

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Name : Starbar UL-100 EC Insecticidal Spray
 Synonyms : EPA Reg. No.: 89459-29, 100208918, 100208919, 100548194, Emulsifiable Spray Concentrate #96

1.2. Recommended use and restrictions on use

Recommended use : Insecticide.
 Restrictions on use : Keep out of reach of children and domestic animals. Avoid contact with eyes, skin and clothing. Do not use or store near heat or open flame. Avoid release to the environment. Do NOT take internally.

1.3. Supplier

Central Garden & Pet
 1501 E. Woodfield Road, Suite 200W
 Schaumburg, IL 60173 - United States
 www.starbarproducts.com

1.4. Emergency telephone number

Emergency number : 1-800-347-8272
 1-800-424-9300 - CHEMTREC
 1-703-527-3887 - CHEMTREC - Outside North America - Collect Calls Accepted

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture


GHS US classification

Flammable liquids Category 4	Combustible liquid
Skin corrosion/irritation Category 2	Causes skin irritation
Serious eye damage/eye irritation Category 1	Causes serious eye damage
Skin sensitization, Category 1	May cause an allergic skin reaction
Specific target organ toxicity — Single exposure, Category 3, Narcosis	May cause drowsiness or dizziness
Aspiration hazard Category 1	May be fatal if swallowed and enters airways

2.2. GHS Label elements, including precautionary statements

GHS US labeling


Hazard pictograms (GHS US) :



GHS05



GHS07



GHS08

Signal word (GHS US) : Danger

Hazard statements (GHS US) : Combustible liquid
 May be fatal if swallowed and enters airways
 Causes skin irritation
 May cause an allergic skin reaction
 Causes serious eye damage
 May cause drowsiness or dizziness

Precautionary statements (GHS US) : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 Avoid breathing dust/fume/gas/mist/vapors/spray.
 Wash hands, forearms and face thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing must not be allowed out of the workplace.
 Wear protective gloves/protective clothing/eye protection/face protection.
 If swallowed: Immediately call poison control or a doctor.
 IF ON SKIN: Wash with plenty of water.
 If inhaled: Remove person to fresh air and keep comfortable for breathing.

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IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center or doctor.
Do NOT induce vomiting.
If skin irritation or rash occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use dry extinguishing powder, carbon dioxide (CO₂), Water fog, foam to extinguish.
Store in a well-ventilated place. Keep container tightly closed.
Keep cool.
Store locked up.
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : This pesticide is toxic to aquatic organisms, including fish and invertebrates. This product is toxic to bees exposed to direct treatment on blooming crops or weeds. Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Pyrethrins	(CAS-No.) 8003-34-7	0.96
Piperonyl butoxide	(CAS-No.) 51-03-6	9.6
* Trade secret	(CAS-No.) Trade secret	81.44
Nonylphenol, ethoxylated proprietary mixture	(CAS-No.) Proprietary	8
Non-hazardous and/or does not meet criteria for classification	(CAS-No.) N/A	Balance

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice and attention.

First-aid measures after ingestion : IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Call a physician immediately. Rinse mouth. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : Causes drowsiness and dizziness.

Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic reaction in individuals with a sensitivity to piperonyl butoxide.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : Aspiration Hazard - may be fatal if swallowed and enters airways.

4.3. Immediate medical attention and special treatment, if necessary

Contains petroleum distillate vomiting may cause aspiration pneumonia. Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Avoid heavy hose streams.

5.2. Specific hazards arising from the chemical

Fire hazard : Combustible liquid. Contains petroleum distillates, liquid may float and may re-ignite on surface of water.

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Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: Exposure controls/personal protection.

Emergency procedures : ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Ventilate area. Do NOT wash away into sewer. Avoid release to the environment. Stay upwind. Stop leak if safe to do so. Turn off electric power to area. Wear appropriate personal protective equipment, avoid direct contact.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Absorb spills with an inert material, clay granules or other inert absorbent material and put in container for disposal. All equipment used when handling the product must be grounded.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Store locked up. Store in original container. Keep from freezing. Protect from sunlight. Keep away from ignition sources. Keep container tightly closed. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Incompatible materials : Heat, sparks, open flame.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Pyrethrins (8003-34-7)		
ACGIH	ACGIH OEL TWA	5 mg/m ³
ACGIH	Remark (ACGIH)	Liver dam; LRT irr
OSHA	OSHA PEL TWA [1]	5 mg/m ³
IDLH	IDLH	5000 mg/m ³
NIOSH	NIOSH REL TWA	5 mg/m ³
* Trade secret (Trade secret)		
ACGIH	ACGIH OEL TWA	Absorbed through skin. 200 mg/m ³ , (as total hydrocarbon vapor) 8 hours.

8.2. Appropriate engineering controls

Appropriate engineering controls : Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Environmental exposure controls : Avoid release to the environment.

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8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear chemically resistant protective gloves.

Eye protection:

Safety glasses

Skin and body protection:

Wear long-sleeved shirt, long pants, socks and shoes

Respiratory protection:

Applicators using a high-pressure hand wand in an enclosed area must wear at least a NIOSH-approved respirator with a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C or any R, P, or HE filter. Applicators using handheld foggers in an enclosed area must wear a half-face, full-face, or hood-style NIOSH-approved respirator with a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a cartridge or canister with any R, P, or HE filter.



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Yellow to amber liquid
Color	: Yellow to amber
Odor	: Pleasant woody
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 66.7 °C (141.8° F)
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability	: Not applicable
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 0.82 g/ml (6.8 lb/gal)
Solubility	: Insoluble
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Lower explosion limit: 0.6 (solvent) Upper explosion limit: 7 (solvent)
Explosive properties	: Not explosive
Oxidizing properties	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Hazardous polymerization will not occur.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition. Avoid direct sunlight. Excessive heat > 50 °C (> 110 °F). Do not freeze.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Decomposes upon heating to produce toxic vapors/gases which include oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Pyrethrins (8003-34-7)	
LD50 oral rat	2370 mg/kg Adult male; 1030 mg/kg Adult female
LD50 dermal rat	2000 mg/kg
LC50 Inhalation - Rat	3.4 mg/l/4h
Piperonyl butoxide (51-03-6)	
LD50 oral rat	4300 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 Inhalation - Rat	> 5 mg/l/4h

GHS-US Properties	Classification
Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye damage.
Respiratory or skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	Not classified
Aspiration hazard	May be fatal if swallowed and enters airways.

Potential health effects

Inhalation

Acute : Causes drowsiness and dizziness.

Skin

Acute : Causes skin irritation. May cause an allergic reaction in individuals with a sensitivity to piperonyl butoxide.

Eye

Acute : Causes serious eye damage.

Ingestion

Acute : Aspiration hazard - small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Mutagenicity

: Pyrethrins were not found to be genotoxic and did not damage DNA in any study conducted which included: Ames assay, chromosome aberration in Chinese hamster ovaries (CHO) cells and in the unscheduled DNA synthesis (UDS) assay in cultured human liver cells. Piperonyl butoxide was not mutagenic in a battery of tests.

Carcinogenicity

: Pyrethrins are not listed as a carcinogen by OSHA, IARC, or NTP. Piperonyl butoxide is not classified as a carcinogen by IARC, NTP, OSHA.

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Reproductive Effects : Pyrethrins did not produce any birth defects or adverse effects on reproductive parameters in tests with rats and rabbits. Piperonyl butoxide did not produce any birth defects or adverse effects on reproductive parameters in tests with rats and rabbits.

SECTION 12: Ecological information

12.1. Toxicity

Pyrethrins (8003-34-7)	
LC50 Acute fish 1	0.0051 mg/l (Exposure time: 96hr Oncorhynchus mykiss)
LC50 Acute fish 2	0.016 mg/l (Exposure time: 96h - Sheepshead minnow)
LC50 Acute crustacea 1	0.0014 mg/l (Exposure time: 96h - Mysid shrimp)
LC50 Acute crustacea 2	0.0116 mg/l (Exposure time: 48h Daphnia)
NOEC Chronic fish 1	0.0019 mg/l (Fathead minnow)
NOEC Chronic fish 2	0.0059 mg/l (Sheepshead minnow - Estimated)
NOEC Chronic crustacea 1	0.00086 mg/l (Daphnia magna)
NOEC Chronic crustacea 2	0.0001 mg/l (Mysid shrimp - Estimated)
Piperonyl butoxide (51-03-6)	
LC50 Acute fish 1	1.9 mg/l (Rainbow trout)
LC50 Acute fish 2	3.94 mg/l (Sheepshead minnow)
LC50 Acute crustacea 1	0.49 mg/l (Mysid shrimp)
LC50 Acute crustacea 2	0.51 mg/l (Gammarus fasciatus (amphipod))
NOEC Chronic fish 1	0.04 mg/l (Fathead minnow)
NOEC Chronic crustacea 1	0.03 mg/l (Daphnia magna)

12.2. Persistence and degradability

Pyrethrins (8003-34-7)	
Persistence and degradability	Pyrethrins have low persistence in the environment due to rapid breakdown in presence of UV light.

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Other adverse effects

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Ecological Fate	This product is toxic to aquatic organisms, including fish and invertebrates. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

SECTION 14: Transport information

	UN number	Proper Shipping Name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	NA1993	Packaging greater than 104 lbs.: Combustible liquid, n.o.s. (Petroleum distillates)	Combustible liquid	III	RQ = Pyrethrins = 1 lb.
IMDG	UN3082	Packaging greater than 5L : Environmentally Hazardous Substance, Liquid, n.o.s. (Pyrethrin and Piperonyl butoxide)	9	III	Marine pollutant
IATA	UN3082	Packaging greater than 5L : Environmentally Hazardous Substance, Liquid, n.o.s. (Pyrethrin and Piperonyl butoxide)	9	III	Acute aquatic toxicity

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SECTION 15: Regulatory information

15.1. US Federal regulations

Pyrethrins (8003-34-7)	
CERCLA RQ	1 lb listed under Pyrethrins
Piperonyl butoxide (51-03-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
SARA Section 313 - Emission Reporting	1 %
* Trade secret (Trade secret)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA Labelling	
EPA Registration Number	89459-29
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. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.	
FIFRA Hazard statements	Caution
FIFRA Precautionary statements	KEEP OUT OF REACH OF CHILDREN.
FIFRA Hazards to Humans and Domestic Animals	Contains Petroleum Distillate. Harmful if absorbed through the skin. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
FIFRA First aid	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 swallowed: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person. NOTE TO PHYSICIAN: Contains petroleum distillate – vomiting may cause aspiration pneumonia.
FIFRA Environmental hazards	For Terrestrial Applications: This product is toxic to aquatic organisms, including fish and invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This product may contaminate water through runoff. This product has a potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. This product is highly toxic to bees exposed to direct treatment 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. Except as specified in the directions for use, 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 contaminate water when disposing of equipment wash-water or rinsate. {For containers equal to or greater than 5 gallons} Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

15.2. US State regulations

No additional information available

SECTION 16: Other information

Issue date	: 06 July 2015
Revision date	: 20 October 2022
Supersedes	: 20 April 2022

Indication of changes:

Revised Sec. 1: Added material number(s).

SDS US (GHS HazCom 2012) - CGP

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The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.