



Creating Value Through Innovative Solutions

Material Safety Data Sheet

Lorox L Herbicide

MSDS Number : LINEX1 DATE: (8/31/2009)

7 Pages

Section 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION

- 1.0** Product Name **Lorox L Herbicide EPA # 61842-21**
 Chemical Family organic methylurea
 Synonyms LORAX L, B11703457, DPX-Z0326
 Formula NA - Blend
- 1.2** **Manufacturer** Tessenderlo Kerley Inc.
 2255 N. 44th Street, Suite 300
 Phoenix, Arizona 85008-3279
 Information (602) 889-8300
- 1.3** **Emergency Contact** (866) 374-1975 (Tessenderlo Kerley)
(800) 424-9300 (CHEMTREC)

Section 2: COMPOSITION, INFORMATION ON INGREDIENTS

2.1	Chemical Ingredients (% by wt.)	CAS No.	%
	Linuron [3-(3,4-dichlorophenyl)-1-methoxy-1-methylurea]	330-55-2	40.6
	Inert ingredients (Including percentages of the following): Ethylene glycol	107-21-1	59.4
	(See Section 8 for exposure guidelines)		

Section 3: HAZARDS IDENTIFICATION

NFPA: **Health - 1** **Flammability - 1** **Reactivity - 0**

EMERGENCY OVERVIEW

CAUTION! Harmful if swallowed or contacts the eye or skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling.

Section	3:	HAZARDS IDENTIFICATION Cont.
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3.1 POTENTIAL HEALTH EFFECTS (if product not handled in the recommended manner)

EYE: Contact with the eyes may cause eye irritation with discomfort, tearing, or blurring of vision.

SKIN CONTACT: Contact with product may cause skin irritation with discomfort or rash.

SKIN ABSORPTION: Absorption may occur.

INGESTION: Repeated or prolonged exposure by ingestion may cause red blood cell destruction.

INHALATION: Inhalation of product may cause irritation of the upper respiratory passages.

CHRONIC EFFECTS/CARCINOGENICITY: Not listed as a carcinogen by NTP, IARC or OSHA.

See Section 11, Toxicological Information

Section	4:	FIRST AID MEASURES
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With any exposure contact the Poison Control Center for medical advise. Have product label with you when calling.

4.1 EYES: Immediately flush with large quantities of water for 15 minutes. Hold eyelids apart during irrigation to insure thorough flushing of the entire area of the eye and lids. Obtain immediate medical attention.

4.2 SKIN: Immediately flush with large quantities of water for 15 minutes. Remove contaminated clothing under a safety shower. Do not neutralize with chemical agents. Obtain medical attention if irritation occurs.

4.3 INGESTION: DO NOT INDUCE VOMITING. Give 1 or 2 glasses of water. If vomiting does occur, repeat fluid administration. If unconscious or convulsing, do not give fluids. Obtain immediate medical attention.

4.4 INHALATION: Remove victim from contaminated atmosphere. If breathing is labored, administer oxygen. If breathing has ceased, clear airway and start mouth to mouth resuscitation. If heart has stopped beating, external heart massage should be applied. Obtain immediate medical attention.

Section	5:	FIRE FIGHTING MEASURES
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5.1 FLAMMABLE PROPERTIES

FLASH POINT:	NA	METHOD USED:	NA
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5.2 FLAMMABLE LIMITS NA

5.3 EXTINGUISHING MEDIA: Use extinguishing media as appropriate for combustibles involved in fire.

5.4 FIRE & EXPLOSIVE HAZARDS: None

5.5 FIRE FIGHTING EQUIPMENT: Wear self-contained breathing apparatus, pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section	6:	ACCIDENTAL RELEASE MEASURES
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6.1 Small releases: Clear area. Shut off leak if safely possible. Do not wash small spills away. Ensure adequate ventilation. Do not discharge into drains or surface waters/groundwater. Dry up then shovel material into a suitable container (fiberboard) for disposal. If spill area is on ground near trees or other valuable plants, remove top two inches of soil after initial cleanup. Dispose as directed by the pesticide product label.

6.2 Large releases: Cordon off area of spillage and dike area with dirt, sand or other inert material to prevent any further migration. Recover as much of usable product for application (best disposal practice). Handle remaining material as a small spill above.

Section	7:	HANDLING and STORAGE
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7.1 Handling: Manufacturing, commercial blending, packaging and applicator 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. Keep out of reach of children. Use only in a well ventilated area. Avoid prolonged or repeated contact with the skin and eyes. Avoid breathing vapors, mist or dust. Wash thoroughly with soap and water after handling. Wash exposed clothing before reuse. Wash the outside of gloves before removing.

7.2 Storage: Store in cool, dry, well ventilated areas away from heat or flame. Protect containers from physical damage and contamination. Do not store close to water, food or feed to avoid contamination.

Section	8:	EXPOSURE CONTROLS, PERSONAL PROTECTION
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All 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. Wear long-sleeve work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with shower and eye wash. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with concentrated product; do not reuse the clothing.

8.1 RESPIRATORY PROTECTION: 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).

8.2 SKIN PROTECTION: Wear butyl, natural, nitrile or neoprene rubber gloves and coveralls over long-sleeve shirt and long pants and chemical resistant apron to prevent repeated or prolonged contact with the skin.

8.3 EYE PROTECTION: Chemical goggles and a full face shield to prevent contact with face and eyes.

	OSHA	ACGIH
	PEL	TLV STEL
Linuron	Not established	Not established
Ethylene glycol	Not Established	39.4 ppm ceiling, 100 mg/m ³ , aerosol

8.5 ENGINEERING CONTROLS: Use adequate exhaust ventilation to prevent inhalation of product vapors, mist or dust..

Section	9:	PHYSICAL and CHEMICAL PROPERTIES.
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9.1 APPEARANCE:	light tan liquid
9.2 ODOR:	Slight characteristic odor
9.3 BOILING POINT:	103°C +/- 3°C
9.4 VAPOR PRESSURE:	Not Determined
9.5 VAPOR DENSITY:	Not Determined
9.6 SOLUBILITY IN WATER:	Disperses to form a suspension (solubility of Linuron is 75 ppm in water)
9.7 DENSITY:	9.8 lb/gal
9.8 FREEZING POINT:	Not Determined
9.9 pH:	7.1
9.10 VOLATILE:	Not Determined

Section	10:	STABILITY and REACTIVITY
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10.1 STABILITY: This is a stable material under normal temperature and storage conditions.

10.2 HAZARDOUS POLYMERIZATION: Will not occur.

10.3 HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition will may release toxic and/or hazardous gases.

10.4 INCOMPATIBILITY: None reasonably foreseeable.

Section	11:	TOXICOLOGICAL INFORMATION
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11.1 ORAL: Oral-Rat LD₅₀: 3,540 mg/kg (male)
3,247 mg/kg (female)

11.2 DERMAL: LD₅₀ : > 2,000 mg/kg (rabbits)

11.3 INHALATION: LC₅₀ : >1.7 mg/L (rats – 4 Hr)

11.4 CHRONIC/CARCINOGENICITY: Not listed as a carcinogen by NTP, IARC or OSHA.

11.5 TERATOLOGY: Data not available

11.6 REPRODUCTION: Data not available

11.7 MUTAGENICITY: Data not available

Section	12:	ECOLOGICAL INFORMATION
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LINURON:

AQUATIC TOXICITY

96 hour LC ₅₀	Bluegill sunfish:	9.6 mg/L
96 hour LC ₅₀	Rainbow trout:	3.3 mg/L
48 hour EC ₅₀	Daphnia magna:	1.9 mg/L

Section	12:	ECOLOGICAL INFORMATION, Cont.
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72 hour EC₅₀ Freshwater algae: 0.028 mg/L

AVIAN TOXICOLOGY

Acute Oral LD ₅₀	Bobwhite quail	940 mg/kg
Acute dietary LC ₅₀	Bobwhite quail	1,838 ppm
Acute dietary LC ₅₀	Mallard duck	5,224 ppm
Oral LC ₅₀	Mallard duck	3,083 ppm

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

Section	13:	DISPOSAL CONSIDERATIONS
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Disposal of product waste should be handled by licensed waste handlers in accordance with all governmental regulations. Do not contaminate water, food or feed by improper disposal. Wastes resulting from the use of this product may be disposed of at an approved waste disposal facility.

Environmental Hazards: This product 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 equipment or disposing of equipment wash waters. .

Ground water advisory: This chemical is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where are permeable, particularly where the water table is shallow, may result in ground water contamination.

Container Disposal:

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of the smoke.

Container Refilling and Disposal (for containers up to 250gal): Refer to product label.

This is a refillable container. If the container is to be refilled, do not rinse with any materials or introduce any pesticide other than this product,

Container Disposal for Bulk Containers: Refer to product label.

The container must only be refilled with this pesticide product. **DO NOT REUSE CONTAINER FOR ANY OTHER PURPOSE>**

Disposal of the container must be in compliance with State and local regulations.

For spills or leaks SEE SECTION 6,

Section	14:	TRANSPORT INFORMATION
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This product is not regulated by DOT unless shipped by water or shipped in bulk packagings (packaging greater than 119 gallons). The regulated shipping description is as follows:

14.1 DOT Shipping Name:	Environmentally Hazardous Substance, liquid, n.o.s.
14.2 DOT Hazard Class:	9
14.3 UN/NA Number:	UN3082
14.4 Packing Group:	III
14.5 DOT Placard:	Class 9
14.6 DOT Mark	Marine Pollutant (Linuron)
14.7 IMO Shipping Name:	Environmentally Hazardous Substance, liquid, n.o.s.
14.8 Reportable Quantity (RQ):	Ethylene glycol, 5,000 lbs
14.9 IATA/ICAO (Ai):	Not regulated

Section	15:	REGULATORY INFORMATION
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15.1 OSHA:	This product is listed as a hazardous chemical under criteria of the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200.										
15.2 SARA TITLE III:	a.	EHS (Extremely Hazardous Substance) List: No									
	b.	Section 311/312, (Tier I,II) Categories: Immediate (acute) Yes Fire No Sudden release No Reactivity No Delayed (chronic) Yes									
	c.	Section 313 (Toxic Release Reporting-Form R): Yes									
		<table> <thead> <tr> <th><u>Chemical name</u></th> <th><u>CAS No.</u></th> <th><u>Concentration</u></th> </tr> </thead> <tbody> <tr> <td>Linuron</td> <td>330-55-2</td> <td>40.6%</td> </tr> <tr> <td>Ethylene glycol</td> <td>107-21-1</td> <td>8%</td> </tr> </tbody> </table>	<u>Chemical name</u>	<u>CAS No.</u>	<u>Concentration</u>	Linuron	330-55-2	40.6%	Ethylene glycol	107-21-1	8%
<u>Chemical name</u>	<u>CAS No.</u>	<u>Concentration</u>									
Linuron	330-55-2	40.6%									
Ethylene glycol	107-21-1	8%									
15.3 CERCLA/SUPERFUND:	RQ (Reportable Quantity) Ethylene glycol (5,000 lbs)	Yes									
15.4 TSCA: (Toxic Substance Control Act) Inventory List:		Yes									
15.5 RCRA: (Resource Conservation and Recovery Act) Status:		No									
15.6 WHMIS: (Canada) Hazard Classification:		ND									
15.6 DOT: Hazardous Material: (See Section 14)		Yes									
15.7 CAA: Hazardous Air Pollutant (HAP)		No									

15.8 FIFRA: Registered pesticide Yes

Section 15: REGULATORY INFORMATION, Cont.
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EPA REG #61842-21

15.9 Prop 65 (CA): Yes
Linuron

Section 16: OTHER INFORMATION

REVISIONS: The entire MSDS was reformatted to comply to ANSI Standard Z400.1-1993, by Technical Services-Tessenderlo Kerley, Inc.

THE INFORMATION PUBLISHED IN THIS MATERIAL SAFETY DATA SHEET HAS BEEN COMPILED FROM OUR EXPERIENCE AND OSHA, ANSI, NFPA, DOT, ERG, AND CHRIS. IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE SUITABILITY OF THIS INFORMATION FOR THE ADOPTION OF NECESSARY SAFETY PRECAUTIONS. WE RESERVE THE RIGHT TO REVISE MATERIAL SAFETY DATA SHEETS PERIODICALLY AS NEW INFORMATION BECOMES AVAILABLE.
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