

Safety Data Sheet

Issue date: 12/01/2021

Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Trade name : Starbar Inhibidor Insecticidal Pour-On, RF2301 LPD PO
 Synonyms : EPA Reg. No.: 89459-127, 100545179, 100545399, 100545430

1.2. Recommended use and restrictions on use

Recommended use : Insecticide.
 Restrictions on use : Keep out of reach of children. Avoid contact with eyes, skin or clothing. Do NOT take internally.

1.3. Supplier

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

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

Skin corrosion/irritation Category 2	Causes skin irritation
Serious eye damage/eye irritation Category 2B	Causes eye irritation
Specific target organ toxicity (repeated exposure) Category 2	May cause damage to organs through prolonged or repeated exposure
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) :



GHS07



GHS08

Signal word (GHS US) : Danger

Hazard statements (GHS US) : May be fatal if swallowed and enters airways
 Causes skin irritation
 Causes eye irritation
 May cause damage to organs (blood) through prolonged or repeated exposure

Precautionary statements (GHS US) : Do not breathe dust/fume/gas/mist/vapors/spray.
 Wash hands, forearms and face thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection/face protection.
 If swallowed: Immediately call a poison center or doctor.
 IF ON SKIN: Wash with plenty of water.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Get medical advice/attention if you feel unwell.
 Do NOT induce vomiting.
 If skin irritation occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 Take off contaminated clothing and wash it before reuse.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

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2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : This product is extremely toxic to aquatic organisms, including fish and invertebrates. 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	%
Diflubenzuron	(CAS-No.) 35367-38-5	3
Piperonyl butoxide	(CAS-No.) 51-03-6	2.5
Lambda-cyhalothrin	(CAS-No.) 91465-08-6	0.5
Petroleum distillates, hydrotreated (mild) heavy paraffinic, hydrotreated (mild) light paraffinic, white mineral oil	(CAS-No.) 64742-54-7, 64742-55-8, 8042-47-5	84.2
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. Wash skin with plenty of 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. 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 skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes mild eye irritation.

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

Chronic symptoms : May cause damage to organ(s) through prolonged or repeated exposure (Blood).

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. Alcohol-resistant foam. Carbon dioxide.

Unsuitable extinguishing media : Avoid heavy hose streams.

5.2. Specific hazards arising from the chemical

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

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Do not allow fire fighting water to escape into waterways or sewers. Do not use direct stream of water. A direct stream of water may spread fire. Ventilate closed spaces before entering. Do not breathe gas/fumes/vapor/spray. Keep unauthorized personnel away. Stay upwind.

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 : Do not breathe vapors, fumes, spray. Wear appropriate personal protective equipment, avoid direct contact.

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6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. Positive pressure self-contained breathing apparatus (SCBA). For further information refer to section 8: Exposure controls/personal protection.
- Emergency procedures : Do not touch spilled material. Do not scatter spilled material with high pressure water streams. Do NOT wash away into sewer. Avoid release to the environment. Ventilate 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. Use appropriate PPE.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Provide local exhaust or general room ventilation. Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe spray/mist.
- Hygiene measures : Separate working clothes from town clothes. Launder separately. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. 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 : Keep container tightly closed. Store in a well-ventilated place. Keep cool. Keep only in original container. Store locked up.
- Incompatible materials : Strong oxidizers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Petroleum distillates, hydrotreated (mild) heavy paraffinic, hydrotreated (mild) light paraffinic, white mineral oil (64742-54-7, 64742-55-8, 8042-47-5)

ACGIH	ACGIH OEL TWA	5 mg/m ³
ACGIH	ACGIH OEL STEL	10 mg/m ³

8.2. Appropriate engineering controls

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

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear chemical resistant gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear long sleeved shirt, long pants, socks and shoes

Respiratory protection:

In case of insufficient ventilation, use NIOSH approved respiratory protection.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Opaque, milky-white liquid
Color	: Milky white
Odor	: Mild, neutral, acrylic
Odor threshold	: No data available
pH	: 4.55 (1% in water)
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 133.5 °C (272.3° F) (TOC)
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non-flammable
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 0.8869 g/mL
Solubility	: Dispersible in water
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 205 cP @ 20 °C (68 °F)
Explosion limits	: Not applicable
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.

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

Excessive heat.

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.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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LD50 oral rat	> 5000 mg/kg
LC50 Inhalation - Rat	> 2.2 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 eye irritation.
Respiratory or skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	May be fatal if swallowed and enters airways.

Potential health effects

Inhalation

- Acute : Under normal conditions of use, no health effects are expected.
Chronic : Repeated and prolonged exposure to diflubenzuron may cause methemoglobinemia.

Skin

- Acute : Causes skin irritation.
Chronic : Repeated and prolonged exposure to diflubenzuron may cause methemoglobinemia.

Eye

- Acute : Causes mild eye irritation.

Ingestion

- Acute : Harmful if swallowed.
Chronic : Repeated and prolonged exposure to diflubenzuron may cause methemoglobinemia.

Mutagenicity

- : Diflubenzuron is not a mutagen. Piperonyl butoxide was not mutagenic in a battery of tests. Lambda-Cyhalothrin does not demonstrate mutagenic effects.

Carcinogenicity

- : Diflubenzuron is not classified as a carcinogen by NTP, IARC and OSHA. Piperonyl butoxide is not classified as carcinogen by NTP, IARC and OSHA. Lambda-Cyhalothrin did not cause cancer in laboratory animal studies.

Reproductive Effects

- : Diflubenzuron is not a reproductive toxicant. Piperonyl butoxide did not produce any birth defects or adverse effects on reproductive parameters in tests with rats and rabbits. Lambda-Cyhalothrin did not produce developmental or reproductive effects in laboratory animal studies.

SECTION 12: Ecological information

12.1. Toxicity

Diflubenzuron (35367-38-5)	
LC50 Acute fish 1	140 mg/l (Exposure time: 96h Rainbow trout)
LC50 Acute fish 2	135 mg/l (Exposure time: 96h Blue gill)
EC50 Acute crustacea 1	0.002 mg/l (Exposure time: 96h Mysid shrimp)
EC50 Acute crustacea 2	0.0037 mg/l (Exposure time: 48h Water flea Daphnia magna)
NOEC Chronic fish 1	0.1 mg/l (Fathead minnow)
NOEC Chronic crustacea 1	0.000045 mg/l (Mysid shrimp)
NOEC Chronic crustacea 2	0.00004 mg/l (Water flea Daphnia magna)
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))

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Piperonyl butoxide (51-03-6)	
NOEC Chronic fish 1	0.04 mg/l (Fathead minnow)
NOEC Chronic crustacea 1	0.03 mg/l (Daphnia magna)
Lambda-cyhalothrin (91465-08-6)	
LC50 Acute fish 1	0.00024 mg/l (Exposure time: 96hr Oncorhynchus mykiss)
LC50 Acute fish 2	0.00021 mg/l (Exposure time: 96h - Blue gill)
LC50 Acute crustacea 1	0.0000049 mg/l (Exposure time: na - Mysid shrimp)
EC50 - Crustacea [1]	0.00036 mg/l (Exposure time: 48h Daphnia)
NOEC Chronic fish 1	0.000062 mg/l (Fathead minnow)

12.2. Persistence and degradability

No data available

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 extremely toxic to aquatic organisms, including fish and invertebrates.

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	Not regulated	Not regulated	Not regulated	Not regulated	Not applicable
IMDG	UN3082	Packaging greater than 5 L: Environmentally Hazardous substance, Liquid, N.O.S. (Diflubenzuron, Lambda cyhalothrin)	9	III	Marine pollutant
IATA	UN3082	Packaging greater than 5 L: Environmentally Hazardous substance, Liquid, N.O.S. (Diflubenzuron, Lambda cyhalothrin)	9	III	Acute aquatic toxicity

SECTION 15: Regulatory information

15.1. US Federal regulations

Diflubenzuron (35367-38-5)	
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 %
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 %
Petroleum distillates, hydrotreated (mild) heavy paraffinic, hydrotreated (mild) light paraffinic, white mineral oil (64742-54-7, 64742-55-8, 8042-47-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA Labelling	
EPA Registration Number	89459-127

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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. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.	
FIFRA Precautionary statements	KEEP OUT OF REACH OF CHILDREN.
FIFRA Hazards to Humans and Domestic Animals	Contains Petroleum distillate. Harmful if swallowed.
FIFRA First aid	If Swallowed: Immediately call a poison control center or doctor for treatment advice. 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 hazard.
FIFRA Environmental hazards	This product is extremely toxic to aquatic organisms, including fish and invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and run-off may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate. This product may contaminate water through run-off. This product has a potential for run-off for several months or more after application. Poorly draining soils and soils with shallow water tables are prone to produce run-off that contains this product. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. See Directions for Use for additional precautions and requirements.

15.2. US State regulations

No additional information available

SECTION 16: Other information

Issue date : 01 December 2021

SDS US (GHS HazCom 2012) - CGP

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