

# Material Safety Data Sheet

## PURGE® III INSECTICIDE

SDS #: 6586-A  
Revision Date: 2011-12-09  
Version 2.01



This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

### 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product name</b>	PURGE® III INSECTICIDE
<b>Formula code</b>	6586
<b>Active Ingredient(s)</b>	Piperonyl Butoxide, Pyrethrins.
<b>Synonyms</b>	Pyrethrins and Pyrethroids, Pyrethrum Butylcarbityl(6-propylpiperonyl) ether, 1,3-Benzodioxole, 5-[[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-; N-(2-ethylhexyl)-5-norbornene-2,3-dicarboximide; N-(2-ethylhexyl)-8,9,10-trinorborn-5-ene-2,3-dicarboximide
<b>Recommended use</b>	Insecticide
<b>Manufacturer</b> FMC Corporation Agricultural Products Group 1735 Market Street Philadelphia, PA 19103 General Information: Phone: (215) 299-6000 E-Mail: msdsinfo@fmc.com	<b>Emergency telephone number</b>  For leak, fire, spill or accident emergencies, call: +1 800.424.9300 (CHEMTREC - U.S.A.) +1 703.527.3887 (CHEMTREC - Collect - All Other Countries), Medical Emergencies: (800) 331-3148 (U.S.A. & Canada) +1 (651) 632-6793 (All Other Countries - Collect)

### 2. Hazards identification

<b>Appearance</b>	Clear, Aerosolized liquid
<b>Physical state</b>	liquid aerosol
<b>Odor</b>	No information available
<b>Physical or Chemical Hazards</b>	.
<b>Flammable properties</b>	Contents under pressure. Combustible liquid
<b>Potential health effects</b>	
<b>Acute effects</b>	
<b>Eyes</b>	May cause slight irritation.
<b>Skin</b>	Substance may cause slight skin irritation.
<b>Inhalation</b>	Harmful by inhalation. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. May cause cardiac effects.
<b>Ingestion</b>	May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause additional affects as listed under "Inhalation".
<b>Chronic effects</b>	

Aggravated Medical Conditions

Liver disorders, Kidney disorders, Cardiovascular.

### 3. Composition/information on ingredients

#### Hazardous ingredients

Chemical Name	CAS-No	Weight %
1,1-Difluoroethane	75-37-6	60-70
Isopropanol	67-63-0	20-30
n-Octyl bicycloheptene dicarboximide	113-48-4	1-5
Piperonyl butoxide	51-03-6	2
Pyrethrin	8003-34-7	0.98

### 4. First aid measures

Eye contact	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.
Skin contact	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.
Inhalation	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	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.
Notes to physician	This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

### 5. Fire-fighting measures

<b>Flammable properties</b>	Contents under pressure. Combustible liquid
<b>Flash Point</b>	> 85 °C / > 185 °F
<b>Method</b>	Tag Closed Cup
<b>Sensitivity to Mechanical Impact</b>	not applicable
<b>Sensitivity to Static Discharge</b>	not applicable
<b>Suitable extinguishing media</b>	Foam. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Water spray.
<b>Protective equipment and precautions for firefighters</b>	Isolate fire area. Evaluate downwind. In the event of fire, wear self contained breathing apparatus.

#### NFPA

Health Hazard	2
Flammability	2
Stability	0
Special Hazards	-

### 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>Environmental precautions</b>	Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.
<b>Methods for cleaning up</b>	Transfer damaged cartridges or cans to containers for later disposal. Clean and neutralize spill area, tools and equipment by washing with bleach 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.
<b>Other</b>	For further clean-up instructions call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

## 7. Handling and storage

<b>Handling</b>	Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.
<b>Storage</b>	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. Store in original container only.

## 8. Exposure controls/personal protection

### Exposure guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Isopropanol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m <sup>3</sup>	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m <sup>3</sup> STEL: 500 ppm STEL: 1225 mg/m <sup>3</sup>	Mexico: TWA 400 ppm Mexico: TWA 980 mg/m <sup>3</sup> Mexico: STEL 500 ppm Mexico: STEL 1225 mg/m <sup>3</sup>
Pyrethrin 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> Mexico: STEL 10 mg/m <sup>3</sup>

Chemical Name	British Columbia	Quebec	Ontario TWAEV	Alberta
Isopropanol 67-63-0	TWA: 200 ppm STEL: 400 ppm	TWA: 400 ppm TWA: 985 mg/m <sup>3</sup> STEL: 500 ppm STEL: 1230 mg/m <sup>3</sup>	TWA: 200 ppm STEL: 400 ppm	TWA: 200 ppm TWA: 492 mg/m <sup>3</sup> STEL: 400 ppm STEL: 984 mg/m <sup>3</sup>
Pyrethrin 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>

### Occupational exposure controls

<b>Engineering measures</b>	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.
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### Personal Protective Equipment

<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.
<b>Respiratory protection</b>	For dust, splash, mist or spray exposures wear a filtering mask.
<b>Eye/face protection</b>	For dust, splash, mist or spray exposure, wear chemical protective goggles or a face-shield
<b>Skin and body protection</b>	Wear long-sleeved shirt, long pants, socks, shoes, and gloves.

<b>Hand protection</b>	Protective gloves
<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.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Appearance</b>	Clear, Aerosolized liquid
<b>Color</b>	Clear
<b>Physical state</b>	liquid aerosol
<b>Odor</b>	No information available
<b>pH</b>	No information available
<b>Melting Point/Range</b>	No information available
<b>Freezing point</b>	No information available
<b>Boiling Point/Range</b>	not applicable
<b>Flash Point</b>	> 85 °C / > 185 °F Tag Closed Cup
<b>Evaporation rate</b>	not applicable
<b>Autoignition Temperature</b>	not applicable
<b>Flammable properties</b>	Contents under pressure. Combustible liquid
<b>Vapor pressure</b>	not applicable
<b>Vapor density</b>	No information available
<b>Bulk density</b>	7.41 lbs/gal
<b>Water solubility</b>	No information available
<b>Percent volatile</b>	No information available
<b>Partition coefficient:</b>	not applicable
<b>Viscosity</b>	No information available
<b>Oxidizing properties</b>	not applicable

### 9.2 Other information

## 10. Stability and reactivity

<b>Stability</b>	Stable
<b>Conditions to avoid</b>	Keep away from open flames, hot surfaces and sources of ignition.
<b>Materials to avoid</b>	Strong oxidizing agents, Bases, Powdered earth metals
<b>Hazardous decomposition products</b>	Carbon oxides, Hydrogen fluoride, Carbonyl fluoride
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur

## 11. Toxicological information

<b>Eye contact</b>	Mild irritant
<b>Skin contact</b>	Mild irritant
<b>Ingestion</b>	May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause additional affects as listed under "Inhalation".

**Inhalation** Harmful by inhalation. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. Inhalation of high concentrations of 1,1-difluoroethane is harmful and may cause heart irregularities, unconsciousness or death.

**LD50 Dermal** > 2000 mg/kg (rabbit)  
**LD50 Oral** 2,140 mg/kg (rat)  
**LC50 Inhalation:** 2.5 mg/L (rat)

Chronic Toxicity - Other Ingredient(s)

**Carcinogenicity** Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).

**Mutagenicity** Piperonyl butoxide ether may affect mammalian liver microsomal detoxification enzymes. n-Octyl bicycloheptene dicarboximide was negative in a chromosome aberration assay,.

**Developmental Toxicity** Isopropanol has been reported to cause teratogenicity in laboratory animals.

**Target Organ Effects** 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.

Chemical Name	ACGIH	IARC	NTP	OSHA	NIOSH - Target Organs
Isopropanol					eyes,respiratory system,skin
Pyrethrin					CNS,skin,respiratory system

## 12. Ecological information

### Ecotoxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Isopropanol	>1000 mg/L EC50 96 h (Desmodesmus subspicatus) >1000 mg/L EC50 72 h (Desmodesmus subspicatus)	LC50 9640 mg/L Pimephales promelas 96 h LC50 11130 mg/L Pimephales promelas 96 h LC50> >1400000 µg/L Lepomis macrochirus 96 h		EC50 13299 mg/L 48 h
Pyrethrin		LC50 0.054 mg/L Oncorhynchus mykiss 96 h LC50 0.0031-0.0038 mg/L Oncorhynchus mykiss 96 h LC50 0.02-0.03 mg/L Oncorhynchus mykiss 96 h LC50 0.0322-0.0472 mg/L Lepomis macrochirus 96 h LC50 0.003-0.0046 mg/L Lepomis macrochirus 96 h LC50 0.074 mg/L Lepomis macrochirus 96 h LC50 0.0425-0.121 mg/L Pimephales promelas 96 h LC50 0.224-0.458 mg/L Pimephales promelas 96 h		

## Environmental Fate

<b>Chemical Name</b>	<b>log Pow</b>
Isopropanol	0.05

**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.

**Contaminated packaging** 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**

**Packaging Type** 17 oz. and 7.3 oz Containers  
**Hazard class** ORM-D

**Proper shipping name** Consumer Commodity

**TDG**

**Proper shipping name** 17 oz. Container: Aerosols  
 13 lb. Container: Compressed gas, flammable, n.o.s. (1,1-Difluoroethane, Isopropyl alcohol)  
**Hazard Class** 2.1  
**UN/ID No** 17 oz. Container: UN1950  
 13 lb. Cylinder: UN1954

**ICAO/IATA**

**UN/ID No** 17 oz. Container: ID8000  
 13 lb. Cylinder: UN 1954  
**Proper shipping name** 17 oz. Container: Consumer Commodity  
 13 lb. Container: Compressed gas, flammable, n.o.s. (1,1-Difluoroethane, Isopropyl alcohol)  
**Hazard Class** 17 oz. Container: 9  
 13 lb. Cylinder: 2.1  
**Marine pollutant** Pyrethrins

**IMDG/IMO**

**Proper shipping name** 17 oz. Container: Aerosols  
 13 lb. Container: Compressed gas, flammable, n.o.s. (1,1-Difluoroethane, Isopropyl alcohol)  
**Hazard Class** 2.1  
**UN/ID No** 17 oz. Container: UN1950  
 13 lb. Cylinder: UN1954  
**Marine pollutant** Pyrethrins

**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 %
Isopropanol	67-63-0	20-30	1.0

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Piperonyl butoxide	51-03-6	2	1.0
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**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	Yes
<b>Sudden Release of Pressure Hazard</b>	no
<b>Reactive Hazard</b>	no

**CERCLA**

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
Pyrethrin	1 lb	

Chemical Name	U.S. - TSCA (Toxic Substances Control Act) - Section 4 - Chemical Test Rules (40 CFR 799)	U.S. - TSCA (Toxic Substances Control Act) - Section 5(a)(2) - Chemicals with Significant New Use Rules (SNURs)
Isopropanol	40 CFR 799.2325	

Chemical Name	U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances
1,1-Difluoroethane	04/13/1989
Isopropanol	12/15/1986

**International Regulations**

**Mexico - Grade**

Serious risk, Grade 3

Chemical Name	Carcinogen Status	Mexico
Isopropanol		Mexico: TWA 400 ppm Mexico: TWA 980 mg/m <sup>3</sup> Mexico: STEL 500 ppm Mexico: STEL 1225 mg/m <sup>3</sup>
Pyrethrin		Mexico: TWA 5 mg/m <sup>3</sup> Mexico: STEL 10 mg/m <sup>3</sup>

Chemical Name	Mexico - Pollutant Release and Transfer Register - Reporting Emissions for Fabrication, Process or Use - Threshold Quantities	Pollutant Release and Transfer Register - Reporting Emissions - Threshold Quantities
1,1-Difluoroethane	1000 100 kg/yr	1000 kg/yr

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class**

- B5 Flammable aerosol
- D1B Toxic materials
- D2B Toxic materials



**16. Other information**

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**Revision Date:** 2011-12-09  
**Reason for revision:** (M)SDS sections updated.

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**End of Material Safety Data Sheet**