



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **PROTUGAN HERBICIDE**
Chemical Name of Active Ing: Isoproturon: 3-(4-isopropylphenyl)-1,1-dimethylurea; 3-p-cumenyl-1,1-dimethylurea
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: 3 July 2020 v2

Section 2. Hazards Identification

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

EPA Approval No: HSR101292

Pictograms



Chronic Ecotoxic

Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1E (oral)	H303	May be harmful if swallowed.	Acute Tox. 5
9.1A	H410	Very toxic to aquatic life with long lasting effects.	Aquatic Chronic 1
9.2A	H421	Very toxic to the soil environment.	-
9.3C	H433	Harmful to terrestrial vertebrates.	-

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe fumes, vapours or spray.
P273	Avoid release to the environment.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.

P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P391	Collect spillage.

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.
Isoproturon	44-49	34123-59-6
Ethylene Glycol	4-5	107-21-1
Other non-hazardous ingredients	To bal	-

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Wash out with plenty of water with the eyelid held wide open for at least 15 minutes. Get medical attention if needed.
If on Skin	Remove contaminated clothing. Gently wash skin with water and soap for 15 minutes or until chemical is removed. Get medical attention if needed.
If Swallowed	If swallowed do NOT induce vomiting. Wash mouth with water and contact National Poisons Centre 0800 764 766 or a doctor.
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:

Ingestion:	May be harmful if swallowed.
Inhalation:	Not applicable.
Skin:	Not applicable.
Eye:	Not applicable.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable/Combustible.
Hazards from combustion products	Nitrogen oxide, carbon oxides (CO, CO2)
Suitable Extinguishing media	For small fire: dry chemical powder, water spray carbon dioxide For large fire: foam, water fog, water spray
Precautions for firefighters and	Self-contained breathing apparatus and total protection required in enclosed areas.

special protective clothing	
HAZCHEM CODE	2X

Section 6. Accidental Release Measures

Wear suitable protective clothing, gloves and eye/face protection. Evacuate all unnecessary personnel.

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

Collect and contain as much free liquid as possible. Absorb remainder in sand or other inert material. Place into a clean container and cover the container loosely for later disposal. Dispose as per Section 15.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Do not breathe fumes, vapours or spray.
- Avoid release to the environment.
- Use personal protective equipment as required.
- Do not eat, drink or smoke while using.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep out of reach of children.
- Store in original, unopened container in cool, dry place, well ventilated place, out of direct sunlight and away from stockfeed or foodstuffs.
- As a Class 9 Substance with Ecotoxicity Classifications, storage of Protugan 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 (NZS8409) is followed as a means of meeting the secondary containment provisions of the HSNO Emergency Management Regulations. Store in original, unopened container in a cool, dry place, out of direct sunlight and away from stock feed or foodstuffs.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA ppm mg/m3	STEL ppm mg/m3
Ethylene glycol (vapour and mist) [107-21-1]		Ceiling 50 ppm (127 mg/m3)

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-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2019 11TH EDITION.

Engineering Controls

Ventilation required

Personal Protection Equipment



Eyes	Safety goggles or face shield.
Hands and Skin	Chemical resistant gloves. Wear protective clothing, including chemical resistant boots.
Respiratory	Respiratory protection is not required if good ventilation is maintained.
General	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

Appearance	Whitish Liquid
Odour	Faint
Odour Threshold	Not applicable
pH	7 – 8.5
Boiling Point	Approximately 100°C (water)
Melting Point	158°C (Isoproturon)
Flash Point	Not applicable
Flammability	Not flammable
Upper and Lower Exposure Limits	Not applicable
Vapour Pressure	0.003@ 20°C (Isoproturon)
Specific Gravity	Not applicable
Solubilities	Miscible
Log P Octanol/water	2.5 @ 22°C (Isoproturon)
Auto-ignition Temperature	Not applicable
Kinematic viscosity mm²/s 40 °C	Not applicable
Particle Characteristics	Not applicable
Volatiles	No specific data.

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Reactivity	None known.
Conditions to Avoid	None known.
Incompatible Materials	Oxidizing agents, acids, alkali
Hazardous Decomposition Products	Nitrogen oxides, carbon oxides (CO, CO ₂)

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable. Rat Oral LD50 [mg/kg]: >5,000
Dermal	Not applicable. Rat Dermal LD50 [mg/kg]: >2,000
Inhalation	Not applicable. Rat Inhalation LC50 [mg/l/4h]: >4.32
Skin	Not applicable
Eye	Not applicable

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.

STOT/RE

May cause damage to organs through prolonged or repeated exposure.

Section 12. Ecotoxicological Information

HSNO Classes: 9.1A = Very toxic to aquatic life with long lasting effects.
 9.2A = Very toxic to the soil environment.
 9.3C = Harmful to terrestrial vertebrates.

On product

96 H-LC50[mg/l] 96.1 - Rainbow trout
 48 H-LC50 [mg/l] 112.2 - Daphnia magna
 48 H-LC50 [mg/l] 0.08- Algae
 LD50 = 4,150 Japanese quail [mg/l]
 LD50 [µ/Bee] Not toxic to bees

Persistence and degradability	Isoproturon: Soil: Moderately persistent in soil Half life time (t1/2) : 15-40 days
Bioaccumulation	No data available
Mobility in Soil	Soil: Mobile
Other adverse effects	No data available
Precautions	Do not allow to enter waterways.

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.

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: 3082
 Class-primary 9
 Packing Group III
 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (Isoproturon)

Air Transport

UN No: 3082
 Class-primary 9
 Packing Group III
 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (Isoproturon)

Marine Transport

UN No: 3082
 Class-primary 9
 Packing Group III
 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (Isoproturon)

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: HSR101292

HSNO Classification: 6.1E(oral), 9.1A, 9.2A, 9.3C

Refer to EPA website www.epa.govt.nz for controls document - HSR101292

HSW (HS) Regulations 2017	Trigger Quantity/Regulation
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.
Location Certificate	Not required
Signage Trigger Quantities (Schedule 3)	100L (9.1A)
Emergency Response Plan (Schedule 5)	100L (9.1A)
Secondary Containment (Schedule 5)	100L (9.1A)
Tracking (Schedule 26)	Not required
HSNO Additional Controls (Restrictions of use)	
Refer to controls document -	
Hazardous Property Controls Notice 2017	
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 1	Hazardous Property Controls preliminary provisions
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 B	Use of class 9 substances in any place
HPC Notice Part 4 Subpart C	Qualifications required for application of class 9 pesticides
ACVM Act and Regulations	
ACVM Approval No See www.foodsafety.govt.nz for registration controls	P8123

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

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Please contact the ADAMA, if further information is required.

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