

**FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300**

**1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

- 1.1 **PRODUCT IDENTIFIER:**  
**TRADE NAME:** CURBIT® EC HERBICIDE
- 1.2 **RECOMMENDED USE:** SELECTIVE PREEMERGENCE CONTROL OF CERTAIN ANNUAL GRASSES AND BROADLEAF WEEDS IN CUCURBITS
- 1.3 **SUPPLIER DETAILS:**  
LOVELAND PRODUCTS, INC.  
P.O. Box 1286 • Greeley, CO 80632-1286
- 1.4 **24 Hour Emergency Phone:** 1-800-424-9300 - **Medical Emergencies:** 1-866-944-8565 – **Product Information:** 1-888-574-2878 (LPI-CUST)  
**U.S. Coast Guard National Response Center:** 1-800-424-8802

**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

**Classification according to 29 CFR 1910.1200**

Flammable Liquids	Category 3	H226
Acute Toxicity – Oral	Category 4	H302
Skin Corrosion/Irritation	Category 1C	H314
Eye Damage/Irritation	Category 1	H318
Acute Toxicity – Inhalation	Category 4	H332
Sensitization – Skin	Category 1	H317

**2.2 Label elements**



Signal word: DANGER

Hazard Statement: H226 – Flammable liquid and vapor.  
H302 – Harmful if swallowed.  
H314 – Causes severe skin burns and eye damage.  
H318 – Causes serious eye damage.  
H332 – Harmful if inhaled.  
H317 – May cause an allergic skin reaction.  
H401 – Toxic to aquatic life.

Precautionary Statement: (Prevention): P210 – Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
P233 – Keep container tightly closed.  
P240 – Ground/bond container and receiving equipment.  
P241 – Use explosion-proof electrical/ventilating/lighting/.../equipment.  
P242 – Use only non-sparking tools.  
P243 – Take precautionary measures against static discharge.  
P280 – Wear protective gloves/protective clothing/eye protection/face protection.  
P264 – Wash face, hands and any exposed skin thoroughly after handling.  
P270 – Do not eat, drink or smoke when using this product.  
P260 – Do not breathe dust/fume/gas/mist/vapors/spray.  
P271 – Use only outdoors or in a well-ventilated area.  
P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.  
P272 – Contaminated work clothing must not be allowed out of the workplace.



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Precautionary Statement:

P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P370+P378: In case of fire: Use dry chemical, carbon dioxide, foam, water spray or fog to extinguish.

(Response):

P301+P312: IF SWALLOWED: CALL A POISON CENTER or doctor/physician if you feel unwell.

P330 – Rinse mouth.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P363 – Wash contaminated clothing before reuse.

P304+P340: IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P321 – Specific treatment (see NOTE TO PHYSICIAN on the product label).

P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 – Immediately call a POISON CENTER or doctor/physician.

P312 – Call a POISON CENTER or doctor/physician if you feel unwell.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P333+P313 – If skin irritation or rash occurs: Get medical advice/attention.

Precautionary Statement:

(Storage):

P403 – Store in a well-ventilated place.

P405 – Store locked up.

Precautionary Statement:

(Disposal)

P501 – Dispose of contents/container to an approved waste disposal facility according to local, state, and federal regulations.

## 2.3 Other hazards

None known.

## 3. COMPOSITION, INFORMATION ON INGREDIENTS

### 3.1 Substances

### 3.2 Mixtures

#### Classification according to 29 CFR 1910.1200

Chemical Name:	CAS No.	Concentration [%]
Ethalfuralin Technical	55283-68-6	35.79 – 38.01
Other ingredients*, contains	n/a	64.60
Solvent Naphtha (Petroleum) Light Aromatic	64742-95-6	43.07 – 45.73
Cyclohexanone	108-94-1	14.06 – 15.54
Emsulsifier blend	Proprietary	3.70 – 4.09

\*Ingredients not specifically listed are non-hazardous or are to be considered proprietary or confidential business information per 29 CFR 1910.1200(i)

## 4. FIRST AID MEASURES

### 4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

**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 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 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.

**If swallowed:**

Immediately call a poison control center or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.



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### 4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Causes severe skin burns and eye damage.

### 4.3 Immediate Medical Attention and Special Treatment

Treatment: This product contains petroleum distillates.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565**

Take container, label or product name with you when seeking medical attention.

**NOTES TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage. Contains petroleum distillates. Vomiting may cause aspiration pneumonia.

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## 5. FIRE FIGHTING MEASURES

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### 5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Use medium appropriate to surrounding fire. Foam, carbon dioxide (CO<sub>2</sub>), dry chemical, soft stream or water fog only if necessary.

### 5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: None known.

### 5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

Special Protective Equipment for Firefighters: Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool. Keep people away. Isolate fire and deny unnecessary entry.

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## 6. ACCIDENTAL RELEASE MEASURES

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### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions: Avoid inhalation of vapors and spray mist and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing.

### 6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: 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 except as noted on appropriate labels. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate. This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

### 6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. After removal flush contaminated area thoroughly with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to Remove residual contamination. Never return spills to original containers for re-use.



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## 7. HANDLING AND STORAGE

### 7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe Handling:

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### 7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers:

Open dumping is prohibited. Avoid contamination of fertilizers, seeds, plants, insecticides, and fungicides in storage. Store in original container and out of reach of children, preferably in a locked storage area. Handle and open container in a manner as to prevent spillage. If product is stored below freezing, it is suggested that it be allowed to warm to at least 40°F and be agitated before use. If the container is leaking, invert to prevent leakage. If container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away. Do not contaminate water, food or feed by storage or disposal.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 CONTROL PARAMETERS:

#### OCCUPATIONAL EXPOSURE LIMITS

##### U.S. Workplace Exposure Level (ACGIH) TLVs

Components	Type	Value
Cyclohexanone (CAS: 108-94-1)	TWA	20 ppm (Skin)
	STEL/CEIL(C)	50 ppm (Skin)

##### U.S. Workplace Exposure Level (OSHA) PELs

Components	Type	Value
Cyclohexanone (CAS: 108-94-1)	TWA	50 ppm / 200 mg/m <sup>3</sup>

#### Biological limit values

##### ACGIH Biological Exposure Indices

Components	Value	Specimen
No listings		

### 8.2 EXPOSURE CONTROLS:

#### Engineering Measures

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets with requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or reduced or modified as specified in the WPS.

#### Individual Protection Measures:

- Eye / Face Protection: Goggles or shielded safety glasses are recommended.
- Skin Protection: Coveralls over long-sleeved shirt and long pants. Chemical-resistant gloves. Chemical-resistant footwear plus socks. Chemical-resistant headgear for overhead exposure. Chemical-resistant apron when cleaning equipment, mixing or loading. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.
- Respiratory Protection: Not normally required. If respirators are used, a program should be in place to assure compliance with 29 CFR 1910.134, the OSHA Respiratory Protection standard.



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### 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 APPEARANCE :	Liquid
ODOR:	Aromatic.
ODOR THRESHOLD:	No data available.
COLOR:	Orange.
pH:	4.5 – 5.5 (1% solution)
MELTING POINT / FREEZING POINT:	No data available
BOILING POINT:	~313 °F / ~156 °C.
FLASH POINT:	119 °F / 48.3 °C (TCC).
FLAMMABILITY (solid, gas):	No data available.
UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	No data available.
VAPOR PRESSURE:	No data available.
SOLUBILITY:	Emulsifies.
PARTITION CO-EFFICIENT, n-OCTANOL / WATER:	No data available.
AUTO-IGNITION TEMPERATURE:	No data available.
DECOMPOSITION TEMPERATURE:	No data available.
VISCOSITY:	No data available.
SPECIFIC GRAVITY (Water = 1):	1.00 – 1.03 g/ml
DENSITY:	8.4 – 8.6 lbs./gal / 1.0 – 1.03 kg/L

Note: These physical data are typical values based on material tested but may vary from sample to sample.  
Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

### 10. STABILITY AND REACTIVITY

#### 10.1 REACTIVITY

Stable

#### 10.2 CHEMICAL STABILITY

Stable under normal temperature conditions

#### 10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No data available. Will not polymerize.

#### 10.4 CONDITIONS TO AVOID

Excessive heat or extreme cold; avoid freezing.

#### 10.5 INCOMPATIBLE MATERIALS

Strong bases and oxidizers.

#### 10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Oxides of nitrogen. Hydrogen chloride, fluorine-containing compounds and other unknown hazardous materials may be formed in a fire situation. Incomplete combustion may lead to formation of oxides of carbon and/or other asphyxiants.

### 11 TOXICOLOGICAL INFORMATION

#### 11.3 LIKELY ROUTES OF EXPOSURE

Ingestion. Eye contact. Skin absorption. Skin contact.

**LC<sub>50</sub> (rat):** 5.0 mg/L (4 HR)

**LD<sub>50</sub> Oral (male rat):** 3267 mg/kg

**LD<sub>50</sub> Dermal (rabbit):** > 5 mL/kg

**Acute Toxicity Estimates:** No data available

**Skin Irritation (rabbit):** May cause mild irritation.

**Eye Irritation (rabbit):** Cause irreversible eye damage.

**Specific Target Organ Toxicity:** No data available.

**Aspiration:** No data available.

**Skin Sensitization (guinea pig):** Sensitizer

**Carcinogenicity:** ACGIH TLV-A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans). IARC-3 (Unclassifiable as to Carcinogenicity in Humans).

**Germ Cell Mutagenicity:** No data available.

**Interactive Effects:** None known.



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## 12 ECOLOGICAL INFORMATION

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### 12.3 ECOTOXICITY

The product is toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to inter-tidal areas below the mean high water mark.

#### Ecotoxicological Data

	<b>Species</b>	<b>Test Results</b>
Ethalfluralin	Rainbow trout	0.136 mg/L – 96-hour LC <sub>50</sub>
	Bluegill	0.054 – 0.102 mg/L – 96-hour LC <sub>50</sub>
	Daphnia magna	> 0.365 mg/L – 48-hour EC <sub>50</sub>
	Eastern oyster	0.100 – 0.172 mg/L – 48-hour EC <sub>50</sub>
	Apis mellifera (bees)	> 109.9 µ/bee LD <sub>50</sub> (Oral)
	Apis mellifera (bees)	46 – 100 µ/bee LD <sub>50</sub> (Contact)
Solvent Naphtha (Petroleum) Light Aromatic	Rainbow trout	9.2 mg/L – 96-hour LC <sub>50</sub>
	Daphnia magna	3.2 mg/L – 48-hour EC <sub>50</sub>
Cyclohexanone	Fathead minnow	481 – 578 mg/L – 96-hour LC <sub>50</sub>

Drift or runoff may adversely affect non-target plants.  
Do not apply directly to water.  
Do not contaminate water when disposing of equipment wash water.  
Do not apply when weather conditions favor drift from target area.

### 12.2 PERSISTENCE AND DEGRADABILITY

Biodegradability: No data available for end-use product.

### 12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: No data available for end-use product.

### 12.4 MOBILITY IN SOIL

No data available for end-use product.

### 12.5 OTHER ADVERSE EFFECTS

Assessment: No data available.

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## 13 DISPOSAL CONSIDERATIONS

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### 13.1 WASTE TREATMENT METHODS

Wastes may be disposed of on site or at an approved waste disposal facility. Triple rinse (or equivalent), adding rinse water to spray tank. Offer container for recycling or dispose of in a sanitary landfill or by other procedures approved by appropriate authorities. Recycling decontaminated containers is the best option of container disposal. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler visit the ACRC web page at <http://www.acrecycle.org/>. Do not contaminate water, food or feed by storage or disposal.

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## 14 TRANSPORT INFORMATION

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### 14.3 LAND TRANSPORT

**DOT Shipping Description:** Less than 119 gallons: NOT REGULATED BY DOT

**DOT Shipping Description:** 119 gallons and greater: UN1993, FLAMMABLE LIQUIDS, N.O.S., (CYCLOHEXANONE), 3, III ERG GUIDE 128

**U.S. Surface Freight Classification:** COMPOUND, TREE OR WEED KILLING, NOI (NMFC 50320, SUB 2: CLASS: 60)



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## 15 REGULATORY INFORMATION

### 15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings:

NFPA		HMIS	
2	Health	0	Least
2	Flammability	1	Slight
1	Instability	2	Moderate
		3	High
		4	Severe

SARA Hazard Notification/Reporting

SARA Title III Hazard Category:	Immediate	<u>Y</u>	Fire	<u>Y</u>	Sudden Release of Pressure	<u>N</u>
	Delayed	<u>Y</u>	Reactive	<u>N</u>		

Reportable Quantity (RQ) under U.S. CERCLA: Cyclohexanone (CAS: 108-94-1) 5000 pounds (14.8% in product); Xylene (CAS: 1330-20-7) 100 lbs. (1.3% in product).

SARA, Title III, Section 313: Xylene (CAS: 1330-20-7); 1,2-4 Trimethylbenzene (CAS: 95-63-6)

RCRA Waste Code: U057 (Cyclohexanone); U239 (Xylene).

CA Proposition 65: Not listed.

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

#### DANGER

Corrosive

Causes irreversible eye damage and skin burns.

Harmful if swallowed or inhaled.

This product may cause skin sensitization reactions in certain individuals.

Do not get in eyes, on skin, or on clothing.

Avoid breathing vapor or spray mist.

## 16 OTHER INFORMATION

SDS STATUS: Format revised.

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

EPA REG. NO.: 34704-610

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