

**SAFETY DATA SHEET**  
Residual Fogger

SDS #: 6596-A  
Revision date: 2021-02-16  
Format: NA  
Version 1.05



**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier**

**Product Name** Residual Fogger

**Formula code** 50000776

**Other means of identification**

**Product Code(s)** 6596-A

**Synonyms** PIPERONYL BUTOXIDE: Butylcarbityl(6-propylpiperonyl) ether, 1,3-Benzodioxole, 5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-; N-OCTYL BICYCLOHEPTENE DICARBOXIMIDE: N-(2-ethylhexyl)-5-norbornene-2,3-dicarboximide; N-(2-ethylhexyl)-8,9,10-trinorborn-5-ene-2,3-dicarboximide; Pyrethrins and Pyrethroids, Pyrethrum

**Active Ingredient(s)** Pyrethrins, Piperonyl Butoxide, n-Octyl bicycloheptene dicarboximide, Esfenvalerate

**Recommended use of the chemical and restrictions on use**

**Recommended Use:** Insecticide

**Restrictions on Use:** Use as recommended by the label.

**Supplier Address**

FMC Corporation  
2929 Walnut Street  
Philadelphia, PA 19104  
(215) 299-6000 (General Information)  
SDS-Info@fmc.com (E-Mail General Information)

**Emergency telephone number**

Medical Emergencies :  
1 800 / 331-3148 (U.S.A. & Canada)  
1 651 / 632-6793 (All Other Countries - Collect)

For leak, fire, spill or accident emergencies, call:  
1 800 / 424-9300 (CHEMTREC - U.S.A.)  
1 703 / 741-5970 (CHEMTREC - International)  
1 703 / 527-3887 (CHEMTREC - Alternate)

**2. HAZARDS IDENTIFICATION**

**Classification**


**OSHA Regulatory Status**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
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Serious eye damage/eye irritation	Category 2B
Flammable Aerosols	Category 1

**GHS Label elements, including precautionary statements****EMERGENCY OVERVIEW**

<p><b>Danger</b></p> <p><b>Hazard Statements</b> H315 - Causes skin irritation H320 - Causes eye irritation</p> <p><b>Physical Hazards</b> H222 - Extremely flammable aerosol H229 - Pressurized container: May burst if heated</p> 
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**Precautionary Statements - Prevention**

P264 - Wash face, hands and any exposed skin thoroughly after handling  
P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking  
P211 - Do not spray on an open flame or other ignition source  
P251 - Do not pierce or burn, even after use  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P337 + P313 - If eye irritation persists: Get medical advice/ attention  
P302 + P352 - IF ON SKIN: Wash with plenty of water and soap  
P332 + P313 - If skin irritation occurs: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse

**Precautionary Statements - Storage**

P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F

**Hazards not otherwise classified (HNOC)**

No hazards not otherwise classified were identified.

**Other Information**

Very toxic to aquatic life with long lasting effects.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical name	CAS-No	Weight %
Pyrethrins	8003-34-7	0.05
Piperonyl butoxide	51-03-6	0.1
n-Octyl bicycloheptene dicarboximide	113-48-4	0.2
Benzeneacetic acid, 4-chloro-.alpha.-(1-methylethyl)-, cyano (3-phenoxyphenyl)methyl ester, (S-(R*,R*))-	66230-04-4	0.1-1
Propane	74-98-6	10-20
Butane	106-97-5	5-10
Petroleum distillates, hydrotreated light	64742-47-8	5-10
Isobutane	75-28-5	5-10

Synonyms are provided in Section 1.

#### 4. FIRST AID MEASURES

<b>Eye Contact</b>	Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.
<b>Skin Contact</b>	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.
<b>Inhalation</b>	Move 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.
<b>Ingestion</b>	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 induce vomiting or give anything by mouth to an unconscious person.
<b>Most important symptoms and effects, both acute and delayed</b>	None known.
<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Small Fire</b>	Dry chemical. Carbon dioxide (CO <sub>2</sub> ).
<b>Large Fire</b>	Water spray. Foam.
<b>Unsuitable extinguishing media</b>	Avoid heavy hose streams.
<b>Specific Hazards Arising from the Chemical</b>	Contents under pressure.
<b>Hazardous Combustion Products</b>	See Section 10.
<b>Explosion data</b>	
<b>Sensitivity to Mechanical Impact</b>	No information available.
<b>Sensitivity to Static Discharge</b>	No information available.
<b>Protective equipment and precautions for firefighters</b>	In the event of fire, wear self contained breathing apparatus. Isolate fire area. Evaluate upwind.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Isolate and post spill area. Remove all sources of ignition. Ventilate the area. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8. If ventilation is not possible wear full protection suit and chemical protective equipment.
<b>Other</b>	For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
<b>Environmental Precautions</b>	See Section 12 for additional Ecological Information.

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Transfer damaged cartridges or cans to containers for later disposal. Clean and neutralize spill area, tools and equipment by washing with water and soap. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13. Rinsate may be disposed at a waste water treatment plant.

## 7. HANDLING AND STORAGE

**Handling** Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal. BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 130°F (56°C). Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.

**Storage** Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Keep/store only in original container.

**Incompatible products** Strong oxidizing agents. Bases. Powdered earth metals.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Pyrethrins (8003-34-7)	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	IDLH: 5000 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	Mexico: TWA 5 mg/m <sup>3</sup>
Propane (74-98-6)	:	TWA: 1000 ppm TWA: 1800 mg/m <sup>3</sup>	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m <sup>3</sup>	Mexico: TWA 1000 ppm
Isobutane (75-28-5)	STEL 1000 ppm	-	TWA: 800 ppm TWA: 1900 mg/m <sup>3</sup>	Mexico: TWA 1000 ppm
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Pyrethrins (8003-34-7)	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>
Propane (74-98-6)	-	TWA: 1000 ppm TWA: 1800 mg/m <sup>3</sup>	TWA:	TWA: 1000 ppm
Petroleum distillates, hydrotreated light (64742-47-8)	TWA: 200 mg/m <sup>3</sup> Skin	-	-	-
Isobutane (75-28-5)	STEL: 1000 ppm	-	STEL: 1000 ppm	-

### Appropriate engineering controls

**Engineering measures** Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

### Individual protection measures, such as personal protective equipment

**Eye/Face Protection** If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

**Skin and Body Protection** Wear long-sleeved shirt, long pants, socks, and shoes.

**Hand Protection** Use protective gloves made of chemical materials such as nitrile or neoprene. Wash the outside of gloves with soap and water before reuse. Check regularly for leaks.

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<b>Respiratory Protection</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.
<b>Hygiene measures</b>	Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.
<b>General information</b>	If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	Mist
<b>Physical State</b>	Aerosol
<b>Color</b>	No information available
<b>Odor</b>	Mild
<b>Odor threshold</b>	No information available
<b>pH</b>	6.59
<b>Melting point/freezing point</b>	Not applicable
<b>Boiling Point/Range</b>	No information available
<b>Flash point</b>	66.7 °C / 152 °F Tag Closed Cup
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Flammability Limit in Air</b>	
<b>Upper flammability limit:</b>	No information available
<b>Lower flammability limit:</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Relative density</b>	8.28 lb/gal
<b>Specific gravity</b>	No information available
<b>Water solubility</b>	Soluble in water
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Viscosity, kinematic</b>	No information available
<b>Viscosity, dynamic</b>	No information available
<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available
<b>Molecular weight</b>	No information available
<b>Bulk density</b>	No information available

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	Not applicable
<b>Chemical Stability</b>	Stable under recommended storage conditions.
<b>Possibility of Hazardous Reactions</b>	None under normal processing.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	To avoid thermal decomposition, do not overheat Keep away from open flames, hot surfaces and sources of ignition
<b>Incompatible materials</b>	Strong oxidizing agents. Bases. Powdered earth metals.
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ).

## 11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral > 5000 mg/kg  
 LD50 Dermal > 5000 mg/kg  
 LC50 Inhalation (dust) > 3.03 mg/L 4 hr

Serious eye damage/eye irritation Moderately irritating to the eyes.  
 Skin corrosion/irritation Moderately irritating.  
 Sensitization Non-sensitizing.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation (vapor)
Pyrethrins (8003-34-7)	= 200 mg/kg ( Rat )	= 1350 mg/kg ( Rat ) = 2060 mg/kg ( Rabbit ) = 300 mg/kg ( Rabbit )	= 3.4 mg/L ( Rat ) 4 h
Piperonyl butoxide (51-03-6)	= 4570 mg/kg ( Rat ) = 6150 mg/kg ( Rat )	= 1880 mg/kg ( Rabbit ) > 7950 mg/kg ( Rat )	> 5.9 mg/L ( Rat ) 4 h
n-Octyl bicycloheptene dicarboximide (113-48-4)	= 2800 mg/kg ( Rat )	= 470 mg/kg ( Rabbit ) = 470 mg/kg ( Rat )	
Benzeneacetic acid, 4-chloro-.alpha.-(1-methylethyl)- , cyano (3-phenoxyphenyl)methyl ester, (S-(R*,R*))- (66230-04-4)	= 325 mg/kg ( Rat ) = 75 mg/kg ( Rat )	> 2 g/kg ( Rabbit ) > 2000 mg/kg ( Rabbit ) > 5 g/kg ( Rat )	= 0.48 mg/L ( Rat ) 4 h
Propane (74-98-6)			> 800000 ppm ( Rat ) 15 min
Petroleum distillates, hydrotreated light (64742-47-8)	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 5.2 mg/L ( Rat ) 4 h
Isobutane (75-28-5)			= 658 mg/L ( Rat ) 4 h

Information on toxicological effects

**Symptoms** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Mutagenicity** Piperonyl butoxide ether may affect mammalian liver microsomal detoxification enzymes.

**Carcinogenicity** n-Octyl bicycloheptene dicarboximide was negative in a chromosome aberration assay,.

**Reproductive toxicity** Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH)

**STOT - single exposure** No information available.

**STOT - repeated exposure** Not classified.

**Target organ effects** Not classified.

Mice fed 0.3 or 0.9% piperonyl butoxide in the diet for 20 days had increased liver weight and other signs of liver toxicity. Male rats given up to 2.4% of piperonyl butoxide in the diet for up to 12 weeks had clinical and histologic signs of liver damage; the highest dose group showed preneoplastic changes, including enlargement of hepatocyte nuclei and multinucleated cells. Kidney damage was also seen.

**Aspiration hazard** No information available.

Chemical name	ACGIH	IARC	NTP	OSHA
Pyrethrins 8003-34-7		Group 2A		
Piperonyl butoxide 51-03-6		Group 3		
Benzeneacetic acid, 4-chloro-.alpha.-(1-methylethyl)-, cyano		Group 3		

(3-phenoxyphenyl)methyl ester, (S-(R*,R*))- 66230-04-4				
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**Legend:****IARC (International Agency for Research on Cancer)**

Group 2A - Probably Carcinogenic to Humans

Group 3 - Not classifiable as to its carcinogenicity to humans

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

<b>Piperonyl butoxide (51-03-6)</b>				
Active Ingredient(s)	Duration	Species	Value	Units
Piperonyl Butoxide	LC50	Fish	3.94	ppm
	LD50	Bee	25	µg/bee
	LD50	Bobwhite quail	>2250	mg/kg
	LD50	Mallard duck	>5620	ppm

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Piperonyl butoxide 51-03-6		96 h LC50: = 7.07 mg/L (Oncorhynchus mykiss) semi-static	
Sodium Benzoate 532-32-1		96 h LC50: 420 - 558 mg/L (Pimephales promelas) flow-through 96 h LC50: > 100 mg/L (Pimephales promelas) static	48 h EC50: < 650 mg/L (Daphnia magna)
Petroleum distillates, hydrotreated light 64742-47-8		96 h LC50: = 2.2 mg/L (Lepomis macrochirus) static 96 h LC50: = 2.4 mg/L (Oncorhynchus mykiss) static 96 h LC50: = 45 mg/L (Pimephales promelas) flow-through	96 h LC50: = 4720 mg/L (Den-dronereides heteropoda)
Pyrethrins 8003-34-7		96 h LC50: 0.003 - 0.0046 mg/L (Lepomis macrochirus) flow-through 96 h LC50: 0.0031 - 0.0038 mg/L (Oncorhynchus mykiss) flow-through 96 h LC50: 0.02 - 0.03 mg/L (Oncorhynchus mykiss) static 96 h LC50: 0.0322 - 0.0472 mg/L (Lepomis macrochirus) static 96 h LC50: 0.0425 - 0.121 mg/L (Pimephales promelas) flow-through 96 h LC50: 0.224 - 0.458 mg/L (Pimephales promelas) static 96 h LC50: = 0.054 mg/L (Oncorhynchus mykiss) 96 h LC50: = 0.074 mg/L (Lepomis macrochirus)	

**Persistence and degradability** No information available.**Bioaccumulation** No information available.**Mobility** No information available.**13. DISPOSAL CONSIDERATIONS****Waste disposal methods**

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. Proper personal protective equipment, as described in Sections 7 and 8, must be worn while handling materials for waste disposal.

**Contaminated containers and packages**

Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions.

## 14. TRANSPORT INFORMATION

**DOT** Ship as Limited Quantity. Carton marks include Limited Quantity mark and orientation arrows.

**UN/ID no** UN1950  
**Proper Shipping Name** Aerosols, flammable  
**Hazard class** 2.1  
**Description** UN1950, Aerosols, flammable, 2.1, Limited Quantity

**TDG** Ship as Limited Quantity. Carton marks include Limited Quantity mark and orientation arrows.

**UN/ID no** UN1950  
**Proper Shipping Name** Aerosols, flammable  
**Hazard class** 2.1  
**Description** UN1950, Aerosols, flammable, 2.1, Limited Quantity

**ICAO/IATA** Ship as Limited Quantity. Carton marks include Limited Quantity mark and orientation arrows.

**UN/ID no** UN1950  
**Proper Shipping Name** Aerosols, flammable  
**Hazard class** 2.1  
**Description** UN1950, Aerosols, flammable, 2.1, Limited Quantity

**IMDG/IMO** Ship as Limited Quantity. Carton marks include Limited Quantity mark and orientation arrows.

**UN/ID no** UN1950  
**Proper Shipping Name** Aerosols  
**Hazard class** 2.1  
**EmS No.** F-D, S-U  
**Description** UN1950, Aerosols, 2.1, Limited Quantity

## 15. REGULATORY INFORMATION

### U.S. Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	CAS-No	Weight %	SARA 313 - Threshold Values %
Piperonyl butoxide - 51-03-6	51-03-6	0.1	1.0

#### **SARA 311/312 Hazard Categories**

**Acute health hazard** Yes  
**Chronic health hazard** Yes  
**Fire hazard** Yes  
**Sudden release of pressure hazard** No  
**Reactive Hazard** No

#### **Clean Water Act**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Pyrethrins 8003-34-7	1 lb			

#### **CERCLA**



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This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Pyrethrins 8003-34-7	1 lb 0.454 kg	

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

#### CAUTION

Harmful if absorbed through skin. Causes moderate eye irritation.

## US State Regulations

### California Proposition 65

This product does not contain any Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Pyrethrins 8003-34-7	X	X	X
Piperonyl butoxide 51-03-6	X		
Propane 74-98-6	X	X	X
Isobutane 75-28-5	X	X	X

### International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Pyrethrins 8003-34-7		X	X		X	X	X	X
Piperonyl butoxide 51-03-6	X	X	X	X	X	X	X	X
n-Octyl bicycloheptene dicarboximide 113-48-4		X	X	X	X		X	X
Benzeneacetic acid, 4-chloro-.alpha.-(1-methylethyl)-, cyano (3-phenoxyphenyl)methyl ester, (S-(R*,R*))- 66230-04-4					X	X		X
Propane 74-98-6	X	X	X	X	X	X	X	X
Petroleum distillates, hydrotreated light 64742-47-8	X	X	X		X	X	X	X

