

SAFETY DATA SHEET

Linex™ Flo

Date of Issue: 09 April 2021

1. SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION

Chemical name of active ingredient(s): Recommended use:	Linuron Herbicide
Supplier:	UPL New Zealand Limited PO Box 51584, Pakuranga Auckland Phone 0800 100 325
Emergency telephone number:	0800 Poison (0800 764 766) 24 Hours

2. HAZARDS IDENTIFICATION

Hazard	6.1E, 6.4A, 6.8B, 6.9A
Classification:	9.1A, 9.2A, 9.3B



Signal Word: DANGER

**Required identification
Details:**

WARNING – KEEP OUT OF REACH OF CHILDREN
May be harmful if swallowed, inhaled or absorbed through the skin.
May cause eye irritation.
Frequent exposure at high doses may cause reproductive/development damage.
Frequent exposure at high doses may cause damage to the production of blood cells.
Very toxic to aquatic organisms.
Very toxic in the soil environment.
Toxic to terrestrial vertebrates.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation Information on hazardous ingredients

Common name	CAS No	%
Linuron (ISO)	330-55-2	45

4. FIRST-AID MEASURES

Description of necessary first aid measures: In case of intoxication call a physician for first aid measures

Effects and symptoms

Inhalation:	Remove victim to fresh air. If breathing is difficult: artificial respiration. Get medical attention.
Ingestion:	Wash out mouth with plenty of water. Get medical attention. Never give anything by mouth to an unconscious person.
Skin contact:	Remove victim from area of exposure. Wash off remaining material with plenty of water. Remove contaminated clothing. Wash away remainder with water and soap.
Eye contact:	Wash out with plenty of water with the eyelid held wide open for at least 15 minutes. Get medical attention.
Notes to a physician:	There is no specific antidote. Treat symptomatically and give supportive therapy.

5. FIRE-FIGHTING MEASURES

Extinguishing media:	Foam, dry chemical or carbon dioxide.
Hazardous thermal (de)composition products:	Chloride compounds and nitrogen oxides
HAZCHEM Code:	2Z
Protection of fire-fighters:	Self-contained breathing apparatus and total protection required in enclosed areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Wear PVC overalls, chemical resistant gloves, facemask or goggles.
Environmental precautions:	Contain Spills. Do not discharge into drains or the environment.
Methods for cleaning up:	Prevent further spillage. Adsorb spilled product and place in sealable container for disposal. Wash down affected area with water plus detergent. Absorb and collect washings and place in the same sealable container for disposal. Seek advice from the local authority regarding disposal.

7. HANDLING AND STORAGE

Handling:	<ul style="list-style-type: none">• Keep out of reach of children• Read label before use.• When mixing or applying, avoid contact with skin and eyes.• Do not breathe fumes, vapours or spray.• Wear protective clothing, gloves and goggles
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- Do not eat or drink while using. Wash hands and face before meals and after work.
- Wash protective clothing after work.
- Avoid release to the environment.

Storage:

- Keep only in the original container.
- Keep in a cool, dry, well ventilated place away from direct sunlight.
- Protect from frost.
- Store at 10-30°C.

Packaging materials:

HDPE Plastic container

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace Exposure Guidelines

Exposure Standards:

Not established.

Engineering measures

Exposure control measures:

General security and hygiene measures in the work place.
Ventilation required in enclosed areas.

Personal Protective Equipment

Detail specifications for equipment:

Respiratory system:

Respiratory protection is not required if good ventilation is maintained.

Skin and body:

Wear long sleeved shirt, long pants.

Hands:

Use gloves chemically resistant (eg: nitrile or neoprene) when prolonged or frequently repeated contact could occur.

Eyes:

Use safety glasses if exposure possible.

General hygiene:

When handling do not eat, drink or smoke.

Wash hands thoroughly after handling.

Wash clothing separately before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Colour, Odour:

Brownish aromatic liquid (suspension concentrate).

pH:

7 – 9.5

Vapour Pressure:

0.05 mPa @ 20°C (Linuron (ISO))

Boiling Point:

100°C (Water)

Freezing/melting point:

NA

Solubility:

Dispersible.

Specific gravity or density:

1.19°C 0.02 g/mL @ 20°C

Flashpoint:

Not flammable

Octanol/water partition coefficient:

log P = 3.0 (Linuron (ISO))

Explosion properties

Not Explosive.

Oxidation Properties

Not an Oxidizing Agent.

10. STABILITY AND REACTIVITY

Stability:

This product is stable under normal storage conditions.

Conditions to avoid:

Excess heat.

Materials to avoid:

Oxidizing agents, acids, and alkali.

Hazardous Decomposition

In fire – Chloride compounds and nitrogen oxides.

Products:

Hazardous polymerization:

This product will not undergo polymerisation reactions.

Hazardous reactions:

None Expected.

11. TOXICOLOGICAL INFORMATION

Values provided for a similar substance

Acute toxicity – Oral : LD ₅₀	>4,480 mg/kg (rat)
Acute toxicity - Dermal : LD ₅₀	>4,000 mg/kg (rabbit)
Acute toxicity – Inhalation: LC ₅₀	>4.66 mg/L (rat, 4 hours)
Skin irritation:	This product is not a skin irritant (rabbit)
Eye irritation:	This product is not an eye irritant (rabbit)
Sensitization:	This product is not considered to be a respiratory and skin sensitizer (guinea-pig).
Chronic toxicity	NOAEL (rat) = 25 ppm or 1.3 mg/kg/day (2 years) NOAEL (mouse) = 50 ppm or 6.5 mg/kg/day (2 years)
Mutagenicity:	Not mutagenic
Reproduction toxicity:	NOAEL (rat) = 6.83 - 8.3 (100 ppm) mg/kg/day.
Other information: Teratogenicity -	NOAEL (rat) = 20 mg/kg/day (Maternal and Fetal) NOAEL (rabbit) = 10 mg/kg/day (Maternal) ; 25 mg/kg/day Fetal)

12. ECOLOGICAL INFORMATION

Ecotoxicity	Very toxic to aquatic organisms. Not toxic to bees.
Rainbow Trout	LC50 (96 hours) = 15.4 mg/L
Daphnia magna	EC50 (48 hours) = 4.1 mg/L
Algae	(Scenedesmus subspicatus) EC50 (72 hours) = 0.1mg/L
Birds	Bobwhite quail (colinus virginianus) LD50 = 314 mg/kg Bobwhite quail (colinus virginianus) LC50 = 1,250 ppm (8-day feeding)
Bees	Oral LD50 > 197 µg/bee Contact LD50 > 200 µg/bee
Soil	Not mobile. Adsorbed on organic matter and clay. Kd = 2.2 - 18 mL/g Koc = 362 - 877 mL/g
Persistence/degradability Soil	Lab. - Half-life time (t _{1/2}): 38-135 days (15-250) Field - DT50: 13-82 days. Degradation is primarily via: microorganisms.
Water	DT50: 48 days. Low risk of underground water contamination.

13. DISPOSAL CONSIDERATIONS

Methods of disposal:	Triple rinse container and add residue to spray tank.
Product:	Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, follow the recommendations in NZS 8409.
Empty Container:	Triple rinse container and recycle through the Agrecovery Programme. If this is not possible bury in landfill.



14. TRANSPORT INFORMATION - International transport regulations

UN number: 3082
Class or Division: 9
Packing Group: III
Marine Pollutant: YES
Proper shipping name: Environmentally hazardous substance, Liquid, N.O.S. Linuron (ISO).
INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):

15. REGULATORY INFORMATION

ACVM Registered Number: P008238
HSNO Approval Code: HSR000938

16. OTHER INFORMATION

Additional information: **Original Issue Date: 22 December 2005**
Revision Date: 9 April 2021
Replaces: ES396

Disclaimer EXCLUSION OF LIABILITY: PLEASE READ

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