

Material Safety Data Sheet

PURGE® III INSECTICIDE

MSDS #: 6586-A
Revision Date: 2013-08-07
Version 2.05



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

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	PURGE® III INSECTICIDE
Formula code	6586
Active Ingredient(s)	Pyrethrins, Piperonyl Butoxide, n-Octyl bicycloheptene dicarboximide (MGK264)
Synonyms	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
Recommended use:	Insecticide
Manufacturer	Emergency telephone number
FMC Corporation Agricultural Products Group 1735 Market Street Philadelphia, PA 19103 General Information: Phone: (215) 299-6000 E-Mail: msdsinfo@fmc.com	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: 1 800 / 331-3148 (PROSAR - U.S.A. & Canada) 1 651 / 632-6793 (PROSAR - All Other Countries - Collect)

2. HAZARDS IDENTIFICATION

Appearance	Clear, Aerosolized liquid
Physical state	Liquid aerosol
Odor	No information available.
Physical or Chemical Hazards	
Flammable properties	Contents under pressure. Combustible liquid
Potential health effects	
Acute effects	
Eyes	May cause moderate eye irritation.
Skin	Harmful if absorbed through skin.
Inhalation	Avoid breathing vapors or mists. 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.

Ingestion

May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause additional effects as listed under "Inhalation".

Chronic effects**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
Petroleum distillates, hydrotreated light	64742-47-8	20-30
n-Octyl bicycloheptene dicarboximide	113-48-4	3.05
Piperonyl butoxide	51-03-6	1.95
Pyrethrins	8003-34-7	0.975

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 (within the U.S. and Canada) 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

Contains petroleum distillate. Vomiting may cause aspiration pneumonia. 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

Flammable properties

Contents under pressure. Combustible liquid

Flash Point Method

> 85 °C / > 185 °F
Tag Closed Cup

**Sensitivity to Mechanical Impact
Sensitivity to Static Discharge**

Not applicable
Not applicable

Suitable extinguishing media

Foam. Carbon dioxide (CO₂). Dry chemical. Water spray.

Protective equipment and precautions for firefighters

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**

Personal precautions	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.
Environmental precautions	Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.
Methods for cleaning up	Transfer damaged 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.
Other	For further clean-up instructions call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

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 122 °F. 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. Store in original container only.

8. EXPOSURE CONTROL / PERSONAL PROTECTIONExposure guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Pyrethrins 8003-34-7	TWA: 5 mg/m ³	TWA: 5 mg/m ³	IDLH: 5000 mg/m ³ TWA: 5 mg/m ³	
Chemical Name	British Columbia	Quebec	Ontario TWAEV	Alberta
Petroleum distillates, hydrotreated light 64742-47-8	TWA: 200 mg/m ³ Skin			
Pyrethrins 8003-34-7	TWA: 5 mg/m ³	TWA: 5 mg/m ³	TWA: 5 mg/m ³	TWA: 5 mg/m ³

Occupational exposure controls

Engineering measures When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Personal Protective Equipment

General Information 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.

Respiratory protection 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.

Eye/face protection Tightly fitting safety goggles

Skin and body protection	Wear long-sleeved shirt, long pants, socks, shoes, and gloves.
Hand protection	Protective gloves
Hygiene measures	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. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Clear, Aerosolized liquid
Color	Clear
Physical state	Liquid aerosol
Odor	No information available.
pH	No information available.
Melting Point/Range	No information available.
Freezing point	No information available.
Boiling Point/Range	Not applicable
Flash Point	> 85 °C / > 185 °F Tag Closed Cup
Evaporation rate	Not applicable
Flammable properties	Contents under pressure. Combustible liquid
Vapor pressure	No information available.
Vapor density	No information available.
Bulk density	7.04 lb/gal
Water solubility	No information available
Percent volatile	No information available.
Partition coefficient:	Not applicable
Viscosity	No information available.

10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

Acute effects

Eye contact	Slightly or non-irritating (rabbit)
Skin contact	Slightly or non-irritating (rabbit)
Ingestion	May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause additional effects 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)

PURGE® III INSECTICIDE

MSDS #: 6586-A
Revision Date: 2013-08-07
Version 2.05

LD50 Oral 2,140 mg/kg (Rat)
LC50 Inhalation: 2.5 mg/L (Rat)

Chronic effects

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
Pyrethrins					CNS,skin,respiratory system

12. ECOLOGICAL INFORMATION

Ecotoxicity

Piperonyl butoxide (51-03-6)				
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 microorganisms	Toxicity to daphnia and other aquatic invertebrates
Petroleum distillates, hydrotreated light		LC50= 45 mg/L Pimephales promelas 96 h LC50= 2.2 mg/L Lepomis macrochirus 96 h LC50= 2.4 mg/L Oncorhynchus mykiss 96 h		LC50 = 4720 mg/L 96 h
Pyrethrins		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

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

<u>DOT</u>	USDOT is requiring that products formerly classified as "Consumer Commodity, ORM-D" transition to "Limited Quantity" by 1/1/2021. During the transition period the 49CFR carton shipping marks may be Consumer Commodity (old) or Limited Quantity Diamond (new). Please prepare shipping documents to match the carton mark.
Packaging Type	7.3 oz Containers
Proper shipping name	Consumer Commodity
Hazard class	ORM-D
<u>TDG</u>	Product is shipped in Canada as a LIMITED QUANTITY. Please prepare shipping documents to match the carton mark.
UN/ID No	UN1950
Proper shipping name	Aerosols
Hazard Class	2.1
Description	(1,1-Difluoroethane, Isopropyl alcohol)
<u>ICAO/IATA</u>	
UN/ID No	ID8000
Proper shipping name	Consumer Commodity
Hazard Class	9
<u>IMDG/IMO</u>	
UN/ID No	UN1950
Proper shipping name	Aerosols
Hazard Class	2
EmS No.	F-D, S-U
Description	&UN1950& (1,1-Difluoroethane, Isopropyl alcohol), 2

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	1.95	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

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
Pyrethrins	1 lb	

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

International Regulations**Mexico - Grade**

Serious risk, Grade 3

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

Revision Date: 2013-08-07
Reason for revision: (M)SDS sections updated.

Disclaimer

FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. **NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN.** The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. Use of this product is regulated by the U.S. Environmental Protection Agency (EPA). It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Further, since the conditions and methods of use are beyond the control of FMC Corporation, FMC corporation expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

Prepared By

FMC Corporation
FMC Logo - Trademark of FMC Corporation

© 2013 FMC Corporation. All Rights Reserved.

End of Material Safety Data Sheet