

1. IDENTIFICATION

Product Identifier:	Lorox® Linuron DF Herbicide
Other Means of Identification:	Linuron
Recommended Use of the Chemical and Restrictions on Use:	Herbicide
Details of Manufacturer or Importer:	AgNova Technologies Pty Ltd Unit 4, 482 Kingsford Smith Drive Hamilton Qld 4007 Australia (03) 9899 8100 agnova.com.au
Emergency Phone Number:	1800 033 111 (24 hrs) IXOM ERS 13 11 26 Poisons Information Centre

2. HAZARD(S) IDENTIFICATION

GHS CLASSIFICATIONS

WARNING

Suspected of causing cancer (H351)
May cause damage to organs through prolonged or repeated exposure (H373)
Harmful if inhaled (H332)
May be harmful if swallowed (H303)
Very toxic to aquatic life with long lasting effects (H400+H410)



HAZARD CLASSIFICATION

Health Hazards	Category	Physical Hazards	Category
Carcinogenicity	2	None	--
Specific target organ toxicity, repeated exposure	2		
Acute toxicity, inhalation	4	Environmental Hazards	Category
		Hazardous to the Aquatic Environment – Acute	1
		Hazardous to the Aquatic Environment – Chronic	1

HAZARDS NOT REQUIRING CLASSIFICATION

None



SAFETY DATA SHEET

LOROX® LINURON DF HERBICIDE

Date of Issue: 23 December 2022

PRECAUTIONARY STATEMENTS

Obtain, read and follow all safety instructions before use. Wear protective gloves and protective clothing. Refer to Section 8 for specific PPE requirements. Do not breathe dust. Use only outdoors or in a well-ventilated area. (P203+P280+P260+P271)

IF exposed or concerned, get medical advice. Get medical help if you feel unwell. (P318+P319)

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help. (P304+P340+P317)

IF SWALLOWED: Get medical help. (P301+P317)

Store locked up. (P405)

Avoid release to the environment not in accordance with the product label. Collect spillage. (P273+P391)

Dispose of contents / container using instructions in the product label and in accordance with local / Federal regulations. (P501)

OTHER CLASSIFICATIONS

ADG Classification: Not classified as Dangerous Goods for land transport under the Australian Code for Transport of Dangerous Goods by Road and Rail special provision AU01, 7th Edition – refer Section 14

SUSMP Classification: Not scheduled
(Standard for Uniform Scheduling of Medicines and Poisons)

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (% w/w):
Linuron [3-(3,4-dichlorophenyl)-1-methoxy-1-methylurea]	330-55-2	50.0

4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (Phone 13 11 26), and follow the advice given. Show this Safety Data Sheet to a doctor.

Description of Necessary First Aid Measures:

Ingestion: Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control centre or doctor. Do not give anything by mouth to an unconscious person.



SAFETY DATA SHEET

LOROX® LINURON DF HERBICIDE

Date of Issue: 23 December 2022

Inhalation:	Move person to fresh air. If person is not breathing, call 000, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.
Skin Contact:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.
Eye Contact:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.
First Aid Facilities:	Provide washing facilities in the workplace.
Symptoms Caused by Exposure:	No data available.
Medical Attention and Special Treatment:	None specified.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Equipment:	Use firefighting media appropriate for combustibles involved in the fire.
Specific Hazards Arising from the Chemical:	Thermal decomposition or combustion may generate irritating and highly toxic fumes.
Special Protective Equipment and Precautions for Firefighters:	Full protective clothing and self-contained positive pressure breathing apparatus should be worn. Evacuate area of all unnecessary personnel and fight fire from a safe distance upwind. Contain contaminated water/firefighting water; do not allow to enter drains or waterways. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.
Hazchem Code:	2Z



SAFETY DATA SHEET

LOROX® LINURON DF HERBICIDE

Date of Issue: 23 December 2022

6. ACCIDENTAL RELEASE MEASURES

**Personal
Precautions,
Protective
Equipment and
Emergency
Procedures:**

Isolate area and keep unnecessary and unprotected personnel from entering. Wear suitable personal protective clothing and equipment as described in Section 8 of this document. Ensure adequate ventilation.

**Environmental
Precautions:**

Contain spillage and minimise spread. Dig up heavily contaminated soil and collect in containers for disposal. Keep out of drains, sewers, ditches and water ways. Do NOT contaminate water when disposing of rinse waters.

**Methods and
Materials for
Containment and
Cleaning Up:**

Avoid creating dust during cleanup. Sweep, scoop or shovel spilled material and place into suitable closed containers for reuse or disposal. After decontamination, spill area can be washed with water. Collect washwater for approved disposal. Place leaking containers in oversize leakproof drums for transport.

7. HANDLING AND STORAGE

**Precautions for Safe
Handling:**

Do not inhale dust or spray mist. Avoid contact with eyes, skin or clothing.

If product on skin, immediately wash the area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

**Conditions for Safe
Storage, including
any
Incompatibilities:**

Store product in original container only. Store in a cool, dry place.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards: None established.

**Biological
Monitoring:**

No data available.

**Engineering
Controls:**

If handling indoors, provide local exhaust ventilation.



SAFETY DATA SHEET

LOROX® LINURON DF HERBICIDE

Date of Issue: 23 December 2022

Individual Protection Measures, for example, Personal Protective Equipment (PPE): Wear protective gloves, protective clothing, eye protection and face protection.
Wash hands thoroughly after handling product.
Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Grey granules
Odour: Slight, characteristic odour
Vapour Pressure: No data available
Vapour Density: Not data available
Bulk Density: 609 kg/m³
Boiling Point: No data available
Melting/Freezing Point: Not determined
Solubility: Disperses. Solubility of Linuron in water is 75 ppm
pH: Not determined
Flash Point: No data available
Flammability (explosive) Limits: No data available
Auto-Ignition Temperature: No data available

10. STABILITY AND REACTIVITY

Reactivity Not reactive under normal temperature and storage conditions
Chemical Stability: Stable under normal temperature and storage conditions
Possibility of Hazardous Reactions: Will not occur
Conditions to Avoid: Exposure to extreme heat and open flames
Incompatible Materials: Strong acids or bases
Hazardous Decomposition Products: No data available

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Oral Toxicity: LD₅₀ Rat 3489 mg/kg

Dermal Toxicity: LD₅₀ Rabbit >2000 mg/kg

Inhalation Toxicity: LC₅₀ Rat 5.08 mg/L (4 hr exposure)

Skin Corrosion /Irritation: No irritant effect (rabbits)

Serious Eye Damage/Irritation: Mild to moderate eye irritant (rabbits)

Respiratory or Skin Sensitisation: Not a skin sensitiser in animals

Germ Cell Mutagenicity: Not mutagenic or genotoxic

Carcinogenicity: US EPA: Group C without Q₁* (Possible Human Carcinogen). Not listed by ACGIH (American Conference of Governmental Industrial Hygienists), IARC (International Agency for Research on Cancer), NTP (National Toxicology Program) or OSHA (Occupational Safety & Health Administration).

Reproductive Toxicity: Not a developmental or reproductive toxin

Specific Target Organ Toxicity (STOT) – single exposure: No data available

Specific Target Organ Toxicity (STOT) – repeated exposure: No data available

Aspiration Hazard: No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity:

This information is based on the active ingredient: Linuron



SAFETY DATA SHEET

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Aquatic Toxicity:	EC ₅₀ 48 hr	<i>Daphnia magna</i>	0.12 mg/L
	LC ₅₀ 96 hr	Sheepshead minnow	0.89 mg/L
	EC ₅₀ 72 hr	Freshwater algae (<i>Scenedesmus subspicatus</i>)	0.016 mg/L
	NOEC 21 day	Rainbow trout	0.1 mg/L
	NOEC 21 day	<i>Daphnia magna</i>	0.18 mg/L
Bird Toxicity:	Acute Oral LD ₅₀	Bobwhite Quail	940 mg/kg
Persistence and Degradability:	<i>Plants:</i> In plants, metabolism involves demethylation and demethoxylation.		
	<i>Soil and Water:</i> Microbial degradation is the primary factor in disappearance from soil. Half-life under field conditions is 2-5 months.		
Bioaccumulative Potential:	No data available		
Mobility in Soil:	This chemical is known to leach through soil into ground water under certain conditions as a result of agricultural use.		

13. DISPOSAL CONSIDERATIONS

Disposal Containers and Methods	DO NOT dispose of undiluted chemical on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. DO NOT burn empty containers or product.
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14. TRANSPORT INFORMATION

Road and Rail Transport (ADG):	Not classified as Dangerous Goods under the ADG7 when being transported in IBCs or other receptacles <500 L (kg), (Special Provision AU01).
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Marine Transport (IMDG):	Classified as Dangerous Goods for transport by sea according to the criteria of the UN Model Regulations for Transport of Dangerous Goods 13 th Edition
Air Transport (IATA):	Classified as Dangerous Goods for transport by air according to the criteria of the UN Model Regulations for Transport of Dangerous Goods 13 th Edition
UN Number:	3077
Proper Shipping Name or Technical Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Linuron)
Transport Hazard Class:	9
Packing Group Number:	III
Environmental Hazards for Transport Purposes:	Product contains environmentally hazardous substances: linuron (ISO). Marine pollutant. Non-bulk packaging (max capacity of 450 L or less for liquids or 400 kg or less for solids) transported by motor vehicle, rail car or aircraft are excepted from all Marine Pollutants regulations and therefore treated as non-hazardous material. All bulk shipments or any shipment transported partially or entirely by vessel are treated as regulated Marine Pollutants and are shipped according to the requirements listed above.
Special Precautions for User:	Not applicable
Additional Information:	None
Hazchem Code:	2Z

15. REGULATORY INFORMATION

APVMA	Registered according to the Agricultural and Veterinary Chemicals Code Act 1994 (Cwlth) APVMA Product Number: 60222
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SUSMP

Not scheduled

16. OTHER INFORMATION

Date of Preparation or Revision: 23 December 2022

Reason for Revision: Updated to GHS7

Abbreviations and Acronyms:

- ADG7 – Australian Dangerous Goods Code for Road and Rail Transport, 7th Edition
- APVMA – Australian Pesticides and Veterinary Medicines Authority
- EC – Effective Concentration
- EPA – Environmental Protection Agency (US)
- GHS – Globally Harmonised System of Classification and Labelling of Chemicals
- IBC – Intermediate Bulk Containers
- LC – Lethal Concentration
- LD – Lethal Dose
- NIOSH – National Institute for Occupational Safety and Health (USA)
- NOEC – No Observed Effect Concentration
- SUSMP – Standard for the Uniform Scheduling of Medicines and Poisons

Data Sources: Manufacturer product safety data and published data

This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

The opinions expressed herein are those of qualified experts with the manufacturer. Since the use of this information and of these opinions and the conditions of use of this product are not within the control of AgNova Technologies Pty Ltd, it is the user's obligation to determine the conditions of safe use of the product.

END OF SDS