Material Safety Data Sheet
CB-40 Insecticide

MSDS #: 6544-A

Revision Date: 2012-03-01
Version 2.01

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 CB-40 Insecticide

Formula code 6544-A

Active Ingredient(s) Piperonyl Butoxide, Pyrethrins, n-Octyl bicycloheptene dicarboximide (MGK264)

Synonyms 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

Recommended use: Insecticide

Manufacturer

FMC Corporation
Agricultural Products Group
1735 Market Street
Philadelphia, PA 19103
General Information:
Phone: (215) 299-6000
E-Mail: msdsinfo@fmc.com

Emergency telephone number

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 Aerosolized liquid, light yellow

Physical state Liquid aerosol

Odor Pyrethrins

Physical or Chemical Hazards

Flammable properties Flammable liquid. Contents under pressure.

Potential health effects

Acute effects

Eyes May cause slight irritation.

Skin Substance may cause slight skin irritation.

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. 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	20-30
Isopropanol	67-63-0	10-20
n-Octyl bicycloheptene dicarboximide	113-48-4	1-5
Piperonyl butoxide	51-03-6	1
Pyrethrins	8003-34-7	0.5

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: 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

Flammable properties Flammable liquid. Contents under pressure.

Flash Point 27.77 °C / 82 °F
Sensitivity to Mechanical Impact Not applicable
Sensitivity to Static Discharge Not applicable

Suitable extinguishing media Foam. Carbon dioxide (CO_2). 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	3
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 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.

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 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/m³	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m³ STEL: 500 ppm STEL: 1225 mg/m³	
Pyrethrins 8003-34-7	TWA: 5 mg/m³	TWA: 5 mg/m³	IDLH: 5000 mg/m³ TWA: 5 mg/m³	

Chemical Name	British Columbia	Quebec	Ontario TWAEV	Alberta
Isopropanol 67-63-0	TWA: 200 ppm STEL: 400 ppm	TWA: 400 ppm TWA: 985 mg/m³ STEL: 500 ppm STEL: 1230 mg/m³	TWA: 200 ppm STEL: 400 ppm	TWA: 200 ppm TWA: 492 mg/m³ STEL: 400 ppm STEL: 984 mg/m³
Pyrethrins 8003-34-7	TWA: 5 mg/m³	TWA: 5 mg/m³	TWA: 5 mg/m³	TWA: 5 mg/m³

Occupational exposure 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.

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

For dust, splash, mist or spray exposures wear a filtering mask.

Eye/face protection

For dust, splash, mist or spray exposure, wear chemical protective goggles or a face-shield

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. 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

Information on basic physical and chemical properties

Appearance	Aerosolized liquid, light yellow
Color	light yellow
Physical state	Liquid aerosol
Odor	Pyrethrins
pH	No information available.
Melting Point/Range	No information available.
Freezing point	No information available
Boiling Point/Range	Not applicable
Flash Point	27.77 °C / 82 °F
Evaporation rate	Not applicable
Flammable properties	Flammable liquid. Contents under pressure.
Vapor pressure	No information available
Vapor density	No information available
Specific Gravity	0.9574
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, unconcsciousness or death.
LD50 Dermal	> 2000 mg/kg (rabbit)
LD50 Oral	2,370 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
Isopropanol		1			eyes,respiratory system,skin
Pyrethrins		2A			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
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
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

Chemical Name	log Pow
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.
US EPA Waste Number	D001

14. TRANSPORT INFORMATION

DOT

Packaging Type	17 oz. Contenedor
Hazard class	ORM-D
Packaging Type	13 lb. Container
UN/ID No	UN1950
Hazard Class	2.1

TDG

UN/ID No	17 oz. Contenedor: UN1950 13 lb. Cilindro: UN1954
Hazard Class	2.1

ICAO/IATA

UN/ID No	17 oz. Contenedor: ID8000 13 lb. Cilindro: UN 1954
Hazard Class	17 oz. Contenedor: 9 13 lb. Cilindro: 2.1
Marine pollutant	Pyrethrins

IMDG/IMO

UN/ID No	17 oz. Contendor: UN1950 13 lb. Cilindro: UN1954
Hazard Class	2.1
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	10-20	1.0
Piperonyl butoxide	51-03-6	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

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	

Component	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 67-63-0 (10-20)	40 CFR 799.2325	

Component	U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances
1,1-Difluoroethane 75-37-6 (20-30)	04/13/1989
Isopropanol 67-63-0 (10-20)	12/15/1986

International Regulations

Mexico - Grade Serious risk, Grade 3

Component	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 75-37-6 (20-30)	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: 2012-03-01
Reason for revision: (M)SDS sections updated.

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End of Material Safety Data Sheet