

Safety Data Sheet

1 IDENTIFICATION

Product Name:

Lorox® DF
Agricultural Herbicide

EPA Reg. No.:
Chemical Family:

61842-23
 Phenylurea herbicide

Manufacturer/Supplier:




Tessengerlo 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 (Tessengerlo 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	25 - 50%

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:

Full protective clothing and self-contained breathing apparatus should be worn.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Not required.

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.

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: N/A

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	Gray granules
Odor	Slight characteristic odor
Odor Threshold	N/A
pH	Not determined
Melting/Freezing Point	Not determined
Boiling Point	NA
Flash Point	N/A
Evaporation Rate	N/A
Flammability (Solid/Gas)	N/A
Upper/Lower Flammability or Explosive Limits	N/A
Vapor Pressure	NA
Vapor Density	NA
Relative Density	N/A
Bulk Density	38 lbs/ft ³ (609 kg/m ³)
Solubility (in Water)	Disperses. Solubility of Linuron in water is 75 ppm
Partition Coefficient: n-octanol/water	NA
Auto-ignition temperature	N/A
Decomposition temperature	N/A
Viscosity	N/A

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	Ignition, heat, open flame and long exposure to high temperatures.
Incompatible materials	None known
Hazardous decomposition products:	None known

11 TOXICOLOGICAL INFORMATION

Acute toxicity:

LD/LC₅₀ values relevant for classification:

Oral	Rat LD ₅₀	3,489 mg/kg (female)
Dermal	Rabbit LD ₅₀ :	>2,000 mg/kg
Inhalation	Rat LC ₅₀ :	5.08 mg/l (4 hr exposure)

Primary irritant effect:

on the skin

No irritant effect

on the eye

LOROX DF is a mild to moderate eye irritant

Sensitization Not a skin sensitizer in animals

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 Q₁* (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	Freshwater algae	0.016 mg/L
21-day NOEC	Rainbow trout:	0.10 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

Persistence and Degradability

Plants:	In plants, metabolism involves demethylation and demethoxylation
Soil & 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 <i>Pestic. Sci.</i> , 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.

13 DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

14 TRANSPORT INFORMATION

UN Number

DOT, ADR, IMDG, IATA UN3077

UN Proper shipping name:

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

14 TRANSPORT INFORMATION (continued)

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 III
DOT, ADR, IMDG, IATA

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

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.

15 REGULATORY INFORMATION
FIFRA: Yes
Product Name: Lorox DF Herbicide

EPA Reg No. 61842-23

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.
 Causes moderate eye irritation.
 Avoid contact with eyes, skin or clothing.

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	50%

TSCA (Toxic Substances Control Act): Exempt from TSCA

Proposition 65

 **WARNING** WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

California Proposition 65 - CRT: Listed date/Developmental toxin

Linuron (CAS 330-55-2) Listed: March 19, 1999

CERCLA/SUPERFUND:

RQ (Reportable Quantity) No

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.

16 OTHER INFORMATION

Issue Date: July 24, 2018

REVISIONS: Section 15: replaced Prop 65 warning with the new format.

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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