

1: Identification of the Substance and Supplier

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| Product Name | MUSTANG |
| Recommended Use | Herbicide |
| Company Details | Orion AgriScience Ltd Unit 1, 15 Sir Gil Simpson Drive, Harewood, Christchurch, 8053 PO Box 39 071, Harewood, Christchurch, 8545 |
| Web Address | www.orionagriscience.co.nz |
| Email Address | orders@orionagriscience.co.nz |
| Telephone Number | (03) 928 2386 (office hours), 0800 674 6627 (free phone) |
| Emergency Telephone | 0800 CHEMCALL (0800 243 622) (24 hours) |
| National Poison Centre | 0800 POISON (0800 764 766) (24 hours) |
| Date of Issue/Revision | July 2015 |

2: Hazards Identification

Hazard Pictograms



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|------------------------------|----------------------------------|
| Priority Identifiers: | Ecotoxic |
| HSNO Classes: | Secondary Identifiers: |
| 6.3B | May cause mild skin irritation |
| 6.4A | May cause eye irritation |
| 9.1A | Very toxic to aquatic organisms |
| 9.2A | Very toxic to some plant species |

3: Composition/ Information on Ingredients

| Ingredient | CAS No | Content (% w/v) |
|---|-------------|-----------------|
| Metsulfuron-methyl (active ingredient) | 74223-64-6 | 60 |
| Other ingredients, filler, surfactants, etc | Proprietary | Remainder |

4: First Aid Measures

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| Skin Contact | In case of contact, immediately wash affected area with soap and water. Wash contaminated clothing before reuse. Seek medical advice if irritation persists. |
| Eye Contact | Hold eyes open and rinse with water for at least 15 minutes. Remove contact lenses if easy to do so. Seek medical advice immediately. |
| Ingestion | Do not induce vomiting. Seek medical advice immediately. |
| Inhalation | Immediately move to fresh air and rest. Maintain half upright position if breathing is difficult. Seek medical advice in feeling unwell. |
| Workplace Facilities | Hand wash facility. Eye wash facility. |
| Advice to Doctor | No specific requirements. Treat symptomatically. |
| National Poison Centre | 0800 POISON (0800 764 766) (24 hours) |

5: Fire-Fighting Measures

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| Fire/Explosion Hazard | May be combustible in a fire. As with many dusts, an explosive air/dust mixture may be formed if rough handling liberates dust in enclosed or poorly ventilated areas |
| HAZCHEM Code | 2Z |
| ERP Guide No | 47 |
| Extinguishing Media | Water spray, foam, dry chemical or CO2. Avoid water jet. |
| Fire Fighting Instructions | During a fire, toxic fumes may be emitted. Wear self-contained breathing apparatus. Contain runoff. |

6: Accidental Release Measures

Exclude non-essential people from the area. Wear protective clothing as described in section 8. Do not inhale dust. Moisten to prevent dusting and carefully sweep up. Place in a waste container. Dispose of safely to a suitable landfill

7: Storage, Handling and Use

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| Storage: | Keep out of reach of children. Store in the original, tightly closed container, in a secure area away from feed or foodstuffs. |
| Handling and Use: | Keep out of reach of children. Avoid contact with eyes and skin. Avoid inhalation of dust or spray mist. When mixing or applying, wear protective clothing as described in section 8. Do not eat, drink or smoke while using. Wash hands and face after use. Wash protective clothing after use. |
| Approved Handler | Required if applied in a wide dispersive manner, or by a commercial contractor. |
| Tracking | Not required. |
| Record Keeping | Record of use must be kept if 3 Kg or more is used in an area within 24 hours, and is likely to enter air or water and leave that place. |
| REI | Until spray has dried |
| Site Requirements under the HSNO Act 1996 and HSNO Regulations: | <ul style="list-style-type: none"> • A location test certificate is not required • A hazardous atmosphere zone is not required • Fire extinguishers are not required • Signage is required for 100 Kg or more • Emergency information is required for 5 Kg or more • An emergency plan is required for more than 100 Kg • Secondary containment is not required. • Separation/Segregation from incompatible substances is not applicable. |
| Additional Requirements | All aspects of storage, handling, use, disposal and record keeping must be in accordance with NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans. |

8: Exposure Control / Personal Protection

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| Tolerable Exposure Limit | None established. |
| Workplace Exposure Standards | <p>Product – None established (Use lowest practicable level).</p> <p>Active ingredient – None established (Use lowest practicable level).</p> <p>Excipients – None established (Use lowest practicable level).</p> |
| Engineering Controls | Limited given nature of use. |
| Personal Protection: | |
| Eye | Safety glasses/goggles when mixing or applying. |
| Skin | Cotton overalls snugly fitting at the neck, wrist and ankle, boots and waterproof gloves. |
| Respiratory | Not required where dust or spray mist is not inhaled. Otherwise, respirator (organic vapour and particulate matter) is required. |

9: Physical and Chemical Properties

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| Appearance | Off White Granules |
| Odour | Non-specific |
| Melting Point | Not available |
| Flash Point | Not applicable |
| Auto ignition Temperature | Not applicable |
| Explosive Limits | Not available. As with many dusts, an explosive air/dust mixture may be formed if rough handling liberates dust in enclosed or poorly ventilated areas. |
| Density | 0.96 g/mL (approx) |
| Vapour Pressure | 3.3×10^{-7} mPa (25°C) (metsulfuron-methyl) |
| Vapour Density | Not volatile |
| Solubility in Water | Dispersible |
| pH | 4 - 7 (1% dispersion) |
| Oxidising Properties | Not an oxidizer |
| Corrosive Properties | Not a corrosive |

10: Stability and Reactivity

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| Stability | Stable under normal conditions. |
| Incompatibility | Avoid mixing with strong acids and alkalis, and oxidizing agents such as chlorine compounds, ammonium nitrate, etc. |
| Decomposition | Decomposition will not occur under normal conditions. |
| Dangerous Reactions | Products arising from combustion or thermal decomposition may be toxic, corrosive or flammable. |

11: Toxicological Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet.

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| Swallowed | Not known (no cases of poisoning known) |
| Eye | Irritation. |
| Skin | Irritation |
| Inhalation | Irritation. |

Note: Symptoms may be delayed for up to 24 hours or more following exposure

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| Acute Toxicity (Active Ingredient) | <ul style="list-style-type: none"> • Acute Oral LD50 (Rat) >5000 mg/kg • Acute Dermal LD50 (Rabbit) >2000 mg/kg • Inhalation LC50 (4 hr) (Rat) >5 mg/l |
| Sensitisation Effects | None |
| Mutagenic Effects | None |
| Carcinogenic Effects | None |
| Reproductive Effects | None |
| Teratogenic (Birth) Effects | None |
| Systemic Effects | None |

12: Ecotoxicity Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet.

The following information is presented in respect of the active ingredient:

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| Ecotoxic Effects | <ul style="list-style-type: none"> • Acute Oral LD50 (Mallard duck) >5000 mg/kg • LC50 (96 hr) (Rainbow trout) >150 mg/l • LC50 (48 hr) (Daphnia) >150 mg/l • LC50 (96 hr) (Green Algae) 100 mg/l |
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- Very toxic to some plant species (selective herbicide)
- Non - toxic to bees.

Environmental Fate

Biodegradable. DT50 (soil) 1 – 5 weeks

Partition Co-Efficient (Kow)

LogP = -1.74 (low)

Environmental Exposure Limit:**Product** - None established**Active Ingredient:** - 8 ng/l (water), 0.52 µg/kg (soil, sediment)

13: Disposal Considerations

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| Product | Dispose of product by using it in accordance with the label. Waste product should be disposed of to a suitable landfill. For disposal of large quantities contact Orion AgriScience Ltd. |
| Container | Dispose of to a suitable landfill or agricultural recycling scheme. Do not burn. Do not use packaging for any other purpose. |

14: Transport Information

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| Dangerous Goods | |
| UN Number | 3077 |
| Proper Shipping Name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (METSULFURON-METHYL 60%) |
| Class | 9 |
| Subsidiary Class | N/A |
| Packing Group | III |
| Additional Information | MARINE POLLUTANT |
| MTQ (Non-Commercial) | 1000 Kg |
| Passenger Service Vehicle: | Maximum quantity 3 Kg |

15: Regulatory

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| HSNO Approval No | HSR000242 |
| ACVM Registration No | P5991 |

16: Other Information

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| Glossary | |
| Approved Handler | For some hazardous substances, persons storing, handling and using must be trained and certified |
| DT50 | Time (days) for 50% reduction in concentration |
| EC50 | Concentration required to produce an effect in 50% of organisms |
| Environmental Exposure Limit | Maximum concentration limit of a substance in an environmental medium, e.g., water, soil. |
| ERP Guide | Dangerous Goods – Initial Emergency Response Guide SNZ HB 76:2008 |
| HAZCHEM Code | Emergency action code for emergency services |
| HSNO | Hazardous Substances and New Organisms |
| LC50 | Concentration that will kill 50% of organisms |
| LD50 | Dose that will kill 50% or organisms |
| MTQ | Maximum Transport Quantity. The maximum amount of dangerous goods that can be transported by road by the user |
| Partition Co-Efficient Kow | Ratio of concentration between octanol and water. Values are given as the log value. A high value indicates a substance may bioaccumulate |
| Record Keeping | Includes a spray diary |
| REI | Restricted Entry Interval – The length of time after application before entry into the treated area is |

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permitted without the use of protective equipment. For indoor environments, this time period commences once ventilation after treatment begins.

Safety Note

A brief document providing hazardous substance information for transport, storage and emergency management purposes

STEL

Short term exposure level

Tolerable Exposure Limit

Maximum concentration limit of a substance above which persons must not be exposed

Tracking

For some hazardous substances, a record must be kept of the transport, storage, sale and use of the product

TWA

Time weighted average

Workplace Exposure Standard

An occupational health standard limiting concentrations of specified substances to which persons are exposed

Wide Dispersive Use

A method of application involving equipment such as boom sprayers, mist blowers, vine sprayers, row sprayers, etc., as well as aerial application. Hand gunning within 30m of a property boundary is also classed as wide dispersive use. Knapsack sprayers are not classed as wide dispersive use

Please Note

Users must ensure that the most up to date version of this safety data sheet is used.

This Safety Data Sheet summarises information on this product, and how to safely handle and use the product. Each user should familiarise themselves with the product label, Safety Note and Safety Data Sheet, and consider the information in the context of how the product will be handled and used, including in conjunction with other products. Orion AgriScience Ltd assumes no responsibility for the accuracy, completeness or suitability of this information. The user is responsible for determining the suitability and accuracy of this information for their particular purposes.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Always read the product label before use.