

### 1: Identification of the Substance and Supplier

<b>Product Name</b>	<b>BASH</b>
<b>Recommended Use</b>	Herbicide
<b>Suppliers Details</b>	Orion AgriScience Ltd Unit 1, 15 Sir Gil Simpson Drive, Harewood, Christchurch, 8053 PO Box 39 071, Harewood, Christchurch, 8545
<b>Web Address</b>	www.orionagriscience.co.nz
<b>Email Address</b>	orders@orionagriscience.co.nz
<b>Telephone Number</b>	(03) 928 2386 (office hours), 0800 674 6627 (free phone)
<b>Emergency Telephone</b>	0800 CHEMCALL (0800 243 622) (24 hours)
<b>National Poison Centre</b>	0800 POISON (0800 764 766) (24 hours)
<b>Date of Issue/Revision</b>	Jan 2025

### 2: Hazards Identification

#### Hazard Pictograms



#### Signal Words

##### Hazard Classes:

Eye irritation (Cat.2)  
Reproductive toxicity (Cat.2)  
Specific target organ toxicity (repeated exposure) (Cat.1)  
Hazardous to the aquatic environment chronic (Cat.3)  
Hazardous to soil organisms  
Hazardous to terrestrial vertebrates

##### Precautionary Statements:

Prevention

#### Danger

##### Hazard Statements:

H319 Causes serious eye irritation  
H361 Suspected of damaging fertility or the unborn child  
H372 Causes damage to organs through prolonged or repeated exposure  
H412 Harmful to aquatic organisms with long lasting effects  
H422 Toxic to the soil environment  
H433 Harmful to terrestrial vertebrates

P101 If medical advice is needed, have product container or label at hand  
P102 Keep out of reach of children  
P103 Read carefully and follow all instructions  
P201 Obtain special instructions before use  
P202 Do not handle until all safety precautions have been read and understood  
P203 Obtain, read and follow all safety instructions before use.  
P264+P265 Wash hands thoroughly after handling. Do not touch eyes.  
P260 Do not breath dust/fume/gas/mist/spray.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/clothing and eye and face protection.  
Keep out of reach of children. When mixing or applying, wear personal protection as described in section 8. Take all reasonable steps to ensure that this product does not cause any significant adverse effects to the environment beyond the application area. Do not apply directly into or onto water.  
P308+P313 If exposed or concerned: get medical advice/attention  
P314 Get medical advice/attention if you feel unwell  
P305+P351+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continuing rinsing.

#### Response

Storage	P337+P313 If eye irritation persists: get medical advice/attention P391 Collect spillage
Disposal	First aid measures described in section 4. Contain and collect spillage for disposal. In an emergency call 111, Police or Fire Brigade. For specialist advice in an emergency only, call 0800 CHEMCALL (0800 243 6225) (24 hrs). P405 Store locked up
	P501 Dispose of contents by using it in accordance with this label. Dispose of the container via AgRecovery after triple rinsing (use the rinsate for spraying).

### 3: Composition/ Information on Ingredients

Ingredient	CAS No	Content (% w/v)
Glufosinate-ammonium (active ingredient)	77182-82-2	20
Other ingredients	Proprietary	Remainder

### 4: First Aid Measures

If medical advice is needed, have product container or label at hand. If exposed or concerned, get medical advice. For advice call the National Poisons Centre or a Doctor.

<b>Ingestion:</b>	Seek medical advice if feeling unwell
<b>Skin Contact:</b>	Wash with plenty of soap and water. Seek medical advice if irritation occurs.
<b>Eye Contact:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if easy to do so. Continue rinsing. Seek medical advice if irritation persists.
<b>Inhalation:</b>	Seek medical advice if feeling unwell
<b>Workplace Facilities:</b>	Hand wash facility. Eye wash facility
<b>Advice to Doctor:</b>	No specific antidote. Treat symptomatically
<b>National Poison Centre</b>	0800 POISON (0800 764 766) (24 hours)

Symptoms of Exposure which could occur if this material is not handled in accordance with instructions:

<b>Ingestion:</b>	Nausea, vomiting, diarrhoea
<b>Skin Contact:</b>	Mild Irritation
<b>Eye Contact:</b>	Irritation and eye damage
<b>Inhalation:</b>	Unknown

### 5: Fire-Fighting Measures

<b>Fire/Explosion Hazard</b>	Non-Flammable
<b>HAZCHEM Code</b>	Not Applicable
<b>ERP Guide No</b>	Not Applicable
<b>Extinguishing Media</b>	Water spray, foam, dry chemical or CO2. Avoid water jet.
<b>Fire Fighting Instructions</b>	During a fire, toxic fumes may be emitted. Wear self-contained breathing apparatus. Contain runoff.
<b>Specific Hazards Arising from Fire</b>	No data available

### 6: Accidental Release Measures

<b>Personal Precautions</b>	Caution: Floors may be slippery if wet. Wear personal protective clothing and equipment as described in section 8. Exclude non-essential people from the area.
<b>Environmental Precautions</b>	Prevent further spillage or leakage. Prevent material from entering drains, waterways, etc.
<b>Clean Up</b>	Absorb spillage with inert material such as spill kit, sand or cat litter. Collect and place in a sealable container for disposal. Wash down affected area with water and detergent. Absorb and collect washings for disposal. Dispose of safely to a suitable landfill.

### 7: Handling and Storage

<b>Storage:</b>	Keep out of reach of children. Store in the original tightly closed container in a locked and secure area.
<b>Handling and Use:</b>	Refer to Prevention statements in section 2 above. Exclude people and animals from the application area, both during application and for the duration of the REI.
<b>REI</b>	Until spray has dried

### 8: Exposure Controls / Personal Protection

<b>Tolerable Exposure Limit</b>	None established
<b>Workplace Exposure Standards</b>	None established
<b>Engineering Controls</b>	Select spray application equipment to minimize exposure to operator and bystanders
<b>Personal Protection:</b>	
<b>Eye</b>	Safety glasses/goggles when mixing or applying
<b>Skin</b>	Chemical resistant overalls snugly fitting at the neck, wrist and ankle, boots and gloves
<b>Respiratory</b>	Not required where spray mist is not inhaled. Otherwise, respirator (organic vapour and particulate matter) is required.

Clean protective equipment after use

### 9: Physical and Chemical Properties

<b>Appearance</b>	Clear Blue Liquid
<b>Odour</b>	Non-specific
<b>Odour Threshold</b>	Does not apply
<b>pH</b>	4.0 – 10.0
<b>Melting Point/Freezing Point</b>	Does not apply
<b>Boiling Point</b>	> 100°C
<b>Flash Point</b>	Does not apply
<b>Flammability</b>	Does not apply
<b>Upper/Lower Flammability Limits</b>	Does not apply
<b>Vapour Pressure</b>	Does not apply
<b>Vapour Density</b>	Does not apply
<b>Relative Density</b>	1.08 g/mL (approx.)
<b>Solubility in Water</b>	Soluble
<b>Partition Coefficient: n-octanol/water</b>	See section 12
<b>Auto ignition Temperature</b>	Does not apply
<b>Decomposition Temperature</b>	Does not apply
<b>Kinematic Viscosity</b>	Does not apply
<b>Particle characteristics</b>	Does not apply

### 10: Stability and Reactivity

<b>Stability</b>	Stable under normal conditions
<b>Hazardous Reactions</b>	None Expected
<b>Incompatibility</b>	None Known
<b>Hazardous Decomposition Products</b>	None Known

### 11: Toxicological Information

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

<b>Acute Oral Toxicity</b>	LD50 > 2000 mg/kg
<b>Acute Dermal Toxicity</b>	LD50 > 5000 mg/kg
<b>Acute Inhalation Toxicity</b>	LD50 > 5 mg/L
<b>Skin corrosion/irritation</b>	Mild Irritant

# SAFETY DATA SHEET

## BASH

Serious eye damage/Eye irritation	Strongly Irritating
Respiratory or skin sensitisation	Information not available
Germ cell mutagenicity	Information not available
Carcinogenicity	Information not available
Reproductive Toxicity	Extended animal feeding studies on glufosinate-ammonium have found changes such as decrease in litter size
Specific Organ Toxicity – Single exposure	Extended animal feeding studies on glufosinate-ammonium have noted an increase in kidney weight at high doses
Specific Organ Toxicity – Repeated exposure	Information not available
Aspiration hazard	Information not available

### 12: Ecological Information

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

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

Ecotoxicity	<ul style="list-style-type: none"><li>Acute Oral LD50 (Japanese quail) &gt;5000 mg/kg</li><li>LC50 (96 hr) (Rainbow trout) 710 mg/l</li><li>LC50 (48 hr) (Daphnia) 560 mg/l</li><li>LD50 (Algae) 37 mg/l</li><li>Toxic to some plant species (selective herbicide)</li><li>Non toxic to bees</li></ul>
Persistence/degradability	Biodegradable. DT50 (soil) 7 days (typical)
Bioaccumulative Potential	Octanol-water partition coefficient                      LogP = -4.01 (low)
Soil Mobility	Soil organic carbon water partitioning coefficient                      Koc = 600 (slightly mobile)
Environmental Exposure Limit:	None established

### 13: Disposal Considerations

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 via AgRecovery. Do not burn. Do not use packaging for any other purpose.

### 14: Transport Information

Dangerous Goods	
UN Number	Not Applicable – Not dangerous for transport
Proper Shipping Name	Not Applicable – Not dangerous for transport
Class	Not Applicable – Not dangerous for transport
Subsidiary Class	Not Applicable – Not dangerous for transport
Packing Group	Not Applicable – Not dangerous for transport
Additional Information	Not Applicable – Not dangerous for transport
MTQ (Non-Commercial)	Not Applicable – Not dangerous for transport

### 15 Regulatory Information

EPA Approval No	HSR007813
ACVM Registration No	P7753
Qualified Person	Required
Certified Handler	Not required

<b>Workplace Only</b>	No
<b>Tracking</b>	Not required
<b>Record Keeping</b>	Not required
<b>Site Requirements under EPA Notice and HSWHS Regs:</b>	<ul style="list-style-type: none"> <li>• A hazardous substance location compliance certificate is not required</li> <li>• A hazardous area is not required</li> <li>• Separation distances for class 3 and class 6 substances to protected places and public places is not applicable</li> <li>• Fire extinguishers are not required</li> <li>• Signage is required for more than 1000 litres</li> <li>• An emergency response plan is required for more than 1000 litres</li> <li>• Secondary containment is required for more than 1000 litres</li> </ul>
<b>Additional Requirements</b>	Refer to NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans

### 16: Other Information

<b>Date of review</b>	10 January 2025
<b>Glossary</b>	
<b>ADE</b>	Acceptable Daily Exposure – A daily dose, received via any route, below which no adverse effects are expected over a lifetime of exposure
<b>ACVM</b>	Agricultural Compounds and Veterinary Medicines group of the Ministry of Primary Industries
<b>Cat.</b>	GHS category
<b>Ceiling</b>	A concentration that should not be exceeded at any time during any part of the working day
<b>Certified Handler</b>	A qualification issued by a Compliance Certifier to handle and use particularly toxic substances (6.1A and 6.1B)
<b>DT50</b>	Time (days) for 50% reduction in concentration
<b>EC50</b>	Concentration required to produce an effect in 50% of organisms
<b>Environmental Exposure Limit</b>	Maximum concentration limit of a substance in an environmental medium, e.g., water, soil.
<b>EPA Notice</b>	Hazardous Property Controls Notice 2017
<b>ERP Guide</b>	Dangerous Goods – Initial Emergency Response Guide SNZ HB 76:2008
<b>GHS</b>	Globally harmonized system of classification and labelling of chemicals
<b>Hazardous Substance Location Compliance Certificate</b>	For locations storing hazard substances of certain classes above threshold quantities
<b>Hazardous Area</b>	A designated area designed for the presence of flammable substances - Refer AS/NZS 60079.10.1:2009
<b>HAZCHEM Code</b>	Emergency action code for emergency services
<b>HSWHS Regs</b>	Health and Safety at Work (Hazardous Substances) Regulations 2017
<b>LC50</b>	Concentration that will kill 50% of organisms
<b>LD50</b>	Dose that will kill 50% of organisms
<b>MTQ</b>	Maximum Transport Quantity. The maximum amount of dangerous goods that can be transported by road by the user
<b>Notification</b>	Advance notice given to neighbours and other affected parties, of details of proposed application, and other details as described
<b>Octanol-Water Partition Coefficient</b>	The partition coefficient of a substance between n-octanol and water, used as the Logarithm base 10 form, as an indicator that a substance may bioaccumulate
<b>PDE</b>	Permitted Daily Exposure - A daily dose below which no adverse effects are expected over a lifetime of exposure
<b>Protected Place</b>	Residential properties, schools, hospitals, kindys, factories, shops, warehouses, etc., and other places where people assemble
<b>Public Place</b>	A place frequented by the public, including roads (does not include private property)

<b>Qualified Person</b>	A requirement for the loader, contractor or person applying the product to hold a qualification such as a GROWSAFE Certificate, Unit Standard 21563, etc.
<b>Record Keeping</b>	Includes a spray diary or other record of application
<b>REI</b>	Restricted Entry Interval – The length of time after application before entry into the treated area is permitted without the use of protective equipment. For indoor environments, this time period commences once ventilation after treatment begins.
<b>Separation Distances</b>	The distances specified in Part 11 and Part 13 of HSWHS Regs between storage and/or use of hazardous substances and protected places and/or public places
<b>Signage</b>	Positioned at entrances to commercial premises providing information on the hazardous substances present
<b>Soil Adsorption Coefficient (Kd)</b>	The ratio of the concentrations of a substance adsorbed onto a solid sorbent to that dissolved in a liquid phase. The higher the value the less mobile the chemical is in soil
<b>Soil Organic Carbon-Water Partitioning Coefficient (Koc)</b>	The ratio of the mass of a chemical that is adsorbed in the soil per unit mass of organic carbon in the soil. The higher the value the less mobile the chemical is in soil
<b>STEL</b>	Short term exposure level – 15 minute time weighted average
<b>Tolerable Exposure Limit</b>	Maximum concentration limit of a substance above which persons must not be exposed
<b>Tracking</b>	For some particularly hazardous substances, a record must be kept of the transport, storage, sale and use of the product
<b>TWA</b>	Time weighted average calculated over an 8 hour working day
<b>Workplace Exposure Standard</b>	An occupational health standard limiting concentrations of specified substances to which persons are exposed
<b>Workplace Only</b>	A product that is restricted to a workplace only and under the supervision of a certified handler
<b>Please Note</b>	

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 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.