Tessenderlo KERLEY

SAFETY DATA SHEET

LOROX® LINURON FLOWABLE HERBICIDE

Date of Issue: 31 January 2019

1. IDENTIFICATION

Product Identifier: **Lorox® Linuron Flowable Herbicide**

Other Means of Identification: Linuron

Recommended Use of the Chemical and Restrictions on Use: **Herbicide**

Details of Importer:
AgNova Technologies Pty Ltd
Suite 3/935 Station Street
Box Hill North Vic 3129 Australia
(03) 9899 8100
www.agnova.com.au

Emergency Phone Number: 1800 033 111 (24 hrs)

2. HAZARD(S) IDENTIFICATION

GHS Classification of the Active Substance:

Pictogram	Hazard Statements	Precautionary Statements
	Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure.	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. If exposed or concerned: Get medical advice/attention. Store locked up. Dispose of contents/container in accordance with local and state regulations.
	Harmful if swallowed or inhaled.	Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapours/spray. IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell. Rinse mouth. Use personal protective equipment as required.

Pictogram	Hazard Statements	Precautionary Statements
	Toxic to aquatic life	Avoid release to the environment.

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 – refer section 14

SUSMP Classification: Poison Schedule 5

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (% w/v):
Linuron (ISO)	330-55-2	48.0
Ethylene Glycol	107-21-1	9.4

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.

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. FIRE FIGHTING MEASURES

Suitable Extinguishing Equipment:	Use firefighting measures that suit the environment.
Specific Hazards Arising from the Chemical:	No relevant information available.
Special Protective Equipment and Precautions for Fire Fighters:	Wear self-contained breathing apparatus, pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment.
Environmental Precautions:	Inform respective authorities in case of seepage into water course or sewage system. Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.
Methods and Materials for Containment and Cleaning Up:	Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to section 13. Ensure adequate ventilation.

7. HANDLING AND STORAGE

Precautions for Safe Handling:	Ensure good ventilation/exhaustion at the workplace. Avoid prolonged or repeated exposure. Keep protective respiratory device available. Refer to the Product Label for further information
Conditions for Safe Storage, including any Incompatibilities:	Store in a cool, dry place. Store in a well ventilated place. Keep away from any sources of heat or flame.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Personnel who handle this product in its end-use application should use this product in accordance with its pesticide labelling.

Exposure Standards:	Ethylene Glycol (CAS no. 107-21-1) TLV Long-term value: NIC-10* mg/m³ Ceiling limit value: (100) mg/m³ (H);*as inhalable fraction and vapour
Biological Monitoring:	None required
Engineering Controls:	Ensure good ventilation in the workplace
Individual Protection Measures, for example, Personal Protective Equipment (PPE):	Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. *Hand and Skin Protection for use in situations where PPE is required to minimise exposure:* Wear butyl rubber, natural rubber, nitrile rubber, or neoprene gloves. Wear long-sleeved shirt and long pants, waterproof shoes and socks. Wash contaminated clothing before reuse. *Eye Protection for use in situations where PPE is required to minimise exposure:* Wear tightly sealed goggles, face protection. *Respiratory Protection if local ventilation is inadequate:* Use NIOSH approved, dual cartridge respirators for dusts or mists (N, R or P class filter media with NIOSH approved prefix TC-84A). Store protective clothing separately.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light tan liquid
Odour:	Weak, characteristic odour
Vapour Pressure:	Not determined
Vapour Density:	Not determined
Density at 20°C:	1.18
Boiling Point:	103 +/- 3°C
Melting/Freezing Point:	Not determined
Solubility:	Disperses to form a suspension. Solubility of Linuron in water is 75 ppm
pH:	7.1
Flash Point:	Not applicable
Flammability (explosive) Limits:	Not determined
Auto-Ignition Temperature:	Product is not self-igniting
Solvent Content:	40.6%
Viscosity:	Not determined

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal temperature and storage conditions.
Possibility of Hazardous Reactions:	Will not occur
Conditions to Avoid:	No further relevant information available
Incompatible Materials:	None known.
Hazardous Decomposition Products:	None known.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Oral Toxicity:	LD_{50} Rat (male) = 3540 mg/kg LD_{50} Rat (female) = 3247 mg/kg
Dermal Toxicity:	LD_{50} Rabbit >2000 mg/kg
Inhalation Toxicity:	LC_{50} Rat >1.7 mg/L (4 hr exposure)
Skin Corrosion/Irritation:	Not irritating to the skin of rabbits
Serious Eye Damage/Irritation:	Not irritating to the eyes of rabbits
Respiratory or Skin Sensitisation:	No data available

This information is based on the active ingredient: Linuron

Germ Cell Mutagenicity:	Not mutagenic or genotoxic
Carcinogenicity:	Category C without Q_1* (Possible Human Carcinogen) by US EPA Not listed by IARC (International Agency for Research on Cancer), NTP (National Toxicology Program) or OSHA-Ca (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

Aquatic Toxicity:	LC_{50} 96 hr	Bluegill sunfish	9.6 mg/L
	LC_{50} 96 hr	Rainbow trout	3.15 mg/L
	EC_{50} 48 hr	*Daphnia magna*	0.12 mg/L
	LC_{50} 96 hr	Sheepshead minnow	0.89 mg/L
	EC_{50} 72 hr	Freshwater algae (*Scenedesmus subspicatus*)	0.016 mg/L
	NOEC 21 day	Rainbow trout	0.1 mg/L
	NOEC 21 day	*Daphnia magna*	0.18 mg/L
Bird Toxicity:	Acute Oral LD_{50}	Bobwhite Quail	940 mg/kg
	Subacute Oral LC_{50}	Bobwhite Quail	1,250 ppm
	Subacute Oral LC_{50}	Mallard Duck	3,083 ppm
	Reproductive Toxicity NOEC	Bobwhite Quail	100 ppm [1]
	Reproductive Toxicity NOEC	Mallard Duck	100 ppm [2]

[1] Treatment-related effects at 300 ppm were effects on adult weight, food consumption, egg production and eggshell thickness
[2] Treatment-related effects at 300 ppm were effects on egg production, hatchability and offspring survival

This information is based on the ingredient: Ethylene Glycol

Aquatic Toxicity:	LC_{50} 96 hr	Fathead minnows	49,000 mg/L
	EC_{50} 48 hr	*Daphnia magna*	46,300 mg/L
	EC_{50} 96 hr	Algae	10,940 mg/L

This information is based on the ingredient: Linuron

Persistence and Degradability:
Plants:
In plants, metabolism involves demethylation and demethoxylation.
Soil and Water:
Microbial degradation is the primary factor in disappearance from soil. Half-life under field conditions is c. 2-5 months, (F. Kempson-Jones and R. J. Hance Pestic. Sci., 1979, 10: 449).
In soil, DT50 38-67 d. Soil adsorption K∞ 500-600.

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

Triple-rinse containers before disposal, as follows. Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure 2 more times.
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.

For minor spills, leaks, etc., follow all precautions indicated on the product label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, phone 1800 033 111 (24 hrs).

14. TRANSPORT INFORMATION

Transport Classification:

Road and Rail Transport: Not dangerous goods under the ADG7 when being transported in IBCs or other receptacles <500 L (kg), (Special Provision AU01).

Marine and Air: Classified as Dangerous Goods for transport by sea and air according to the criteria of the UN Model Regulations for Transport of Dangerous Goods 13th Edition

UN Number: **3082**

Proper Shipping Name or Technical Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport Hazard Class: 9

Packing Group: III

Environmental Hazards for Transport Purposes:	Product contains environmentally hazardous substances: linuron (ISO) Marine pollutant
Special Precautions for User:	Warning: Miscellaneous dangerous substances and articles
Additional Information:	None
Hazchem Code:	3Z

15. REGULATORY INFORMATION

APVMA	Registered according to the Agricultural and Veterinary Chemicals Act 1988. APVMA Product Number: 6049
SUSMP	Poison Schedule S5

16. OTHER INFORMATION

Trademark Information:	Lorox® is a registered trademark of Tessenderlo Kerley, Inc. All rights reserved.
Abbreviations and Acronyms:	ADG7 – Australian Dangerous Goods Code for Road and Rail Transport, 7th Edition APVMA – Australian Pesticides and Veterinary Medicines Authority GHS – Globally Harmonized System of Classification and Labelling of Chemicals IBC – Intermediate Bulk Containers MSHA – Mine Safety and Health Administration NIOSH – National Institute for Occupational Safety and Health (USA) NOEC – No Observed Effect Concentration SUSMP – Standard for the Uniform Scheduling of Medicines and Poisons TLV – Threshold Limit Value USEPA – United States Environmental Protection Agency
Date of Preparation or Revision:	31 January 2019
Reason for Revision:	To correct SG in Section 9 and % Contents in Section 3
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