

**1: Identification of the Substance and Supplier**

<b>Product Name</b>	<b>VIPER 90DF</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>	Mar 2025

**2: Hazards Identification**

<b>Hazard Pictograms</b>	
<b>Signal Words</b>	<b>Warning</b>
<b>Hazard Classes:</b>	<b>Hazard Statements:</b>
Acute Oral Toxicity (Cat. 4)	H302 Harmful if swallowed
Acute Inhalation Toxicity (4)	H332 Harmful if inhaled
Eye Irritation (Cat. 2)	H319 Causes serious eye irritation
Specific target organ toxicity (repeated exposure) (Cat. 2)	H373 May cause damage to organs through prolonged or repeated exposure
Hazardous to the aquatic environment acute (Cat. 1)	H400 Very toxic to aquatic life
Hazardous to the aquatic environment chronic (Cat. 1)	H410 Very toxic to aquatic life with long lasting effects
Hazardous to soil organisms	H421 Very toxic to the soil environment
Hazardous to terrestrial vertebrates	H433 Harmful to terrestrial vertebrates
<b>Precautionary Statements:</b>	
Prevention	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 P264 Wash hands thoroughly after handling P270 Do not eat, drink or smoke when using this product P260 Do not breathe dust/fume/gas/mist/vapours/spray P271 Use only outdoors or in a well ventilated area P273 Avoid release to the environment P280 Wear eye protection / face protection Avoid contact with eyes and skin. Do not breathe in the dust or spray mist. 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. P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell P330 Rinse mouth P304+P340 IF INHALED: Move person to fresh air and keep comfortable for breathing P312 Call a POISON CENTRE/doctor if you feel unwell
<b>Response</b>	

Storage	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing
Disposal	P337+P313 If eye irritation persists: Get medical advice/attention P391 Collect spillage 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).
	Keep out of reach of children.
	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/w)
Hexazinone (active ingredient)	51235-04-2	90
Other ingredients	Proprietary	Remainder

### 4: First Aid Measures

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

<b>Ingestion:</b>	Rinse mouth. Call a POISON CENTRE/doctor if you feel unwell
<b>Skin Contact:</b>	Wash with plenty of soap and water. Seek medical advice if feeling unwell or 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>	Remove to fresh air and keep at rest in a position comfortable for breathing. 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
<b>Skin Contact:</b>	Irritation
<b>Eye Contact:</b>	Irritation
<b>Inhalation:</b>	Irritation

### 5: Fire-Fighting Measures

<b>Fire/Explosion Hazard</b>	Non-flammable. As with many dusts, an explosive air/dust mixture may be formed if rough handling liberates dust from the granules in enclosed or poorly ventilated areas.
<b>HAZCHEM Code</b>	2Z
<b>ERP Guide No</b>	47
<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>	Wear protective clothing as described in section 8. Do not inhale dust. Exclude non-essential people from the area.
<b>Environmental Precautions</b>	Prevent further spillage or leakage. Prevent material from entering drains, waterways, etc.

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### Clean Up

Moisten to prevent dusting and carefully sweep up. 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 secure area.
<b>Handling and Use:</b>	Keep out of reach of children. Refer to Prevention statements in section 2 above. Keep people and animals away from the area while spraying 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>	The following Standards provide general advice regarding safety clothing and equipment: Respiratory equipment: AS/NZS 1715, Protective Gloves: AS 2161, Occupational Protective Clothing: AS/NZS 4501, Industrial Eye Protection: AS1336 and AS/NZS 1337, Occupational Protective Footwear: AS/NZS2210
<b>Eye</b>	Safety glasses/goggles when mixing or applying
<b>Skin</b>	Cotton overalls snugly fitting at the neck, wrist and ankle, boots and waterproof gloves when mixing and applying
<b>Respiratory</b>	Not required where dust or 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>	Off White Granule
<b>Odour</b>	Mild acrid type smell
<b>Odour Threshold</b>	Does not apply
<b>pH</b>	7.1 (1% dispersion)
<b>Melting Point/Freezing Point</b>	Does not apply
<b>Boiling Point</b>	Does not apply
<b>Flash Point</b>	Does not apply
<b>Flammability</b>	Not flammable
<b>Upper/Lower Flammability Limits</b>	Does not apply. As with many dusts, an explosive air/dust mixture may be formed if rough handling liberates dust in enclosed or poorly ventilated areas
<b>Vapour Pressure</b>	Does not apply
<b>Vapour Density</b>	Does not apply
<b>Relative Density</b>	0.5 Kg/L (approx)
<b>Solubility in Water</b>	Dispersible
<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

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Incompatibility	None Known
Hazardous Decomposition Products	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

Acute Oral Toxicity	LD50 > 300 mg/kg
Acute Dermal Toxicity	LD50 > 5000 mg/kg
Acute Inhalation Toxicity	LD50 > 1 mg/L
Skin corrosion/irritation	Irritant
Serious eye damage/Eye irritation	Irritant
Respiratory or skin sensitisation	Information not available
Germ cell mutagenicity	Information not available
Carcinogenicity	Information not available
Reproductive Toxicity	Information not available
Specific Organ Toxicity – Single exposure	Information not available
Specific Organ Toxicity – Repeated exposure	Ingestion of hexazinone at high doses is damaging to the blood and hematopoietic (blood cell production) system
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 (Bobwhite quail) 2258 mg/kg</li><li>LC50 (96 hr) (Rainbow trout) 320 - 420 mg/l</li><li>LC50 (Daphnia) 442 mg/l</li><li>Non toxic to bees</li></ul>
Persistence/degradability	Biodegradable DT50 (soil) 105 days (typical)
Bioaccumulative Potential	Octanol-water partition coefficient LogP = 1.17 (low)
Soil Mobility	Soil organic carbon water partitioning coefficient Koc = 54 (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	3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (HEXAZINONE 90%)
Class	9
Subsidiary Class	None
Packing Group	III
Additional Information	MARINE POLLUTANT

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MTQ (Non-Commercial)	1000 Kg
Passenger Service Vehicle	No restriction

### 15 Regulatory Information

EPA Approval No	HSR000959
ACVM Registration No	P7263
Qualified Person	Required
Certified Handler	Not required
Workplace Only	No
Tracking	Not required
Record Keeping	Not required (unless > 3 Kg applied within 24 hours, and which is likely to leave the application area)
Site Requirements under EPA Notice and HSWHS Regs:	<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 100 Kg</li> <li>• An emergency response plan is required for more than 100 Kg</li> <li>• Secondary containment is required for more than 100 Kg</li> <li>• Segregation from incompatible substances is not required</li> </ul>
Additional Requirements	Refer to NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans

### 16: Other Information

SDS review date	28 March 2025
Glossary	
ADE	Acceptable Daily Exposure – A daily dose, received via any route, below which no adverse effects are expected over a lifetime of exposure
ACVM	Agricultural Compounds and Veterinary Medicines group of the Ministry of Primary Industries
Cat.	GHS category
Ceiling	A concentration that should not be exceeded at any time during any part of the working day
Certified Handler	A qualification issued by a Compliance Certifier to handle and use particularly toxic substances (6.1A and 6.1B)
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.
EPA Notice	Hazardous Property Controls Notice 2017
ERP Guide	Dangerous Goods – Initial Emergency Response Guide SNZ HB 76:2008
GHS	Globally harmonized system of classification and labelling of chemicals
Hazardous Substance Location Compliance Certificate	For locations storing hazard substances of certain classes above threshold quantities
Hazardous Area	A designated area designed for the presence of flammable substances - Refer AS/NZS 60079.10.1:2009
HAZCHEM Code	Emergency action code for emergency services
HSWHS Regs	Health and Safety at Work (Hazardous Substances) Regulations 2017
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

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<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>Segregation</b>	Certain classes of substances must not be in contact with, and must be stored separately from, certain other classes as specified in HSWHS Regs
<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

### 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 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.