

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY:

METRO 200 WDG

SUPPLIER NAME: Zelam Limited
SUPPLIER CODE: None
SUPPLIER ADDRESS: Hudson Road, Bell Block, New Plymouth, New Zealand
SUPPLIER PHONE: +64 6 755 9234 SUPPLIER FAX: +64 6 755 1174
EMERGENCY PHONE: 0800 243 622, 0800 CHEMCALL INTERNATIONAL EMERGENCY PH: +64 3 353 0199
CHEMICAL FAMILY: Sulfonyl urea USE: Herbicide

2. COMPOSITION / INFORMATION ON INGREDIENTS:

COMMON NAME:	CAS NUMBER:	CONCENTRATION %:	HAZARD CLASSIFICATIONS:
Metsulfuron-methyl	74223-64-6	20	Class 6, 9.

3. HAZARDS IDENTIFICATION:

Harmful - may cause skin irritation. Avoid contact with skin.
Harmful - may cause eye irritation. Avoid contact with eyes.
Very toxic to fish/aquatic organisms with long-lasting effects. Avoid contamination of any water supply with product or empty container.
Very toxic to the soil environment.
Refer to Section 15 for ERMA Requirements.

4. FIRST - AID MEASURES:

EYE CONTACT: Immediately flush with flowing water for at least 15 minutes. Seek medical attention if irritation persists.
SKIN CONTACT: Wash with plenty of soap and flowing water for at least 15 minutes while removing contaminated clothing. Wash clothing before reuse.
INHALATION: If ill-effects occur, move the victim to fresh air. Avoid inhalation of dust.
INGESTION: If swallowed, drink several glasses of water. DO NOT induce vomiting. Seek medical advice.
NOTES TO DOCTOR: Treat Symptomatically.

5. FIRE FIGHTING MEASURES:

FLASHPOINT: Not flammable.
FLAMMABLE LIMITS: Not flammable.
EXTINGUISHING MEDIA: Foam, Carbon dioxide, Dry chemical or Water spray (fog).
THERMAL DECOMPOSITION PRODUCTS: Carbon dioxide, carbon monoxide, nitrogen oxides, oxides of sulfur, water.
SPECIAL FIRE FIGHTING METHODS: Not Applicable.
UNUSUAL FIRE OR EXPLOSION HAZARDS: Decomposition products are toxic. There is little or no chance of an explosion from this product if involved in a fire.

6. ACCIDENTAL RELEASE MEASURES:

Use appropriate protective equipment. Sweep up spilt granules, ensure that the product is stored in either the original container or a well labeled container.
If the granules are exposed to water the solution may become slippery and should be cleaned up immediately. Absorb the remaining liquid and any small spills with clay granules, sand or other absorbent material and sweep to a waste container. Cover the spill area with water and absorb.
Warning this substance is very toxic to aquatic organisms. Avoid contamination of any water supply with this substance or empty container.

7. HANDLING AND STORAGE:

Store in original container, tightly closed under lock and key, away from food stuffs. Wash protective clothing daily after work.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION:

EXPOSURE LIMITS: Not established by OSHA.
EYE PROTECTION: Chemical goggles or face shield where splash may occur.
RESPIRATORY PROTECTION: Not established by OSHA.
PROTECTIVE CLOTHING: If skin contact or contamination of clothing is likely, gloves should be worn.
VENTILATION: Not normally required. Exceptions: in the case of fire or during the formation of mists or aerosols.
HYGIENE PRECAUTIONS: Do not eat drink or smoke while working with this product. Remove clothing that becomes soaked or contaminated and wash before reuse. Wash hands before breaks and after work. The use of a skin barrier cream is useful to give additional skin protection.

9. PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE / STATE / ODOUR:	Light tan extruded granule.		
BOILING POINT:	Not applicable.	pH:	8
DENSITY:	Not applicable.	SETTING POINT:	Not applicable.
DECOMPOSITION TEMP:	Not available.	AUTOIGNITION TEMP:	Not applicable.
FLASHPOINT:	Not applicable.	VAPOUR DENSITY:	Not applicable.
EXPLOSION PROPERTIES:	Not applicable.	VAPOUR PRESSURE:	Not applicable.
SOLUBILITY:	Dispersible in water		
OTHER DATA:			
OCTANOL / WATER PARTITION COEFFICIENT:	Not available.		

10. STABILITY AND REACTIVITY:

CONDITIONS TO AVOID:

MATERIALS TO AVOID:

HAZARDOUS DECOMPOSITION PRODUCTS: May decompose to form carbon dioxide, carbon monoxide, nitrogen oxides, oxides of sulfur, and water in event of fire.

11. TOXICOLOGICAL INFORMATION:

ACUTE ORAL: LD50 (Rat) > 5000mg/Kg.

ACUTE DERMAL: LD50(rabbits) > 2000 mg/Kg.

ACUTE INHALATION: LC50 (96 hours) > 150mg/L for rainbow trout and bluegill sunfish.

OTHER TOXICITY INFORMATION: 6.3B; Harmful - may cause skin irritation. Avoid contact with skin.
6.4A; Harmful - may cause eye irritation. Avoid contact with eyes.

12. ECOLOGICAL INFORMATION:

Aquatic Toxicity: Very toxic to fish. LC 50 (96 hr) for Rainbow trout >150mg/L.

Soil Toxicity: Very toxic to the soil environment.

Terrestrial Vertebrates - Birds: Not toxic to birds.

Terrestrial Invertebrates - Bees: Not toxic to bees.

9.1A; Very Toxic to fish/aquatic organisms with long lasting effects. Avoid contamination of any water supply with this product or empty container.

9.2A; Very toxic to the soil environment. Selective herbicide - very toxic to some plant species (certain plants may be killed or damaged from root uptake of this product).

13. DISPOSAL CONSIDERATIONS:

Triple rinse container and add residue to spray tank. Burn the container if circumstances, especially wind direction permit. Otherwise bury in a landfill. Avoid contamination of any water supply with chemical or empty container.
Do not allow contamination of any water supply with the empty container.

14. TRANSPORT INFORMATION:

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID N.O.S

UN Hazard Class: 9.

UN Number: 3077

Packing Group: III

Hazchem Code: 2X

Additional Information: Contains Metsulfuron-methyl.

15. REGULATORY INFORMATION:

Approved Handler.

An approved handler is required where: a) The product is applied in a wide dispersive manner (aerial, motorised equipment). b) By a commercial contractor. c) Directly onto or into water.

If an approved handler is present at the facility where the substance is being handled, or the approved handler has provided guidance to the person in respect to the handling of the product and is present at all times a non approved handler may handle the product. Note: The approved handler can be in contact by the use of a cellphone.

Record Keeping.

Record keeping is required if more than 3 Kg is used within 24 hours in a place where the substance is likely to enter air or water and leave the place. The information must be kept for a minimum of three years.

This product DOES NOT have Tracking Requirements.

See the ERMA Website for more details: www.ermanz.govt.nz

ERMA Approval Code: HSR000245.

ACVM Pesticide Number: P007147.

16. OTHER INFORMATION:

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.



HURRICANE SAFETY DATA SHEET

1: Identification of the Substance and Supplier

Product Name:	HURRICANE
Recommended Use:	Herbicide
Company Details:	Orion Crop Protection Ltd 14 – 22 Triton Drive, North Harbour, Auckland PO Box 100 570, North Shore Mail Centre, 0745 New Zealand
Telephone Number:	(09) 415 1679 (office hours)
Emergency Telephone:	0800 CHEMCALL (0800 243 622) (24 hours)
National Poison Centre:	0800 POISON (0800 764 766) (24 hours)
Date of Issue/Revision:	June 2009

2: Hazards Identification

Priority Identifiers:	Combustible Liquid, Ecotoxic, Keep Out of Reach of Children
HSNO Classes:	Secondary Identifiers:
3.1D	Combustible liquid
6.4A	Harmful - May cause eye irritation
6.9B	Harmful - May cause organ damage from repeated ingestion at high doses
9.1B	Toxic to aquatic organisms

3: Composition/ Information on Ingredients

Ingredient	CAS No	Content (% w/v)
Haloxypop-R-methyl ester (active ingredient)	72619-32-0	10
Diethylene glycol monoethyl ether	111-90-0	30 - 60
Other ingredients, solvents, surfactants, etc	Proprietary	Remainder

4: First Aid Measures

Skin Contact:	In case of contact, immediately wash affected area with soap and water. Seek medical advice if irritation persists. Wash contaminated clothing before reuse.
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 if feeling unwell.

Workplace Facilities:	Hand wash facility. Eye wash facility.
Advice to Doctor:	No specific antidote. Treat symptomatically. If gastric lavage or emesis is considered necessary, use a method least likely to result in aspiration of solvents, e.g., use endotracheal intubation.
National Poison Centre:	0800 POISON (0800 764 766) (24 hours)

5: Fire-Fighting Measures

Fire/Explosion Hazard:	Combustible liquid
HAZCHEM Code:	3Z
IER 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

Caution: Floors may be slippery if wet. Eliminate all ignition sources and naked lights. Use non-sparking equipment. Leave and/or avoid entering confined spaces. When dealing with spills wear personal protective clothing and equipment as described in section 8. Respiratory protection (with organic vapour cartridge) required for any spill other than minor. Prevent further spillage or leakage. Keep bystanders away. 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: Storage, Handling and Use

Storage:	Keep out of reach of children. Do not store near heat, flame or other source of ignition. Store in the original, tightly closed container, in a cool, well ventilated and secure area.
Handling and Use:	Keep out of reach of children. Avoid contact with eyes and skin. Avoid inhalation of vapour or spray mist. Avoid handling, mixing or use of the product or container near heat, flame or other source of ignition. When mixing, using 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	Not required.
Tracking	Not required.
Record Keeping	Not required.
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 required for more than 500 litres (2 fire extinguishers) • Signage is required for 1000 litres or more • Emergency information is required for 1 litre or more • An emergency plan is required for more than 1000 litres • Secondary containment is required for more than 1000 litres • Separation/Segregation from incompatible substances (classes 1, 2, 3.2, 4 and 5) is required.
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

Tolerable Exposure Limit:	None established.
Workplace Exposure Standards:	Product – None established (Use lowest practicable level). Active ingredient – None established (Use lowest practicable level). Excipients – None established (Use lowest practicable level). [Recommendation: Diethylene glycol monoethyl ether 25ppm (8 hr TWA)]
Engineering Controls:	Limited given nature of use.
Personal Protection:	
Eye:	Safety glasses/goggles (or full face respirator incorporating visor) when mixing or applying.
Skin:	Cotton overalls snugly fitting at the neck, wrist and ankle, chemical resistant boots and gloves (barrier multilayer, PVC, nitrile, neoprene).
Respiratory:	Not required where vapour or spray mist is not inhaled. Otherwise, respirator (organic vapour and particulate matter) is required.

9: Physical and Chemical Properties

Appearance:	Amber Liquid
Odour:	Ether like
Boiling Point:	Not available
Flash Point:	93°C approx
Auto ignition Temperature:	Not available
Explosive Limits:	Not available. Undiluted product may form explosive mixture in enclosed or poorly ventilated areas (if container not kept tightly closed).
Density:	1.05 g/ml (approx)
Vapour Pressure:	Not available
Vapour Density:	> 1 (heavier than air)
Solubility in Water:	Emulsifiable
pH:	4.0 – 6.0 (1% emulsion)
Oxidising Properties:	Not an oxidizer
Corrosive Properties:	Not a corrosive

10: Stability and Reactivity

Stability:	Stable under normal conditions.
Incompatibility:	Avoid mixing with strong acids, 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.

Swallowed:	Dizziness, headache, nausea, incoordination. The solvent in this product may cause bronchopneumonia or pulmonary oedema if aspirated into the lungs from ingestion or from vomiting.
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Eye:	Irritation.
Skin:	Prolonged or repeated contact may result in degreasing of the skin and dermatitis.
Inhalation:	Irritation, headache, dizziness, nausea, drowsiness.
Acute Toxicity:	Acute Oral LD50 (Rat) 300 mg/kg
(Active Ingredients)	Acute Dermal LD50 (Rat) >2000 mg/kg
Sensitisation Effects:	None
Mutagenic Effects:	None
Carcinogenic Effects:	None
Reproductive Effects:	None
Teratogenic (Birth) Effects:	None.
Systemic Effects:	Long term animal feeding studies on haloxyfop have noted effects to the liver and kidneys.

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 ingredients:

Ecotoxic Effects:	Acute Oral LD50 (Bobwhite quail) 1159 mg/kg LC50 (96 hr) (Rainbow trout) 0.7 mg/l EC50 (5 dy) (Algae) 1.72 mg/l LC50 (48 hr) (Daphnia) 6.12 mg/l Very toxic to some plant species (selective herbicide) Non - toxic to bees.
Environmental Fate:	Biodegradable. DT50 (soil) 9 - 20 days
Partition Co-Efficient (Kow):	LogP = 4 (moderate)
Environmental Exposure Limit:	None established.

13: Disposal Considerations

Product:	Dispose of product by using it in accordance with the label. Do not burn. Waste product should be disposed of to a suitable landfill. For disposal of large quantities contact Orion Crop Protection 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

Dangerous Goods:	
UN Number:	3082
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (HALOXYFOP-R-METHYL ESTER 10%)
Class:	9
Subsidiary Class:	None
Packing Group:	III
Additional Information:	MARINE POLLUTANT
MTQ (Non-Commercial)	250 litres
Passenger Service Vehicle:	Maximum quantity 1 litre

15: Regulatory Information

HSNO Approval No: HSR000373
ACVM Registration No: P7703

16: Other Information

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.
ERMA	Environmental Risk Management Authority
ERP Guide	Dangerous Goods – Initial Emergency Response Guide SNZ HB 76:2008
HAZCHEM Code	Emergency action code for emergency services
HAZNOTE	A brief document providing hazardous substance information for transport, storage and emergency management purposes
HSNO	Hazardous Substances and New Organisms
LC50	Concentration that will kill 50% of organisms
LD50	Dose that will kill 50% of 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	Spray diary
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

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, HazNote 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 Crop Protection 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.