

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

- 1.1.1 **PRODUCT IDENTIFIER:** EPA REG. NO. 34704-978
TRADE NAME: TOMBSTONE™ HELIOS®
- 1.2 **RECOMMENDED USE:** PYRETHROID INSECTICIDE
- 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

Acute Toxicity – Oral	Category 4	H302
Acute Toxicity – Inhalation	Category 4	H332
Eye Damage/Irritation	Category 2A	H319

2.2 Label elements



Signal word: WARNING
 Hazard Statement: H302 – Harmful if swallowed.
 H332 – Harmful if inhaled.
 H319 – Causes serious eye irritation.

Precautionary Statement: P264 – Wash hands thoroughly after handling.
 P270 – Do not eat, drink or smoke when using this product.
 (Prevention): P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.
 P271 – Use only outdoors or in a well-ventilated area.
 P280 – Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statement: P301+P312: IF SWALLOWED: Call a poison center or doctor/physician if you feel unwell.
 P330 – Rinse mouth.
 (Response): P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312 – Call a poison center or doctor/physician if you feel unwell.
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contacts lenses if present and easy to do. Continue rinsing.
 P337+P313 – If eye irritation persists: Get medical advice/attention.

Precautionary Statement: (Storage): Not required or applicable.

Precautionary Statement: (Disposal): P501 – Dispose of contents/container in accordance with all local, state and federal regulations.

2.3 Other hazards

None known



SAFETY DATA SHEET

SDS NUMBER: 000978-17-LPI

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TOMBSTONE™ HELIOS®

SUPERSEDES: 11/30/12

3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Classification according to 29 CFR 1910.1200

Chemical Name:	CAS No.	Concentration [%]
Cyfluthrin	68359-37-5	25.00
*Other ingredients (including Naphthalene)	91-20-3	75.00

*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 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 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.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Ingestion: Harmful if swallowed.
Inhalation: Harmful if inhaled.
Causes serious eye irritation.

4.3 Immediate Medical Attention and Special Treatment

NOTE TO PHYSICIAN: No specific antidote. Treat symptomatically. Published data indicate Vitamin E acetate can prevent and/or mitigate symptoms of paresthesia caused by synthetic pyrethroids. Contains petroleum distillates. Vomiting can cause aspiration pneumonia. Contact with the eyes causes serious irritation.

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

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



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5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Use medium appropriate to surrounding fire. Dry chemical, carbon dioxide (CO₂), alcohol foam, foam, water spray or fog.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: Combustible. Can release vapors which can form explosive mixtures at temperatures at or above the flashpoint. Heavy vapors can flow along surfaces to distant ignition sources and flash back.

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.

6. ACCIDENTAL RELEASE MEASURES

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 extremely toxic to fish and aquatic invertebrates. For terrestrial uses: 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 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 if bees are visiting the treatment area.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Avoid breathing mists or vapors. Contain spill and sweep up material and transfer to containers for possible land application according to label use or for proper disposal. Wash spill area with water containing strong detergent, absorb and sweep up as above. Check local, state and federal regulations for proper disposal. Never return spills to original containers for re-use.

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: Store in a cool, dry place and away from open flame and extreme heat. Store in such a manner as to prevent cross-contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Handle open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, carefully dam up material to prevent runoff. Refer to Precautionary Statements on product 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 in Section 13 of this document. In spill or leak incidents, keep unauthorized people away. Maintaining a spill kit and fire extinguisher on hand and having emergency phone numbers posted will allow you to be prepared for emergencies. Do not contaminate water, food or feed by storage or disposal.



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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS: OCCUPATIONAL EXPOSURE LIMITS

U.S. Workplace Exposure Level (ACGIH) TLVs

Components	Type	Value
Naphthalene	TWA	52 mg/m ³

U.S. Workplace Exposure Level (OSHA) PELs

Components	Type	Value
Naphthalene	TWA	50 mg/m ³

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 the Worker Protection Standard (WPS) for agricultural pesticides [40CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Individual Protection Measures:

- Eye / Face Protection: Goggles or shielded safety glasses are recommended.
- Skin Protection: Long-sleeved shirt and long pants. Chemical-resistant gloves such as barrier laminate or viton. Shoes plus socks.
- Respiratory Protection: In case of inadequate ventilation or risk of inhalation of mists or vapors, use suitable respiratory equipment such as Dust/mist filtering NIOSH-approved respirator with approval number prefix TC-21C. Wear respiratory protection during operations where spraying or misting occurs. If respirators are used, a program should be in place to assure compliance with 29 CFR 1910.134, the OSHA Respiratory Protection standard. Wear air supplied respiratory protection if exposure concentrations are unknown.

9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 APPEARANCE : Liquid.
- ODOR: Turpentine odor.
- ODOR THRESHOLD: No data available.
- COLOR: Dark amber.
- pH: 4.75 – 4.85 (1% emulsion)
- MELTING POINT / FREEZING POINT: No data available
- BOILING POINT: No data available
- FLASH POINT: > 150 °F / > 65.6 °C.
- FLAMMABILILITY (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 (Kinematic): No data available.
- SPECIFIC GRAVITY (Water = 1): 0.987 – 0.999 g/ml
- DENSITY: 8.23 – 8.33 lbs./gal | 0.99 – 1.0 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.



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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 and open flame.

10.5 INCOMPATIBLE MATERIALS

Alkaline media. Reacts with methanol. Incompatible with most disinfectants.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Not determined.

11 TOXICOLOGICAL INFORMATION

11.3 LIKELY ROUTES OF EXPOSURE

Ingestion. Inhalation. Eye contact.

LC₅₀ (rat): 0.54 - 2.04 mg/L (4 HR)

LD₅₀ Oral (rat): 1,030 mg/kg

LD₅₀ Dermal (rat): > 2,000 mg/kg

Acute Toxicity Estimates: No data available

Skin Irritation (rabbit): No data available.

Eye Irritation (rabbit): Causes serious eye irritation.

Specific Target Organ Toxicity: No data available.

Aspiration: Vomiting may cause aspiration pneumonia.

Skin Sensitization (guinea pig): Not a sensitizer

Carcinogenicity: IARC-2B: Possibly Carcinogenic to Humans; NTP-R: Reasonably Anticipated to Be a Human Carcinogen.

Germ Cell Mutagenicity: No data available

Interactive Effects: None known

12 ECOLOGICAL INFORMATION

12.3 ECOTOXICITY

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. 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.

Ecotoxicological Data

	Species	Test Results
Cyfluthrin	No data	

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.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: No data available.

12.4 MOBILITY IN SOIL

Moderate.

12.5 OTHER ADVERSE EFFECTS

Assessment: No data available.



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13 DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING: Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at www.acrecycle.org. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

For packages up to 5 gallons: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. **For packages greater than 5 gallons or 50 lbs: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. **For square bottom caged totes greater than 55 gals.: Triple rinse or pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Fill the container about 1/4 full with water, rinsing down all sides inside the container thoroughly. Recirculate water with the pump for 2 minutes. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

14 TRANSPORT INFORMATION

14.3 LAND TRANSPORT

DOT Shipping Description: 119 GALLONS AND LESS: NOT REGULATED.

DOT Shipping Description: GREATER THAN 119 GALLONS: RQ NA1993, COMBUSTIBLE LIQUID, N.N.O. (NAPHTHALENE), III ERG GUIDE 128

U.S. Surface Freight Classification: INSECTICIDES OR FUNGICIDES, INSECT OR ANIMAL REPELLENTS, NOI; OTHER THAN POISON (NMFC 102120, CLASS: 60)

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
		2	Health
		2	Flammability
		1	Reactivity
		G	PPE

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: Naphthalene (CAS: 91-20-3) (6.8% in product) 100 lbs.

SARA, Title III, Section 313: Cyfluthrin (CAS: 68359-37-5) 25%; Naphthalene (CAS: 91-20-3) 6.8%

RCRA Waste Code: Not listed

CA Proposition 65: **WARNING:** This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.



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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:

WARNING

Causes substantial but temporary eye irritation.

Do not get in eyes, skin or on clothing.

Wear protective eyewear such as goggles, face shield or safety glasses.

Harmful if swallowed or inhaled.

Avoid breathing vapor or spray mist.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.

Remove and wash contaminated clothing before reuse.

Do not contaminate feed or food. Keep out of reach of children.

16 OTHER INFORMATION

SDS STATUS: Format revised.

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

EPA REG. NO.: 34704-987

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