

SAFETY DATA SHEET



SDS per US OSHA Hazard Communication Standard (HazCom) 2012, 29 CFR §1910.1200

1 TEST SUBSTANCE IDENTIFICATION AND COMPANY INFORMATION

1.1 PRODUCT IDENTIFICATION

Product name: Fun-Thyme
Product Type: Biofungicide/Bactericide
EPA Registration No. 99869-2-2935
Active Ingredient: Thyme Oil (syn. *Thymus vulgaris* leaf extract)
CAS No.: 8007-46-3 (alternate 84929-51-1)
US HTS No.: 3808.92.50.80

1.2 RELEVANT IDENTIFIED USES

Identified Uses: For pesticidal use only
Uses Advised Against: Any other use

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Name: Wilbur-Ellis Company LLC
Address: 16300 Christensen Rd. Ste 135, Tukwila, WA 98188
Telephone: (800) 500-1698
Email: SDS@wilburellis.com

1.4 EMERGENCY PHONE NUMBER

Emergency Number: Chemtrec - Domestic (800) 424-9300

2 HAZARDS IDENTIFICATION AND INFORMATION

2.1 CLASSIFICATION OF THE SUBSTANCE/MIXTURE

OSHA Hazard Classification: Skin irritation, Category 2; **H315**
Sensitization — Skin, Category 1; **H317**
Serious eye damage/eye irritation, Category 1; **H318**
Hazardous to the aquatic environment — long-term hazard, Category Chronic 2;
H411

Signal Word: Danger

Hazards Statements: **H315** Causes skin irritation
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H411 Toxic to aquatic life with long lasting effects.

Pictogram:



Precautionary Statements:

P264+P265: Wash hands thoroughly after handling. Do not touch eyes.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P273: Avoid release to the environment.
P302+P352: IF ON SKIN: Wash with plenty of water.
P321: Specific treatment (see Section 4.1 on this SDS).
P332+P317: If skin irritation occurs: Get medical help.
P362+P364: Take off contaminated clothing and wash it before reuse.
P305+P354+P338+P317: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get emergency medical help.
P391: Collect spillage.
P501: Dispose of contents/container in accordance with all Federal, State and local procedures.

2.2 OTHER HAZARDS

Other Hazards: None.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient		CAS #	% w/w	
Thyme oil (C ₁₀ H ₁₄ O) [syn. <i>Thymus vulgaris</i> leaf extract]		8007-46-3	26	
Hazardous Ingredient(s)		Classification	CAS #	% w/w
Thyme Oil	Flammable liquids, Category 3; H226	8007-46-3	26	
	Acute toxicity (oral), Category 4; H302			
	Skin corrosion/irritation, Category 1C; H314			
	Serious eye damage/eye irritation, Category 1; H318			
	Sensitization — Skin, Category 1; H317			
	Aspiration hazard, Category 1; H304			
	Hazardous to the aquatic environment — long-term hazard, Category Chronic 2; H411			
Proprietary ingredient	Flammable liquids, Category 3; H226	***	0 – 4	
	Skin corrosion/irritation, Category 1A; H314			
	Serious eye damage/eye irritation, Category 1; H318			

4 FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

Treat symptomatically. Use personal protective equipment as required. Avoid contact with eyes, skin and clothing.

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician.

Skin Contact: Wash off immediately with plenty of water. Wash contaminated clothing before reuse. Consult a physician.

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Consult a physician.

Ingestion: Rinse mouth. Do not induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.

4.2 MOST IMPORTANT SYMPTOMS/EFFECTS (ACUTE AND/OR DELAYED)

No information available.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically. Do not induce vomiting due to aspiration hazard.

5 FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable Methods: Dry chemical extinguisher, dry sand, CO₂, alcohol foam

Unsuitable Methods: Water jet

5.2 SPECIAL HAZARDS ARISING FROM SUBSTANCE/MIXTURE

Hazardous Combustion Products: None known.

5.3 ADVICE FOR FIREFIGHTERS

Firefighter Protection: Keep upwind of fire. Wear protective clothing and self-contained breathing apparatus. Fight fire from a safe distance.

6 ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Non-Emergency Personnel: Avoid substance contact. Ensure adequate ventilation. Evacuate the area and observe emergency procedures.

Emergency Responders: Use appropriate personal protective equipment. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Do NOT smoke and do NOT expose the product to an open flame or to any other potential source of ignition.

6.2 ENVIRONMENTAL PRECAUTIONS

General: Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Other: **H411** Toxic to aquatic life with long lasting effects

6.3 MATERIAL CONTAINMENT/CLEAN-UP

Methods: Caution: spillages may be slippery. For small spills, contain the spill and stop the flow. Contain spillages with sand, earth, or any suitable absorbent material. Transfer to a suitable container for disposal or recovery. Seal the container and handle in an approved manner. Reclaim material if possible.

Other Information: Dispose of in accordance with all Federal, State and local procedures.

6.4 REFERENCE TO OTHER SECTIONS

See Section 13 for disposal considerations.

7 HANDLING AND STORAGE

7.1 HANDLING PRECAUTIONS

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition. Do not smoke while handling or in areas where the product is stored. Take preventative measures to prevent the buildup of electrostatic charge.

7.2 STORAGE PRECAUTIONS (INCLUDING INCOMPATIBILITIES)

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool, dry place away from heat, sunlight, or ignition sources. Keep away from foodstuffs.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Substance	Occupational Exposure Limits
Thyme Oil	<u>OSHA PELs</u> : None established.
	<u>ACGIH TLVs</u> : None established.
	<u>NIOSH IDLH</u> : None established.

8.2 EXPOSURE CONTROLS

Wear protective equipment to comply with good occupational hygiene practice. Do not eat, drink or smoke at the workplace.

8.2.1 ENGINEERING CONTROLS

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.2.2 PERSONAL PROTECTIVE EQUIPMENT

The following protective clothing should be used by any handlers of this product.

8.2.2.1 RESPIRATORY PROTECTION

Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment (e.g., respirator).

8.2.2.2 EYE/FACE PROTECTION

Use tight sealing safety goggles.

8.2.2.3 HAND/SKIN PROTECTION

Wear chemical-resistant gloves, long-sleeved shirt, long pants, shoes, and socks.

8.2.3 ENVIRONMENTAL EXPOSURE CONTROLS

Do not flush into surface water or sanitary sewer system.

9 PHYSICAL/CHEMICAL PROPERTIES

9.1 BASIC PHYSICAL/CHEMICAL PROPERTIES

<i>Physical Property</i>	<i>Result</i>
Appearance:	Milky white to pale yellow viscous liquid
Odor:	Smokey, spicy, pungent
Odor Threshold:	Not applicable
pH:	5.0 (1% v/v solution in water) [Range: 4.5 – 5.5]
Melting Point / Freezing Point:	Not applicable
Initial Boiling Point:	190° – 195°C [thyme oil]
Boiling Range:	Not applicable
Flash Point:	>98.1°C (closed cup) [point of boiling without ignition]
Evaporation Rate:	Not applicable
Flammability (solid, gas):	Not applicable
Lower & Upper Flammability Limits:	Not applicable
Vapor Pressure:	Not applicable
Vapor Density (Air = 1):	Not determined
Density/Bulk Density/Specific Gravity:	Specific gravity: 1.0 (nominal) [Range: 0.9 – 1.1]
Solubility:	Insoluble in water, soluble in alcohol
Partition Coefficient (n-octanol/water):	Not applicable
Auto-ignition Temperature:	Not applicable
Decomposition Temperature:	Not applicable
Viscosity:	18.65 cP @ 20°C; 21.55 @ 40°C

9.2 OTHER PHYSICAL/CHEMICAL PROPERTIES

<i>Physical Property</i>	<i>Result</i>
UV/Visible Light Absorbance:	275 nm [thyme oil]
Refractive Index:	1.5 @ 25°C (range 1.48 – 1.51) [thyme oil]
Optical Rotation:	-5° – +5° [thyme oil]

10 STABILITY AND REACTIVITY

10.1 REACTIVITY

No known or expected hazardous reactions when handled and stored according to stated provisions.

10.2 CHEMICAL STABILITY

Stable when handled and stored according to stated provisions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

None known or expected.

10.4 CONDITIONS TO AVOID

None known or expected.

10.5 INCOMPATIBLE MATERIALS

None known or expected.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

None known or expected.

11 TOXICOLOGICAL INFORMATION

11.1 LIKELY ROUTES OF EXPOSURE

Skin contact, inhalation.

11.2 SYMPTOMS RELATED TO PHYSICAL/CHEMICAL/TOXICOLOGICAL CHARACTERISTICS

None noted.

11.3 EFFECTS (DELAYED/IMMEDIATE/CHRONIC FROM SHORT- AND LONG-TERM EXPOSURE)

None noted. See Section 4.

11.4 ACUTE TOXICITY

<i>Test</i>	<i>Results</i>	<i>Test Substance</i>	<i>US EPA Toxicity Category</i>
Acute oral LD₅₀	Rat: > 5,000 mg/kg bw	Fun-Thyme	IV
Acute dermal LD₅₀	Rat: > 5,000 mg/kg bw	Fun-Thyme	IV
Acute inhalation LC₅₀	Rat: > 2.15 mg/L	Fun-Thyme	IV
Eye irritation:	Rabbit: Severely irritating (MMTS = 47.3)	Fun-Thyme	I
Skin irritation:	Rabbit: Moderately irritating (PDII = 2.4)	Fun-Thyme	III
Respiratory or skin sensitization:	LLNA: Mild contact dermal sensitizer	Fun-Thyme	N/A

11.5 SUBCHRONIC/CHRONIC/GENETIC/REPRODUCTIVE TOXICITY

<i>Test</i>	<i>Results</i>
Repeated-Dose Toxicity	No information available
Genetic Toxicity	Not genotoxic
Reproductive Toxicity	No information available
Carcinogenicity	No carcinogenic effects known <u>NTP</u> : not listed <u>IARC</u> : not listed <u>OSHA</u> : not listed

12 ECOLOGICAL INFORMATION

12.1 ECOTOXICITY

Species	Test	Study Duration	Conditions	Test Substance	Results
Bobwhite quail (<i>Colinus virginianus</i>)	Avian oral	14-day			No data available
Bobwhite quail (<i>Colinus virginianus</i>)	Avian dietary	7-day			No data available
Rainbow trout (<i>Oncorhynchus mykiss</i>)	Freshwater fish	96-hour	Static	90% oil with emulsifier	16.1 mg/L
		96-hour	Static	Essential oil	6.6 mg/L
Pacific coho salmon (<i>Oncorhynchus kisutch</i>)	Freshwater fish	96-hour	Static	90% oil with emulsifier	20.5 mg/L
Cladoceran (<i>Daphnia magna</i>)	Freshwater invertebrate	48-hour	Static	Essential oil	EC ₅₀ = 11.787 mg/L
Honey bee (<i>Apis mellifera</i>)	Honeybee toxicity	24-hour	Contact	Thyme oil solution	LC ₅₀ = 2.61% LC ₉₀ = 6.39%
			Topical		LC ₅₀ = 3.30% LC ₉₀ = 9.84%
			Oral		High mortality at all doses
Stingless bee (<i>Trigona hyalinata</i>)	Nontarget pollinator	24-hour	Contact	Thyme oil solution	LC ₅₀ = 8.29% LC ₉₀ = 18.15%
			Topical		LC ₅₀ = 6.53% LC ₉₀ = 30.41%
			Oral		High mortality at all doses
Rove beetle (<i>Atheta coriaria</i>)	Nontarget insect	10-day		0.3% commercial product	No negative effects on survival, egg-to-adult development time, prey consumption, or reproduction

12.2 PERSISTENCE AND DEGRADABILITY

Not determined.

12.3 BIOACCUMULATIVE POTENTIAL

Not determined.

12.4 MOBILITY IN SOIL

Not determined.

12.5 OTHER ADVERSE EFFECTS

H411 Toxic to aquatic life with long lasting effects. (GHS hazard statement)

13 DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Product/packaging disposal: Handle in accordance with federal, state, and/or local ordinances.

Waste treatment options: Recycling is preferred to disposal or burning.

Disposal conditions: Dispose of in accordance with all federal, state, and local environmental regulations.

14 TRANSPORTATION INFORMATION

UN NUMBER	UN PROPER SHIPPING NAME	TRANSPORT HAZARD CLASS(ES)
Not applicable.	Not applicable.	Not applicable.

PACKING GROUP	ENVIRONMENTAL HAZARDS	SPECIAL PRECAUTIONS FOR USER
Not applicable.	Not applicable.	Not applicable.

TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL73/78 AND THE IBC CODE

Not applicable.

15 REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

EPA/FIFRA

This product is a pesticide product registered with the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements may differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticidal chemicals. The pesticide label also includes other important information, including directions for use.

- EPA Signal Word: Danger

OSHA	TSCA STATUS	CERCLA REPORTABLE QUANTITY
N/A	Exempt	N/A
SARA TITLE III	RCRA STATUS	OTHER
Section 302: N/A	N/A	N/A
Section 311/312: N/A		
Section 313: N/A		

16 OTHER INFORMATION

ABBREVIATIONS

OSHA	US Occupational Health and Safety Administration
EPA	US Environmental Protection Agency
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (Superfund)
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act

TSCA	Toxic Substances Control Act
PEL	Permissible exposure limit
STOT	Specific target organ toxicity
TLV	Threshold limit value
TWA	Time-weighted average
LD ₅₀	Median lethal dose: dose resulting in 50% mortality in the test species
LC ₅₀	Median lethal concentration: concentration resulting in 50% mortality in the test species
EC ₅₀	Median effective concentration: concentration resulting in 50% reduction in algae growth or algae growth rate, or <i>Daphnia</i> immobilization
PPE	Personal protective equipment
PBT	Persistent, bioaccumulative, and toxic
vPvB	Very persistent, very bioaccumulative
MARPOL 73/78	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 (<u>Marine Pollution 1973/1978</u> ,

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