

# 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. 44<sup>th</sup> 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
<b>Active Ingredient:</b>	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 <sup>3</sup> (609 kg/m <sup>3</sup> )
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/LC<sub>50</sub> values relevant for classification:

Oral	Rat LD <sub>50</sub>	3,489 mg/kg (female)
Dermal	Rabbit LD <sub>50</sub> :	>2,000 mg/kg
Inhalation	Rat LC <sub>50</sub> :	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 Q<sub>1</sub>\* (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 <sub>50</sub>	Bluegill sunfish:	9.6 mg/L
96 hour LC <sub>50</sub>	Rainbow trout:	3.15 mg/L
48 hour EC <sub>50</sub>	Water flea ( <i>Daphnia magna</i> ):	0.12mg/L
96 hour LC <sub>50</sub>	Sheephead minnow:	0.89 mg/L
72 hour EC <sub>50</sub>	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 <sub>50</sub>	Bobwhite quail	940 mg/Kg
Subacute Oral LC <sub>50</sub>	Bobwhite quail	1250 ppm
Subacute Oral LC <sub>50</sub>	Mallard duck	3083 ppm
Reproductive Toxicity, NOEC	Bobwhite quail	100 ppm <sup>1</sup>
Reproductive Toxicity, NOEC	Mallard duck	100 ppm <sup>2</sup>

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

<sup>2</sup>Treatment -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 <sub>∞</sub> 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.

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