

# Safety Data Sheet RADICO LFR



## SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name:** Radico LFR Insecticide  
**EPA Registration No.** 279-3302-33270  
**Product Type:** Insecticide  
**Active Ingredient(s):** Bifenthrin: (2-methyl[1,1'-biphenyl]-3-yl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate; IUPAC: 2-methylbiphenyl-3-ylmethyl (Z)-(1RS)-cis-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate.  
**Manufacturer/Registrant:** United Suppliers, Inc.  
30473 260<sup>th</sup> St.  
Eldora, IA 50627

**FOR EMERGENCY MEDICAL TREATMENT INFORMATION:** Call National Poison Control Center 1-800-222-1222

**FOR MEDICAL EMERGENCIES:** Contact the National Pesticide Information Center 1-800-858-7378

**FOR CHEMICAL EMERGENCY:** Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

THE FOLLOWING HAZARDS ARE IDENTIFIED ACCORDING TO OSHA HCS CLASSIFICATION (29 CFR 1910.1200).

### Hazard Classifications:

- Acute oral toxicity: Category 3
- Acute inhalation toxicity: Category 4
- Carcinogenicity: Category 2
- Specific target organ toxicity (single exposure): category 1
- Specific target organ toxicity (repeated exposure): Category 1

**Signal Word:** DANGER

### Pictograms:



### Hazard Statements:

- Harmful if swallowed
- Harmful if inhaled
- Suspected of causing cancer
- Cause damage to organs
- May cause damage to organs through prolonged or repeated exposure.
- Toxic to aquatic life with long lasting effects.

### Precautionary Statements:

- Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. If swallowed, immediately call a poison center or a doctor. Rinse mouth. Store locked up.
- Avoid breathing dust, fume, gas, mist, vapors or spray. Use only outdoors or in a well-ventilated area. If inhaled, Remove victim to fresh air and keep comfortable for breathing. Call a poison center if you feel unwell.

- Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, clothing, eye and face protection. If exposed or concerned: get medical advice. Store locked up.

Contact Chemtrec for emergency medical treatment at 1- 800-424-9300.

**Storage and Disposal:** See Section 7 and 13.

**Other Hazards:** See Section 11 and 12.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Bifenthrin	82657-04-3	17.15
Propylene glycol	57-55-6	5-10

### SECTION 4. FIRST AID MEASURES

- If Swallowed:** Call a poison control center or doctor immediately for treatment advice.  
Do not give any liquid to the person.  
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 in Eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes.  
Remove contact lenses, if present, after 5 minutes, then continue rinsing eye.  
Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or when going for treatment. You may also contact the National Poison Control Center, 1-800-222-1222, day or night, for emergency medical treatment information.

This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

### SECTION 5. FIRE FIGHTING MEASURES

**Fire and Explosion:**

- Flash Point: Not applicable
- Flammable Limits (% in Air): Lower: % Not available Upper: % Not available
- Autoignition Temperature: Not available
- Flammability: Not available

**Unusual Fire, Explosion and Reactivity Hazards:**

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

**Hazardous Decomposition Products:**

Carbon oxides (CO<sub>x</sub>), Hydrogen chloride, Hydrogen fluoride, Sulfur oxides.

**In Case of Fire:**

Use foam, dry chemical, CO<sub>2</sub> extinguishing media. Soft stream or water fog only if necessary. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### In Case of Spill or Leak:

Isolate and post spill area. Wear suitable protective clothing, gloves and eye/face protection. Clean up spills immediately, observing precautions outlined in Section 8. Keep people and animals away from the upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains. Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Absorb rinseate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of water as indicated in Section 13.

## SECTION 7. HANDLING AND STORAGE

If storing this product below freezing, user should shake or roll the container to ensure proper product consistency. Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

**Skin/Hand Protection:** Wear long-sleeved shirt, long pants, socks, and shoes. Protective gloves.

**Eye/Face Protection:** Wear chemical protective eyewear (goggles, face shield or safety glasses).

**Respiratory Requirements:** For dust, splash, mist or spray exposure wear a filtering mask.

**General Protective Measures:** Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

### User Safety Recommendations:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**Engineering Controls:** See product label. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guideline. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

### Exposure Limits:

Chemical Name	CAS NO.	ACGIH/TLV	OSHA/PEL	WEEL*	ONTARIO TWAE
Propylene glycol	57-55-6	NE	NE	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup> (TWA, aerosol only) 50 ppm (TWA, aerosol and vapor) 155 mg/m <sup>3</sup> (TWA, aerosol and vapor)

\* USA. Workplace Environmental Exposure Levels (WEEL)

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** White to off-white, viscous liquid

**Odor:** Latex

**Odor Threshold:** Not available

pH: 6.1  
Flash Point: Not applicable  
Density: 1.05 g/mL (8.75 lbs/gal)  
Water Solubility: Not available  
Viscosity: Not available  
Flammability (Solid, Gas): Not applicable  
Upper/Lower Flammability/Explosive Limits: Not available  
Auto-ignition Temperature: Not available  
Explodability: Not available  
Solubility: Not available  
Partition Coefficient (n-Octanol/Water): Not available  
Vapor Pressure: Not available  
Vapor Density: Not available  
Melting Point/Freezing Point: Not applicable  
Boiling Point: Not available  
Evaporation Rate: Not available  
Decomposition Temperature: Not available

## SECTION 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal use and storage conditions.  
**Hazardous Polymerization:** Will not occur.  
**Conditions to Avoid:** Heat, flames and sparks.  
**Materials to Avoid:** Strong acids, bases and oxidizing agents.  
**Hazardous Decomposition Products:** Carbon oxides (CO<sub>x</sub>), Hydrogen chloride, Hydrogen fluoride, Sulfur oxides.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity/Irritation Studies:

Acute oral toxicity:	LD <sub>50</sub> (Rat)	175 mg/kg
Acute Dermal toxicity:	LD <sub>50</sub> (Rabbit):	> 5,000 mg/kg
Acute inhalation toxicity:	LC <sub>50</sub> (Rat):	>2.28 mg/L (4 hr)
Eye irritation:	Minimally Irritating (Rabbit)	
Skin irritation:	Slightly Irritating (Rabbit)	
Skin Sensitization:	Non-sensitizing	

### Toxicological Information: (Based on Bifenthrin Technical)

**Symptoms :** Large doses of bifenthrin ingested by laboratory animals produced signs of toxicity including convulsions, tremors and bloody nasal discharge.

**Chronic Toxicity:** Long-term exposure to bifenthrin caused neurotoxicity (tremors and impaired gait) in the early exposure in animal studies, but tremors disappeared with continued exposure.

**Reproductive/Developmental Toxicity:** No reproductive or teratogenic toxicity in animal studies

**Neurotoxicity:** Bifenthrin causes clinical signs of neurotoxicity (tremors, impaired gait, excessive salivation) following acute or subchronic exposure. Tremors disappeared with continued exposure.

**Mutagenicity:** Bifenthrin I sno genotoxic in laboratory studies.

**STOT – Single Exposure:** Causes damage to organs:

**STOT- Repeated Exposure:** Causes damage to organs through prolonged or repeated exposure.

**Target Organ Effects:** Central Nervous System.

**Carcinogenicity:** Bifenthrin showed weak treatment-related response for liver adenocarcinomas and benign bladder tumors (lesion) in male mice.

**Carcinogenicity Assessment:**

ACGIH: None  
 NTP : None  
 IARC : None  
 OSHA : None

**SECTION 12. ECOLOGICAL INFORMATION**

**Environmental Precautions:**

This pesticide is extremely toxic to fish and aquatic invertebrates. Use with care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not make applications when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area. The use of bifenthrin is prohibited in areas that may result in exposure of endangered species to bifenthrin. Prior to use in a particular county contact the local extension service for procedures and precautions to use to protect endangered species.

**Ecological information (Based on Bifenthrin Technical):**

Rainbow trout LC<sub>50</sub> (96h): 0.00015 mg/L  
 Bluegill LC<sub>50</sub> (96h): 0.00035 mg/L  
 Daphnia magna EC<sub>50</sub>: 0.0016 mg/L  
 Mallard Duck LD<sub>50</sub>: 2,150 mg/kg  
 Bobwhite quail LD<sub>50</sub> : 1,800 mg/kg  
 Bifenthrin is toxic to bees.

**Bioaccumulation:** Bifenthrin has some potential to bioaccumulate in the environment.

**Mobility:** Bifenthrin is immobile, not expected to reach groundwater.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance. Dispose of product containers, waste containers, and residues in accordance with local, state, and federal health and environmental regulations. Do not contaminate water, food, or feed by disposal.

**SECTION 14. TRANSPORT INFORMATION**

**DOT**

<b>Packaging Type</b>	Non-Bulk, Bulk
<b>Proper Shipping Name</b>	Pyrethroid pesticide, liquid, toxic
<b>UN/ID no</b>	UN3352
<b>Hazard class</b>	6.1
<b>Packing Group</b>	III
<b>Description</b>	UN3352, Pyrethroid pesticide, liquid, toxic (Bifenthrin), 6.1, PG III

**TDG**

UN/ID no	UN3352
Proper Shipping Name	Pyrethroid pesticide, liquid, toxic
Hazard class	6.1
Packing Group	III
Marine Pollutant	Bifenthrin,
Description	UN3352, Pyrethroid pesticide, liquid, toxic (Bifenthrin), 6.1 PG III, Marine Pollutant

**ICAO/IATA**

UN/ID no	UN3352
Proper Shipping Name	Pyrethroid pesticide, liquid, toxic
Hazard class	6.1
Packing Group	III
Marine Pollutant	Bifenthrin,
Description	UN3352, Pyrethroid pesticide, liquid, toxic (Bifenthrin), 6.1, PG III, Marine pollutant

**IMDG/IMO**

UN/ID no	UN3352
Proper Shipping Name	Pyrethroid pesticide, liquid, toxic
Hazard class	6.1
Packing Group	III
EmS No.	F-A, S-A
Marine Pollutant	Bifenthrin,
Description	UN3352, Pyrethroid pesticide, liquid, toxic (Bifenthrin), 6.1, PG III, Marine Pollutant

**SECTION 15. REGULATORY INFORMATION**

**FIFRA INFORMATION:**

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 for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

**WARNING** May be fatal if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.

**SARA 311/212 Hazard Categories:**

Section 311/312	Acute Health Hazard Chronic Health Hazard
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Section 313 Chemical(s) Not applicable

**CERCLA/SARA 302 Reportable Quantity (RQ):** Not Applicable

**RCRA Hazardous Waste Classification (40 CFR 261):** Not Applicable

**TSCA List:** The ingredients of this product are listed on the TSCA inventory or are exempt.

**CA Proposition 65:** Not Applicable

**State Right-To-Know Ingredients:** Not applicable

## SECTION 16. OTHER INFORMATION

**NFPA 704 (National Fire Protection Association) Rating:**

Health - 2 Flammability - 1 Reactivity - 1 Others - None

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

**SDS DATE:** 6-29-2015. Supersedes version dated 2-29-2015. Revised for OSHA 2012 HCS compliance.

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions.