



SAFETY DATA SHEET

EMERGENCY CALL: 1-800-424-9300 (CHEMTREC) or
1-866-374-1975 (Tessengerlo Kerley)

1. IDENTIFICATION

PRODUCT NAME: Linex 4L Agricultural Herbicide
DESCRIPTION: A liquid herbicide
EPA Reg. No.: 61842-21
Chemical Characterization: Substance
COMPANY IDENTIFICATION: Tessengerlo Kerley, Inc.
 2910 N. 44th Street, Suite 100
 Phoenix, AZ 85018-7272
 (602) 889-8300

2. HAZARD IDENTIFICATION

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 (H302)
 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
Acute toxicity, oral	5	Hazardous to the Aquatic Environment – Acute	1
		Hazardous to the Aquatic Environment – Chronic	1

HAZARDS NOT REQUIRING CLASSIFICATION

None

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 mist/spray. Use only outdoors or in a well-ventilated area. (P203+P280+P260+P271)

IF exposed or concerned, get medical advice. (P318)

Get medical help if you feel unwell. (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)

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Common Name</u>	<u>Chemical Name</u>	<u>CAS #</u>	<u>Composition</u>
Linuron	[3-(3,4-dichlorophenyl)-1-methoxy-1-methylurea]	330-55-2	40.6%

NOTE: Values are not product specifications.

4. FIRST AID MEASURES

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 by mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

5. FIREFIGHTING MEASURES

Fire and Explosion Hazards: Thermal decomposition or combustion may generate irritating and highly toxic fumes.

Extinguishing Medium: Use firefighting media appropriate for combustibles involved in the fire.

Fire Fighting Equipment: Firefighters should be equipped with self-contained positive pressure breathing apparatus and full bunker gear.

Fire Fighting Instructions: 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.

Hazardous Combustion Products: No data available

NFPA Ratings: Health – 2 / Flammability – 0 / Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: 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: Prevent material from entering into soil, ditches, public sewer systems, any waterways and/or groundwater. Do not flush to drain or soil. Contain contaminated water.

Spill Cleanup: Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Handling: 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.

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Protective Clothing: Wear coveralls over short-sleeved shirt and short pants, chemical resistant gloves made of any waterproof material, shoes plus socks, chemical-resistant headgear for overhead exposure.

General: Immediately remove all soiled and contaminated clothing. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and was PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light tan liquid	pH:	7.1
Melting point:	not applicable	Kinematic viscosity:	not available
Boiling point:	103 ± 3°C (217 ± 37°F)	Solubility (water):	Disperses to form a suspension. Solubility of linuron in water is 75 ppm
Flammability:	not flammable	Partition coefficient:	not available
Flammability limits (upper/lower):	not applicable	Vapor pressure:	not available
Flash point (cc):	not available	Density:	9.94 lbs./gal @ 20°C (68°F)
Auto-ignition temperature:	not available	Relative vapor density:	not available
Decomposition temperature:	not available	Particle characteristics:	not available
Odor:	weak, characteristic		

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Exposure to extreme heat and open flames.

CHEMICAL STABILITY: Stable under all normal use and storage conditions.

INCOMPATIBILITY WITH OTHER MATERIALS: Strong acids or bases.

HAZARDOUS DECOMPOSITION PRODUCTS: No data available.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ORAL TOXICITY (rat LD₅₀): 3,247 mg/kg (female rat)

DERMAL TOXICITY (rat LD₅₀): > 2,000 mg/kg

INHALATION TOXICITY (rat LC₅₀): >1.7 mg/L (4 hours)

EYE IRRITATION: Not irritating to the eyes (rabbits)

SKIN IRRITATION: Not irritating to the skin (rabbits)

SKIN SENSITIZATION: Not a sensitizer

CARCINOGENICITY:

EPA: Group C without Q₁ (Possible human carcinogen)

ACGIH: Not Listed **NTP:** Not Listed

IARC: Not Listed **OSHA:** Not Listed

REPRODUCTIVE TOXICITY: Not a developmental or reproductive toxin.

MUTAGENICITY / GENOTOXICITY: Not mutagenic or genotoxic.

12. ECOLOGICAL INFORMATION

The following information is for the active ingredient, Linuron:

AQUATIC TOXICITY - Acute

Rainbow Trout (96-hour LC₅₀): 3.15 mg/L

Sheepshead Minnow (96-hour LC₅₀): 0.89 mg/L

Bluegill sunfish (96-hour LC₅₀): 9.6 mg/L

Daphnia (48-hour EC₅₀): 0.12 mg/L

Algae (72-hour EC₅₀): 0.016 mg/L

12. ECOLOGICAL INFORMATION (Continued)

AQUATIC TOXICITY - Chronic

Rainbow Trout (21-day NOEC): 0.1 mg/L

Daphnia (21-day NOEC): 0.18 mg/L

AVIAN TOXICITY

Bobwhite Quail Oral (LD₅₀): 940 mg/kg

Bobwhite Quail Subacute Oral (LC50): 1,250 ppm

Mallard Duck Subacute Oral (LC50): 3,083 ppm

Bobwhite Quail Reproductive Toxicity (NOEC): 100 ppm¹

Mallard Duck Reproductive Toxicity (NOEC): 100 ppm²

Degradability: In plants, metabolism involves demethylation and demethoxylation. Microbial degradation is the primary factor in disappearance from soil. Half-life under field conditions is 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.

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

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

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. See container label for container handling and disposal instructions.

14. TRANSPORT INFORMATION

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

US-DOT:

Containers ≤ 1.3 gal. (5 L):

Not regulated

Containers > 1.3 gal. (5 L):

UN3082, Environmentally hazardous substance, liquid, N.O.S. (linuron), 9, PG III, Marine Pollutant

DOT Emergency Guide: 171

IMDG:

UN3082, Environmentally hazardous substance, liquid, N.O.S. (linuron), 9, PG III, Marine Pollutant

IATA:

UN3082, Environmentally hazardous substance, liquid, N.O.S. (linuron), 9, PG III, Marine Pollutant

EMS Number:

F-A, S-F

Additional Transportation 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.

15. REGULATORY INFORMATION

FIFRA –

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 GHS classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where weather conditions favor drift from areas treated. Do not contaminate water when cleaning of equipment or disposing of equipment washwater and rinsate.

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

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

Section 355 (extremely hazardous substances): Not listed.

SARA Title III – Section 302 Extremely Hazardous Substances

Not listed

SARA Title III – Section 311/312 Hazard Categories

Immediate (Acute), Delayed (Chronic)

Section 313 (Toxic Release Reporting-Form R):

<u>Chemical name</u>	<u>CAS No.</u>	<u>Concentration</u>
Linuron	330-55-2	40.6%

CERCLA/SUPERFUND:

RQ (Reportable Quantity): Not applicable

California Proposition 65

⚠ WARNING: This product can expose you to Linuron, which is known to the State of California to cause developmental toxicity. For more information, go to www.P65Warnings.ca.gov.

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.

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

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

CANADA

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

16. OTHER INFORMATION

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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SDS Version: 2.2

Effective Date: March 18, 2022

REVISIONS: Update formatting and content for GHS / OSHA compliance.
Updated Section 2 to match GHS Guideline 9th edition.
Updated format of section 14.