



## SAFETY DATA SHEET

### Section 1. Identification of the material and the supplier

Product: **ADAMA METSULFURON HERBICIDE**  
Chemical Name of Active Ing: Metsulfuron methyl  
Product Use: Herbicide  
Restriction of Use: Refer to Section 15

New Zealand Supplier: ADAMA New Zealand Ltd  
Address: Level 1/93 Bolt Road  
Tahunanui, Nelson  
Telephone: +64 3 543 8275  
Fax Number: +64 3 543 8274

**Emergency Telephone: 0800 764 766 (National Poison Centre)**

Date of SDS Preparation: 28 May 2019

### Section 2. Hazards Identification

**This substance is hazardous according to the *Hazardous Substances (Classification) Notice 2017***

**EPA Approval No:** HSR000242

#### Pictograms



Corrosive



Ecotoxic

Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.3B	H316	Causes mild skin irritation.	Skin Irrit. 3
6.4A	H319	Causes serious eye irritation.	Eye Irrit. 2A
9.1A	H400/H410	Very toxic to aquatic life. / Very toxic to aquatic life with long lasting effects.	Aquatic Acute 1/Aquatic Chronic 1
9.2A	H421	Very toxic to the soil environment.	

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P391	Collect spillage.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.

Storage Code	Storage Statement
None allocated	

Disposal Code	Disposal Statement
P501	Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers and add rinsate to spray tank before puncturing and offering for recycling or landfill. Do not allow product to enter waterways. Do not burn product or container.

### Section 3. Composition / Information on Ingredients

Ingredients	Wt %	CAS NUMBER.
Metsulfuron methyl	60	74223-64-6
Other non-hazardous ingredients	To bal	-

### Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.
If on Skin	Take off contaminated clothing and wash before re-use. Wash with plenty of soap and water. If skin irritation or rash occurs: get medical advice/attention.
If Swallowed	Do not induce vomiting. Wash out mouth with water and drink several glasses of water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Call a POISON CENTER or doctor/physician if you feel unwell.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

#### Most important symptoms and effects, both acute and delayed

Symptoms:

<b>Ingestion:</b>	Not applicable.
<b>Inhalation:</b>	Not applicable.
<b>Skin:</b>	Causes mild skin irritation.
<b>Eye:</b>	Causes serious eye irritation.

**Section 5. Fire Fighting Measures**

<b>Hazard Type</b>	Non Flammable / Not combustible.
<b>Hazards from products</b>	Fire decomposition products from this product may be toxic if inhaled.
<b>Suitable Extinguishing media</b>	There is no risk of an explosion from this product under normal circumstances if it is involved in a fire. Preferred extinguishing media are carbon dioxide, dry chemicals, foam, water fog.
<b>Precautions for firefighters and special protective clothing</b>	Full protective clothing and self-contained breathing apparatus.
<b>HAZCHEM CODE</b>	<b>3Z</b>

**Section 6. Accidental Release Measures**

As a minimum wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber, PVC. If there is a significant chance that dust is likely to build up in cleanup area, we recommend that you use a dust mask.

**Environmental precautions**

In the event of a major spill, prevent spillage from entering into drains and water courses.

**Methods and material for containment and cleaning up**

Stop leak if safe to do so, and contain spill. Sweep up and shovel or collect recoverable product into labeled containers for recycling or salvage and dispose of promptly. Consider vacuuming if appropriate. Ensure disposal is in compliance with local disposal regulations.

**Section 7. Handling and Storage****Precautions for Handling:**

- Read label before use.
- Avoid release to the environment.
- Do not smoke, drink or eat while using.
- Do not breath dusts.
- Wash hands thoroughly after handling.
- Wear protective clothing as detailed in Section 8.

**Precautions for Storage:**

- Store away from incompatible materials listed in Section 10.
- Store in the original, unopened container in a cool, dry place, out of direct sunlight and away from stockfeed or foodstuffs.
- As a Class 9 Substance with Ecotoxicity Classifications storage of ADAMA Metsulfuron Herbicide must be carried out in such a manner as to prevent contamination of waterways. It is recommended that The New Zealand Standard for the Management of Agrichemicals (NZS 8409) is followed as a means of meeting the secondary containment provisions of the HSNO Emergency Management Regulations.
- Keep out of reach of children.

**Section 8 Exposure Controls / Personal Protection****WORKPLACE EXPOSURE STANDARDS (provided for guidance only)**

Substance	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA).The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-

Product Name: METSULFURON HERBICIDE  
Date of SDS: 28 May 2019

Prepared by: Technical Compliance Consultants (NZ) Ltd  
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### Engineering Controls

Control airborne concentrations below the exposure guidelines. Exhaust ventilation may be necessary under certain confined conditions.

### Personal Protection Equipment



<b>Eyes</b>	Safety goggles or face shield.
<b>Hands and Skin</b>	Wear suitable protective clothing. Chemical resistant boots. Chemical resistant gloves.
<b>Respiratory</b>	Ensure good ventilation. If not adequate, wear a suitable dust respirator.
<b>General</b>	When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.

## Section 9 Physical and Chemical Properties

<b>Appearance</b>	Beige to light brown tubular granule (solid)
<b>Odour</b>	No odour
<b>Odour Threshold</b>	Not applicable
<b>Coefficient pH</b>	4 – 7 (10% solution)
<b>Boiling Point</b>	Expected to decompose before boiling
<b>Melting /Freezing Point</b>	Not applicable
<b>Flash Point</b>	Not applicable
<b>Flammability</b>	Not applicable
<b>Upper and Lower Exposure Limits</b>	Not applicable
<b>Vapour Pressure</b>	Not applicable
<b>Density</b>	Not applicable.
<b>Solubilities</b>	Wettable
<b>Coeff Oil/water distribution:</b>	Not applicable
<b>Auto-ignition Temperature</b>	Not applicable
<b>Kinematic viscosity mm<sup>2</sup>/s 40 °C</b>	Not applicable
<b>Particle Characteristics</b>	Not applicable
<b>Volatiles</b>	Not applicable

## Section 10. Stability and Reactivity

<b>Stability of Substance</b>	This product is stable under normal conditions.
<b>Reactivity</b>	This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.
<b>Conditions to Avoid</b>	Containers should be kept dry. Protect this product from light. Store in closed original container in a dry, cool, well ventilated area, out of direct sunlight.
<b>Incompatible Materials</b>	Incompatible with strong oxidizing agents.
<b>Hazardous Decomposition Products</b>	If heat to decompose, it emits toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxide and sulfur oxides.

**Section 11 Toxicological Information****Acute Effects:**

<b>Swallowed</b>	Not applicable
<b>Dermal</b>	Not applicable
<b>Inhalation</b>	Not applicable
<b>Skin</b>	Causes mild skin irritation.
<b>Eye</b>	Causes severe eye irritation.

**Chronic Effects:**

<b>Carcinogenicity</b>	Not applicable.
<b>Reproductive Toxicity</b>	Not applicable.
<b>Germ Cell Mutagenicity</b>	Not applicable.
<b>Aspiration</b>	Not applicable.
<b>STOT/SE</b>	Not applicable.
<b>STOT/RE</b>	Not applicable.

Acute toxicity - Dermal:	LD50 (rabbit) >2000 mg/kg
Acute toxicity – Inhalation:	LC50 (rat) 5 mg/L (4 hours) (technical material)
Skin irritation:	May be irritating (rabbits)
Eye irritation:	May be irritating (rabbit).
Sensitization :	Non sensitizer (guinea-pig)

**Common name: Metsulfuron**

Chronic toxicity: 2-year feeding study in rats resulted in a NOEL of 25.0 mg/kg/day (or 500 ppm in feed), based on decreased body weight seen at 250 mg/kg/day (5000 ppm) which was the highest dose tested. EPA has based its reference dose (0.25 mg/kg/day) on this study.

Carcinogenicity:	Negative for rats and mice in laboratory tests.
Mutagenicity:	Not mutagenic
Reproduction toxicity:	None

**Section 12. Ecotoxicological Information**

HSNO Classes: 9.1A =	Toxic to aquatic life.
9.2A =	Very toxic to the soil environment.

<b>Persistence and degradability</b>	No data available.
<b>Bioaccumulation</b>	No data available.
<b>Mobility in Soil</b>	No data available.
<b>Other adverse effects</b>	No data available.
<b>Precautions</b>	Do not allow to enter waterways.

**Breakdown of chemical in soil and groundwater:** The breakdown of Metsulfuron-methyl in soils is largely dependant on soil temperature, moisture content, and pH. The chemical will degrade faster under acidic conditions and in soils with higher moisture content and higher temperatures. The chemical has a higher mobility potential in alkaline soils than in acidic soils, as it is more soluble under alkaline conditions. Metsulfuron-methyl is stable to photolysis, but will break down in ultraviolet light. Half-life estimates for Metsulfuron-methyl in soil are wide ranging from 14-180 days; with an overall average of reported values of 30 days. Reported half-life values (in days) for soil include: clay – 178; sandy loam – 102; clay loam – 70, 14-28, 14-105; silty loam – 120-180.

**Breakdown of chemical in surface water:** The dissipation time for Metsulfuron-methyl was investigated in a mixed wood/boreal forest lake. The DT<sub>50</sub> or length of time required for half of the material to dissipate in water was >84 days when high concentrations of Metsulfuron-methyl were applied, and 29.1 days at concentrations that might be expected if the chemical is applied for forestry uses. It is stable to hydrolysis at neutral and alkaline pHs, and has a half-life of 3 weeks at pH 5.0, 25°C and >30 days at 15°C.

**Breakdown of chemical in vegetation:** Metsulfuron-methyl is rapidly taken up by plants at the roots and on foliage. The chemical is translocated throughout the plant, but is not persistent. It is broken down to non-herbicidal products in tolerant plants.

### Section 13. Disposal Considerations

**Disposal Method:** Triple rinse empty container and add rinsate to spray tank. Burn in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitable landfill, or if appropriate, recycle. Avoid contamination of any water supply with product or empty container.

**Precautions and methods to avoid:**

Avoid contamination of any water supply with product or empty container.

### Section 14 Transport Information

**This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012**



**Road and Rail Transport**

UN No: 3077  
Class-primary 9  
Packing Group III  
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (Metsulfuron)

**Air Transport**

UN No: 3077  
Class-primary 9  
Packing Group III  
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (Metsulfuron)

**Marine Transport**

UN No: 3077  
Class-primary 9  
Packing Group III  
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (Metsulfuron)  
Marine Pollutant Yes

**Special Provisions:**

If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

### Section 15 Regulatory Information

**This substance is hazardous according to the Hazardous Substances (Classification)**

## Notice 2017

EPA Approval Code: HSR000242  
HSNO Classification: 6.3B, 6.4A, 9.1A, 9.2A

Refer to EPA website [www.epa.govt.nz](http://www.epa.govt.nz) for controls document - HSR000242

<b>HSW (HS) Regulations 2017</b>	<b>Trigger Quantity</b>
Signage Trigger Quantities (Schedule 3)	100kg (9.1A)
Emergency Response Plan (Schedule 5)	100kg (9.1A)
Secondary Containment (Schedule 5)	100kg (9.1A)
Tracking (Schedule 26)	Not required
HSW(Hazardous substance) Regulations Part 4 Certified Handlers and supervision and training of workers	HSW Reg 4.5 – 4.6 Information, instruction, training and supervision.
<b>HSNO Additional Controls (Restrictions of use)</b>	
<b>PLEASE REFER TO CONTROLS DOCUMENT FOR ALL CONTROLS</b>	
<b>Hazardous Property Controls Notice 2017</b>	
HPC Notice Part 4 Clause 47	Equipment for class 9 substances must be appropriate
HPC Notice Part 4 Clause 48	Records of application of class 9 pesticides and plant growth regulators
HPC Notice Part 3	Hazardous substances in a place other than a workplace
HPC Notice Part 4 Subpart A	Site and storage controls for class 9 substances
HPC Notice Part 4 Subpart C	Qualifications required for application of class 9 Pesticides
<b>ACVM Act and Regulations</b>	
ACVM Approval No See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> for registration controls	P7371

## **Section 16**                      **Other Information**

### Glossary

EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

### References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

### Disclaimer

This document has been issued by TCC (NZ) Ltd and serves as their Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC

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Please contact the ADAMA, if further information is required.

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