuisance dust with no specific official Occupational Exposure Limit (OEL). Recommend a total inhalable dust standard for nuisance dust of 10 $mg/m^3$ as an 8 hour Time Weighted Average. See HSE Guidance Notes EH40/2005 and HSG 173.
*Molten material:* Will cause burns.
*Fire and thermal decomposition products:* May emit toxic fumes of
Ammonia and oxides of sulphur under intense heat.

### 3.4 Environment

As these fertilisers contain phosphate, heavy spillage may cause adverse environmental impact such as eutrophication in confined surface waters. See Section 12.

### 3.5 Other Hazards

With extreme heating it may melt and further heating can cause decomposition, releasing toxic fumes of Ammonia and oxides of sulphur.

## 4. First Aid Measures

### 4.1 Product

**Skin Contact** Wash the affected area with soap and water

**Eye Contact** Irrigate eyes with copious amounts of eyewash solution or water for at least 10 minutes. Obtain medical advice if symptoms persist.

**Ingestion Do not** induce vomiting. Give milk or water to drink. Obtain medical attention if more than small quantities have been swallowed.

**Inhalation** Remove from source of exposure to dust. Keep warm and at rest. Obtain medical advice if symptoms persist.

### 4.2 Fire and Thermal Decomposition Products

**Skin contact** Wash areas in contact with molten material. Wash copiously with cold water. Seek medical advice.

**Inhalation** Remove from source of exposure to fumes. Keep warm and at rest.

## 5. Fire-fighting Measures

When the fertiliser **is not** directly involved in the fire use the best means available to control the fire.

When the fertiliser **is** involved:-
Evacuate the area.
Avoid breathing the fumes.
Wear an approved self-contained breathing apparatus when fighting a fire or when fumes are being emitted.
Call the fire brigade.
Fight the fire from upwind and from outside the buildings, if possible.
Open doors and windows to give maximum ventilation.
Use plenty of water.
Where combustible material is the source of the fire, extinguish this source as a matter of priority.
Do not allow molten fertiliser to run into drains.
If fire run-off water enters any drain or water course, inform the appropriate water authorities immediately.

## 6. Accidental release measures

### 6.1 Personal precautions

Do not smoke. Avoid dust inhalation. Avoid contact with decomposition products. See also section 8.

### 6.2 Environmental protection

Clean up spillage promptly and place in a clean appropriately labelled container. Do not allow to mix with combustible or organic substances.

Inform the appropriate water authority in the event of accidental watercourse contamination.

### 6.3 Clean Up Methods

Wash contaminated area with large quantities of water.

### 6.4 Disposal

See section 13

## 7. Handling and storage

### 7.1 Handling

Avoid prolonged contact with skin.

Avoid producing and inhaling dust. See also section 8.

Avoid contamination by materials such as diesel oil, grease and other combustible and incompatible materials.

Avoid unnecessary exposure to the atmosphere to prevent moisture pick-up.

Avoid application of heat.

### 7.2 Storage

The basic requirements are the avoidance of involvement in a fire or contamination.
Locate away from sources of heat, fire or explosion.
Keep away from combustible materials and chemical substances taking particular care on farms to ensure that it is not stored near straw, grain, diesel, etc.
Ensure high standard of house-keeping in the storage areas.
**Do not** permit smoking or the use of naked lights in the storage area.
Ensure that any contaminated product or spillage is segregated from normal product and disposed of in conformity with section 13.
Buildings used for storage should be dry and well ventilated; stacks therein should be at least 1 metre from walls, eaves and beams.

### 7.3 Packaging Materials

Polyethylene (PE), polypropylene (PP) and PTFE.

## 8. Exposure controls/personal protection

| | |
|---|---|
| **8.1 Occupational exposure limits** | EH40/2005 Workplace Exposure Limits (published by HSE) specify for dust:<br>TWA 10 mg/m3 (inhalable)<br>TWA 4 mg/m3 (respirable) |

### 8.2 Precautionary and Engineering Measures

Avoid high dust concentration and provide ventilation where necessary.

### 8.3 Personal Protection

Wear suitable gloves when handling the product over long periods.
Use suitable dust respirator if dust concentration is high.
After handling product, wash hands and observe good hygiene practice.

## 9. Physical and chemical properties

### 9.1 General Information – Appearance

| | |
|---|---|
| Colour | White, grey or brown granules unless deliberately coloured during manufacture |
| Odour | Odourless |

### 9.2 Important health, safety and environmental information

| | |
|---|---|
| pH water solution (100g/l) | Usually > 4.5-6 |
| Density | Normally between 900-1100 kg/m$^3$ |
| Solubility | Soluble in water, extent depends on composition<br>Most formulas are hygroscopic. |

## 10. Stability and reactivity

### 10.1 Stability

Stable under normal conditions of storage, handling and use.

### 10.2 Conditions to avoid

High temperature, contamination by incompatible/combustible materials, application of heat and confinement e.g. welding or hot work on equipment or plant which may have contained fertiliser without first washing thoroughly to remove all fertiliser.

### 10.3 Materials to avoid

Combustible and incompatible materials
Strong oxidising agents alkalis and acids.

### 10.4 Hazardous Decomposition Products

Could liberate Ammonia and oxides of sulphur

## 11. Toxicological information

**Potential acute health effects**

Products can be expected to be of low toxicity but prolonged skin or eye contact may cause some irritation.

**11.1 Acute Toxicity**

| Ingredient Name | Test | Result | Route | Species |
|---|---|---|---|---|
| Ammonium Sulphate | LD50 | >2000mg/kg | Oral | Rat |
| Urea | LD50 | >14300mg/kg | Oral | Rat |
| Methylene Urea | LD50 | >10000mg/kg | Oral | Rat |
| Monoammonium phosphate | LD50 | >2000mg/kg | Oral | Rat |
| Diammonium phosphate | LD50 | >2000mg/kg | Oral | Rat |
| Potassium Chloride or sulphate | LD50 | >2000mg/kg | Oral | Rat |
| Ferrous Sulphate Heptahydrate | LD50 | >1770mg/kg | Oral | Rat |
| Ferrous Sulphate Monohydrate | LD50 | >1000mg/kg | Oral | Rat |
| Iron Pyrites | No data | | | |
| Iron Oxide | No data | | | |

**11.2 Contact**

Prolonged contact may cause irritation of the skin and mucous tissues

**11.3 Inhalation**

Prolonged exposure to dust may cause irritation

**11.4 Ingestion**

Small quantities unlikely to cause toxic effect. Large quantities may give rise to gastro-intestinal disorders.

**11.5 Sensitisation**

None reported

**11.6 Chronic or Long-term Effects**

None reported

## 12. Ecological Information

**12.1 Ecotoxicity data**

Low toxicity to aquatic life

**12.2 Mobility**

Fertiliser partially soluble in water

**12.3 Persistence/Degradability**

The ammonium ion is absorbed by soil particles. Phosphates, whether water or citrate soluble, are translocated in the soil over very short distances and are then immobilised. The dissolved potassium ion in the soil solution is absorbed by clay minerals; where these are absent in light soils part of the potassium may be leached.

**12.4 Bio-accumulation**

The product does not show any bio-accumulation phenomena.

**12.5 Other Data**

Keep away from water courses, report any accidental contamination of water courses to the authorities.

## 13. Disposal Considerations

Depending on the degree and nature of contamination/physical deterioration and quantity of the material, dispose of by use on a farm as a fertiliser on a farm, by spreading thinly on open ground or alternatively to an authorised waste facility. Take care to avoid the contamination of watercourses and drains.
Measures should be taken to completely empty the bag of its contents, ensuring that residues of fertiliser do not contaminate the packaging during disposal (incineration, recycling, land filling etc).

## 14. Transport information

Not classified, i e considered non-hazardous material according to the UN Orange Book and international transport codes e g RID (rail), ADR (road) and IMDG (sea).
**Do not** transport with combustible materials, see 10.3.
Ensure that the transport is clean before loading the product.

## 15. Regulatory Information

### 15.1 EC Regulations & Directives

**Regulation 2003/2003/EC relating to fertilisers, OJ 304/1 20.11.2003**

### 15.2 National Regulations

The Fertiliser Regulations 1991, SI No 2197 (as amended in 1995 and 1998)

## 16. Other Information

**Sources of Data and Reference**

Guidance for the Storage, Handling and Transportation of Solid Mineral Fertilizers (EFMA), 2007

This safety data sheet provides health and safety information. The product is to be used in applications consistent with best practice. Individuals handling this product should be informed under COSHH of the recommended safety precautions and should have access to this information. The product information in this data sheet is to the best of Maxwell's knowledge correct as at the date of publication.

The Manufacturer or Supplier does not accept liability for any loss or damage resulting from reliance on this information.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.