



FICAM[®] D

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name	FICAM [®] D
Chemical Name	2,2-dimethyl-1,3-benzodioxol-4-yl methyl carbamate (a. i.)
Synonym	
MSDS Number	1971
Chemical Family	Carbamate
Chemical Formulation	Mixture (active ingredient: C11H13NO)
EPA Registration No.	432-933
Canadian Registrat. No.	16080

Bayer CropScience
 #100 - 3131 - 114th Avenue SE
 Calgary, AB T2Z 3X2
 Canada

Emergency Number (24 Hours/Day): 1-800-334-7577 Product Information: 1-888-283-6847

Product Use Description Ficam D is a pesticide for use by Pest Control Professionals for the control of indoor and perimeter household insect pests.

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component Name</u>	<u>CAS No.</u>	<u>Concentration % by Weight</u>	
		<u>Minimum</u>	<u>Maximum</u>
Bendiocarb Technical	22781-23-3	1.0000	
INERT INGREDIENTS (Trade Secret)		99.0000	
Hydrous Magnesium silicate	14807-96-6		< 70.0000
Crystalline Silica (Quartz)	14808-60-7		< 1.0000

INERT INGREDIENTS (99.0%): Only the regulated ingredients are listed above. For additional information, refer to Section 15 (Regulatory Information).

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SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview

CAUTION. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH THE SKIN. DO NOT BREATHE DUST. INHALATION EXPOSURE MAY CAUSE RESPIRATORY IRRITATION AND SYMPTOMS ASSOCIATED WITH CHOLINESTERASE INHIBITION: HEADACHE, NAUSEA, DIZZINESS AND CONSTRICTED PUPILS.

Physical State

solid

Odor

Odorless

Appearance

Grey/white powder

Routes of Exposure

Dust inhalation, skin contact and absorption.

Immediate Effects

Eye

May cause slight or no irritation.

Skin

May be absorbed through the skin. Not likely to cause irritation. Not a skin sensitizer.

Ingestion

No specific health effects are known for ingestion of a small amount incidental to routine handling and use. Ingestion of large amount is harmful but its occurrence is considered highly unlikely under normal use conditions.

Inhalation

Do not breathe dust. Prolonged inhalation may cause respiratory irritation and symptoms associated with reversible cholinesterase inhibition (see Signs and Symptoms).

Chronic or Delayed Long-Term

None of the product components are listed as a human carcinogen by OSHA and NTP. One inert ingredient contains a small amount (< 1%) of crystalline silica which is a naturally occurring component of sand, clay, and inorganic soil. Chronic exposure to inhalable crystalline silica is known to cause silicosis (formation of fibrous tissue in the lung). IARC has listed the crystalline silica as a probable human carcinogen (class 2A), based on human inhalation exposures under excessive and chronic conditions (i.e. long term mineral or clay mining working conditions).

Ficam D contains only a very small amount (<1%) of respirable crystalline silica. Consequently, any long term risk, as those stated above under mining conditions, is considered highly unlikely. Under the recommended conditions of normal handling and use, excessive and chronic inhalation exposure by the consumer is unlikely.

INTERNATIONAL AGENCY FOR RESEARCH IN CANCER LISTING :
Hydrous Magnesium Silicate 69.999% (14807-96-6)

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NATIONAL TOXICOLOGY PROGRAM CANCER LISTING :

Crystalline Quartz .999% (14808-60-7)

TARGET ORGAN EFFECTS:

None under the recommended conditions of use.

**Medical Conditions
Aggravated by Exposure**

Excessive dust inhalation may aggravate pre-existing respiratory conditions.

Signs and Symptoms

Excessive inhalation of bendiocarb can cause reversible cholinesterase inhibition. The symptoms of overexposure are headache, nausea, dizziness, constricted pupils and reversible vision impairment. Ingestion of large amounts may cause vomiting, abdominal cramps, diarrhea, muscular incoordination, and incontinence.

SECTION 4. FIRST AID MEASURES

Eye	Rinse thoroughly with clean water.
Skin	Wash with soap and warm water.
Ingestion	Drink 1 or 2 glasses of water and induce vomiting by touching back of victim's throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person. Get medical attention.
Inhalation	Keep patient at rest; transfer at once to hospital to get medical attention.
Note to Physician	Contains anticholinesterase carbamate insecticide. In case of overexposure, 2 mg atropine sulfate (equivalent to 1/30 grain adult dose) should be given and repeated as necessary until fully atropinized. Morphine is contraindicated. Control convulsions with 10-20 mg of diazepam intravenously. Miosis due to direct eye contact will reverse spontaneously without specific treatment.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point	Does not flash
Fire and Explosion Hazards	When heated to the point of decomposition (above 140°C or 280°F), bendiocarb gives off a toxic fume which is rapidly eliminated by fire or water.
Suitable Extinguishing Media	Dry chemical, foam or water.
Fire Fighting Instructions	Wear positive pressure self-contained breathing apparatus. Use water to cool fire-exposed containers and personnel.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

General and Disposal Use proper protective equipment to minimize personal exposure (see Section 8). Take all necessary action to prevent and to remedy the effects of the spill. Ensure that the disposal is in compliance with federal or local disposal regulations. Notify the appropriate authorities immediately. (See Section 15 for applicable Reportable Quantity (RQ) and other federal regulatory information).

Land Spill or Leaks KEEP PEOPLE AWAY. SWEEP UP OR, PREFERABLY, VACUUM while AVOIDING THE FORMATION OF A DUST CLOUD. Place material in a suitable container and seal. Areas can be washed with water and detergent to remove last traces of this product but keep the washings out of watercourses and sewers. Inform authorities at once if contamination has occurred.

SECTION 7. HANDLING AND STORAGE

Handling Procedures HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH THE SKIN. DO NOT BREATHE DUST. DO NOT allow to contact skin, eyes or clothing. If contact occurs wash skin with soap and warm water, or eyes with clean water. Wash hands and exposed skin before eating, drinking or smoking and after handling. Wash all contaminated clothing thoroughly before reuse.

DO NOT use on or contaminate fruit, vegetables or other food or feed crops. DO NOT apply to humans, animals, clothing or bedding. DO NOT contaminate feed or food products or food preparation surfaces, dishes, kitchen utensils and food containers.

Storing Procedures Store in a cool, dry place. DO NOT reuse empty container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls Control airborne concentrations below the exposure guideline (see below for any OSHA/ACGIH exposure limits). Use with adequate ventilation. Local exhaust ventilation may be necessary if the product use is in a confined area

Eye/Face Protection Safety glasses.

Body Protection PVC or rubber recommended.

Respiratory Protection Ensure good ventilation. If not adequate, wear suitable dust respirator.

Exposure Limits

Hydrous Magnesium silicate	14807-96-6	OEL (QUE)	TWA	3 mg/m ³
		Form of Exposure	Respirable dust.	

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		CAD AB OEL TWA	2 mg/m3
		Form of Exposure	Respirable dust.
		CAD AB OEL TWA	4 mg/m3
		Form of Exposure	Total dust.
		CAD BC TWA	2 mg/m3
		OEL	
		Form of Exposure	Respirable dust.
		CAD ON TWA	2 mg/m3
		OEL	
		Form of Exposure	Respirable.
		CAD ON TWA	2
		OEL	
Crystalline Silica (Quartz)	14808-60-7	OEL (QUE) TWA	0.1 mg/m3
		Form of Exposure	Respirable dust.
		CAD AB OEL TWA	0.1 mg/m3
		Form of Exposure	Respirable dust.
		CAD AB OEL TWA	0.05 mg/m3
		Form of Exposure	Respirable dust.
		CAD AB OEL TWA	0.3 mg/m3
		Form of Exposure	Total dust.
		CAD AB OEL TWA	0.15 mg/m3
		Form of Exposure	Total dust.
		CAD BC TWA	0.1 mg/m3
		OEL	
		Form of Exposure	Respirable dust.
		CAD ON TWA	10 mg/m3
		OEL	
		Form of Exposure	Inhalable particulate.
		CAD ON TWA	3 mg/m3
		OEL	
		Form of Exposure	Respirable particles.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Grey/white powder
Physical State	solid
Odor	Odorless
Odor Threshold	Not applicable
Vapor Pressure	Not volatile
Density	0.65 g/ml

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Melting/Freezing Point Not available

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability Stable

Conditions to Avoid Extreme heat and moisture.

Hazardous Products of Decomposition When heated to the point of decomposition (above 140°C or 280°F), bendiocarb gives off a toxic fume which is rapidly eliminated by fire or water. It also generates hazardous oxides of carbon and nitrogen.

Hazardous Polymerization (Conditions to avoid) Will not occur

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity LD50 (rat): 12,000 mg/kg (low toxicity)

Acute Dermal Toxicity LD50 (rat): > 5,000 mg/kg (low toxicity)

Acute Inhalation Toxicity Inhalation LC50 (rat-6hrs.): > 4.0 mg/l, the highest attainable dust concentration. No mortality or toxicity was observed in rats exposed to this maximum dose. The equivalent LC50 (1hr) is: > 16 mg/l (Transportation)

Skin Irritation Dermal LD50 (rat): > 5,000 mg/kg (low toxicity)

Eye Irritation May cause a slight or no irritation.

The studies below were carried out with bendiocarb technical (96%), the active ingredient. NOTE: FICAM D contains only 1% bendiocarb.

Sub-Chronic Toxicity Results from 90-day animal studies suggest no target organ effects are likely under the conditions of normal handling and use.

Chronic Toxicity In two year feeding studies with bendiocarb in animals, no clinical signs or mortalities related to treatment were observed in rats and dogs at dose levels up to 200 ppm and 500 ppm, respectively; the effects observed at the highest dose were reduced blood cholinesterase level in rats and lower blood and brain cholinesterase levels in dogs. Similarly, bendiocarb administered chronically to mice at dietary dose levels up to 1250 ppm showed only an effect in increased testes weight at the highest dose.

Assessment Carcinogenicity

ACGIH

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None
NTP
None
IARC
Hydrous Magnesium silicate
Hydrous Magnesium silicate
OSHA
None

14807-96-6	1
14807-96-6	3

Reproductive & Developmental Toxicity

Bendiocarb showed no adverse effects on fertility or reproduction in rats fed dietary levels up to 800 ppm prior to mating and during gestation.

Neurotoxicity

No evidence of neurological lesions or irreversible or delayed neurotoxic effects were observed when bendiocarb was administered to hens by single doses up to 757 mg/kg.

Teratogenicity

No evidence of teratogenic effects of Bendiocarb was observed in offspring of rats and rabbits fed during gestation dose levels up to 4 mg/kg/day and 5 mg/kg/day, respectively.

Mutagenicity

Bendiocarb is not mutagenic or genotoxic when tested in Ames gene mutation assay and in four other mutagenesis assays of bacteria, yeast, and rodents. In an in vitro analysis of metaphase chromosomes from human lymphocyte cell cultures, a positive result was observed only in the presence of metabolic activation. However, an in vivo analysis of metaphase chromosomes of bone marrow cells did not show any evidence of chromosomal damages, both in the absence or presence of metabolic activation. It is concluded from the results of these mutagenesis studies that bendiocarb does not damage chromosomes in humans and animals under normal conditions of use.

SECTION 12. ECOLOGICAL INFORMATION

Ecological Information

This pesticide is toxic to fish and wildlife. For terrestrial uses, DO NOT apply directly to water or where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. DO NOT contaminate water when disposing of equipment washwaters.

TOXICITY TO BENEFICIAL MICROORGANISMS

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. DO NOT apply this product, or allow it to drift, to blooming crops or weeds if bees are visiting the treatment area.

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Environmental Fate Bendiocarb technical, the active ingredient of Ficam D, breaks down readily in the natural environment, especially under alkaline conditions.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance PESTICIDE DISPOSAL: Do not contaminate water, food or feed by storage of disposal. Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Must ensure that waste disposal is in compliance with Federal (RCRA), State and local requirements.

Container Disposal Fiber Drum - Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by state and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner.

Poly Tub - Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

RCRA Classification

SECTION 14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: None
DOT SHIPPING LABEL: None
FREIGHT CLASSIFICATION: None

SECTION 15. REGULATORY INFORMATION

US Federal Regulations

EPA Registration No.	432-933
TSCA list	
Hydrous Magnesium silicate	14807-96-6
Crystalline Silica (Quartz)	14808-60-7

TSCA 12b export notification

None

SARA Title III - section 302 - notification and information

None

SARA Title III - section 313 - toxic chemical release reporting

None

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

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This product does not contain any substances known to the State of California to cause reproductive harm.

US State right-to-know ingredients

None

Canadian Regulations

Canadian Registrat. No.	16080
Canadian Domestic Substance List	
Bendiocarb Technical	22781-23-3
Hydrous Magnesium silicate	14807-96-6
Crystalline Silica (Quartz)	14808-60-7

Environmental

CERCLA

None

Clean Water Section 307 Priority Pollutants

None

Safe Drinking Water Act Maximum Contaminant Levels

None

International Regulations

EU Classification

None

European Inventory of Existing Commercial Substances (EINECS)

Bendiocarb Technical	22781-23-3
Hydrous Magnesium silicate	14807-96-6
Crystalline Silica (Quartz)	14808-60-7

SECTION 16. OTHER INFORMATION

MSDS REVISION INDICATOR: Company name change. Canadian Version of MSDS.
Prepared by the HSE Department Bayer CropScience Inc. (306)-721-0310

Revision Date: 08.31.2006

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