

Safety Data Sheet

1 IDENTIFICATION

Product Name:

Linex[®] 4L

Agricultural Herbicide

EPA Reg. No.:

61842-21

Chemical Family:

Phenylurea herbicide

Manufacturer/Supplier:




Tessenderlo Kerley Inc.
2255 N. 44th Street, Suite 300
Phoenix, Arizona 85008-3279
Information: (602) 889-8300

For 24-Hour Emergency Assistance (Spill, Leak, Fire, or Exposure), Call CHEMTREC[®]:

(800) 424-9300 (CHEMTREC)
(866) 374-1975 (Tessenderlo Kerley)

2 HAZARD(S) IDENTIFICATION

Classification of the substance or mixture

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/vapors/spray. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. Use personal protective equipment as required.
	Toxic to aquatic life.	Avoid release to the environment.

Signal Word: Warning

NFPA Hazard Ratings



HMIS Ratings



3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization: Mixture

Description: Mixture of the substance(s) listed below with nonhazardous additions.

	Component	CAS No.	% by Weight
Active Ingredient:	Linuron (ISO)	330-55-2	40.6%
Other Ingredients:	Ethylene glycol	107-21-1	8%

4 FIRST AID MEASURES

Description of first aid measures

General information:

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies involving this product, call toll free 1-866-374-1975. See Label for Additional Precautions and Directions for Use.

IF SWALLOWED: Call a poison control center 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 center or doctor. Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF IN EYES: 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 center or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

5 FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing agents:

Use firefighting measures that suit the environment.

Special hazards arising from the substance or mixture

No relevant information available.

Advice for firefighters

Protective equipment:

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

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 material 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.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 HANDLING and STORAGE

Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Avoid prolonged or repeated exposure.

Personnel must refer to the Product Label and Directions For Use attached to the product for agricultural use requirements in accordance with the EPA Worker Protection Standard.

Information about protection against explosions and fires: Keep protective respiratory device available.

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/PERSONAL PROTECTION

Control parameters

Components with occupational exposure limits: 107-21-1 (ethylene glycol)

TLV Long-term value: NIC-10* mg/m³
Ceiling limit value: (100) mg/m³
(H);*as inhalable fraction and vapor

Additional information:

Personnel who handle this product in its end-use application should use this product only in accordance with its pesticide labeling and with the "Worker Protection Standard", 40 CFR 170.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Breathing equipment:

Use NIOSH approved, dual cartridge respirators for dusts or mists if local ventilation is inadequate (N, R or P class filter media with NIOSH approved prefix TC-84A).

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product.

Material of gloves

Butyl rubber, BR

Natural rubber, NR

Nitrile rubber, NBR

Neoprene gloves

Penetration time of glove material

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

Eye protection:

Tightly sealed goggles

Face protection

Body protection:

Wear long-sleeved shirt and long pants, waterproof shoes and socks. Wash contaminated clothing before reuse.

9 PHYSICAL and CHEMICAL PROPERTIES

Appearance	Light tan liquid
Odor	Weak, characteristic
Odor Threshold	Not determined
pH	7.1
Melting/Freezing Point	Not determined
Boiling Point	103 +/- 3 °C (217 +/- 37 °F)
Flash Point	N/A
Danger of Explosion	N/A
Flammability (Solid/Gas)	Product does not present an explosion hazard
Upper/Lower Flammability or Explosive Limits	Not determined
Vapor Pressure	Not determined
Vapor Density	Not determined
Relative Density	Not determined
Density @ 20°C (68°F)	9.94 lb/gal
Solubility (in Water)	Disperses to form a suspension. Solubility of Linuron in water is 75 ppm
Partition Coefficient: n-octanol/water	Not determined
Auto-ignition temperature	Product is not self-igniting
Solvent content	40.6%
Viscosity	Not determined

10 STABILITY and REACTIVITY

Reactivity	N/A
Chemical stability	This is a stable material 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:
LD/LC₅₀ values relevant for classification:

Oral	Rat LD ₅₀	3,540 mg/kg (male), 3,247 mg/kg (female)
Dermal	Rabbit LD ₅₀ :	>2,000 mg/kg
Inhalation	Rat LC ₅₀ :	>1.7 mg/L (4 hr exposure)
Eye Irritation		Not irritating to the eyes of rabbits
Skin Irritation		Not irritating to the skin of rabbits

This information is based on the active ingredient: Linuron

Mutagenicity / genotoxicity	Not mutagenic or genotoxic
Reproductive Toxicity	Not a developmental or reproductive toxin
Carcinogenicity Assessment	Category C without Q ₁ * (Possible Human Carcinogen) by USEPA Not listed by IARC (International Agency for Research on Cancer), NTP (National Toxicology Program) or OSHA-Ca (Occupational Safety & Health Administration)

12 ECOLOGICAL INFORMATION

This information is based on the active ingredient: Linuron

Aquatic Toxicity

96 hour LC ₅₀	Bluegill sunfish:	9.6 mg/L
96 hour LC ₅₀	Rainbow trout:	3.15 mg/L
48 hour EC ₅₀	Water flea (<i>Daphnia magna</i>):	0.12mg/L
96 hour LC ₅₀	Sheephead minnow:	0.89 mg/L
72 hour EC ₅₀	Algae (<i>S. subspicatis</i>):	0.016 mg/L
21-day NOEC	Rainbow trout:	0.1 mg/L
21-day NOEC	Water flea (<i>Daphnia magna</i>):	0.18 mg/L

Avian Toxicity

Acute Oral LD ₅₀	Bobwhite quail	940 mg/Kg
Subacute Oral LC ₅₀	Bobwhite quail	1250 ppm
Subacute Oral LC ₅₀	Mallard duck	3083 ppm
Reproductive Toxicity, NOEC	Bobwhite quail	100 ppm ¹
Reproductive Toxicity, NOEC	Mallard duck	100 ppm ²

¹Treatment -related effects at 300 ppm were effects on adult weight, food consumption, egg production, and eggshell thickness

²Treatment -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

96 hour LC ₅₀	Fathead minnows	49,000 mg/L
48 hour EC ₅₀	Daphnia magna,	46,300 mg/L
96 hour EC ₅₀	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_{oc} 500-600.

Mobility

This chemical is known to leach through soil into ground water under certain conditions as a result of agricultural use.

13 DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities by burning. If burned, stay out of smoke.

For minor spills, leaks, etc., follow all precautions indicated on this 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, call 1- (800) 424-9300 (CHEMTREC) day or night.

14 TRANSPORT INFORMATION

UN Number

DOT, ADR, IMDG, IATA UN3082

UN Proper shipping name:

DOT Environmentally hazardous substance, liquid, n.o.s.
 ADR UN3082 Environmentally hazardous substance, liquid, n.o.s.
 IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE, liquid, n.o.s. (linuron(ISO)), MARINE POLLUTANT
 IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, liquid, n.o.s.

Transport hazard class(es)

DOT



Class 9 Miscellaneous dangerous substances and articles

ADR, IMDG



Class 9 Miscellaneous dangerous substances and articles
 Label 9

IATA



Class 9 Miscellaneous dangerous substances and articles
 Label 9

Packing group DOT, ADR, IMDG, IATA III

Environmental hazards: Product contains environmentally hazardous substances: linuron (ISO)
Marine pollutant: Yes

Symbol (fish and tree)

Special marking (ADR): Symbol (fish and tree)

Special marking (IATA): Symbol (fish and tree)

Special precautions for user Warning: Miscellaneous dangerous substances and articles

EMS Number: F-A,S-F

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Transport/

Additional information:

In accordance with 49 CFR 171.4(c), non-bulk packagings (max capacity of 119 gal (450 L) or less for liquids or 882 lbs (400 kg) or less for solids) transported by motor vehicle, rail car or aircraft are excepted from all Marine Pollutants regulations in 49 CFR 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.

14 TRANSPORT INFORMATION (continued)
ADR
Excepted quantities (EQ)

 Code: E1
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 1000 ml

IMDG
**Limited quantities (LQ)
 Excepted quantities (EQ)**

 5L
 Code: E1
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 1000 ml

UN "Model Regulation"

UN3082 Environmentally hazardous substance, liquid, n.o.s., 9, III

15 REGULATORY INFORMATION
FIFRA: Yes
Product Name: Linex 4L Herbicide

EPA Reg No. 61842-21

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Harmful if swallowed or absorbed through the skin.
 Avoid contact with eyes, skin, or clothing.
 Prolonged or frequently repeated skin contact may cause an allergic reaction in some individuals.
 Remove contaminated clothing and wash clothing before reuse.

Safety, health and environmental regulations/legislation specific for the substance or mixture

Section 355 (extremely hazardous substances): None of the ingredients is listed.

Section 313 (Toxic Release Reporting-Form R):

<u>Chemical name</u>	<u>CAS No.</u>	<u>Concentration</u>
Linuron	330-55-2	40.6%
Ethylene Glycol	107-21-1	8%

TSCA (Toxic Substances Control Act): Exempt from TSCA

Proposition 65

This product contains chemicals known to the state of California to cause developmental toxicity.

CERCLA/SUPERFUND:

RQ (Reportable Quantity) Yes: Ethylene Glycol (5,000 lbs)

RCRA Classification

Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

National regulations:

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

16 OTHER INFORMATION

Issue Date: February 13, 2018

REVISIONS: Section 9 – corrected weight (density).

The information and recommendations contained herein are provided in good faith and are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information herein.

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