

**FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL DAY OR NIGHT 1-800-561-8273 or
CHEMTREC 1-800-424-9300**

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

MANUFACTURED FOR:

UNITED AGRI PRODUCTS CANADA, INC.
789 Donnybrook Drive • Dorchester, Ontario N0L 1G5

24-Hour Emergency Phone: 1-800-561-8273
Medical Emergencies (Prosar): 1-800-301-7976
Additional Emergency Phone (Canutec): 1-613-996-6666 (Collect)

CHEMICAL IDENTITY: Ferbam; Ferric dimethyldithiocarbamate
PRODUCT USE: Fungicide – Group M
PCP REG. NO.: 20136
MSDS Number: 20136-08-UAP

MSDS Revisions: All sections

Date of Issue: 01/07/08

Supersedes: 01/07/05

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION - Harmful if inhaled or absorbed through the skin. Direct contact with eyes or skin may cause irritation. May cause allergic skin reaction in some individuals. Inhalation of dust may cause irritation of mucous membranes, respiratory irritation, congestion and lethargy. Ingestion may cause systemic poisoning symptoms of nausea, vomiting, dizziness, kidney damage, and coma. Wash thoroughly with soap and water after handling, and before eating, drinking or smoking. Avoid breathing dusts, vapors, or spray mist. Avoid contact with eyes, skin or clothing. Primary routes of entry are Inhalation, eye contact and skin contact. Note: consumption of alcoholic beverages increases the toxic effects of Ferbam

This product is black, granular solid with no odor.

3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Ferbam	76.00	14484-64-1	10 mg/m ³

4. FIRST AID MEASURES

If in eyes: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If on skin or clothing: 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.

If inhaled: Move person 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.

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-301-7976. Have the product label or container with you when calling a poison control centre or doctor, or going for treatment.

5. FIRE FIGHTING MEASURES

FLASH POINT (°F/Test Method): None

FLAMMABLE LIMITS (LFL & UFL): Not established

EXTINGUISHING MEDIA: Use medium appropriate to surrounding fire. Dry chemical, carbon dioxide, foam, water spray or fog.

HAZARDOUS COMBUSTION PRODUCTS: Thermal decomposition may generate toxic and/or hazardous gases.

SPECIAL FIRE FIGHTING PROCEDURES: Evacuate area of non-essential personnel. Wear self-contained breathing apparatus and full protective gear. Fight fire from upwind

UNUSUAL FIRE AND EXPLOSION HAZARDS: High concentrations of this product suspended in the air may present an explosion hazard. If water is used to fight fire or cool containers, dike to prevent runoff and contamination of municipal sewers and waterways. This product is toxic to fish.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Wear appropriate protective equipment as described in Section 8 to prevent eye and skin contact and appropriate respirator to prevent overexposure. Avoid contact, isolate area and keep animals and unprotected persons away from spill area. If dry material, cover to prevent further dispersal. Sweep up spill and transfer to labeled, approved chemical containers for disposal or rework. Keep dusting to a minimum. If liquid, dike surrounding area with any available absorbent, i.e. sand, cat litter, or commercial absorbent. Sweep up and place in labeled containers for disposal. Check local or provincial regulations for proper disposal. Flush the area with water to remove any residue.

CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

HANDLING: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STORAGE: Not for use or storage in or around the house. Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, fold and roll back bags, clamp and close tightly. Do not contaminate water, food or feed by storage and disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets with requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

RESPIRATORY PROTECTION: Not normally required. If vapors or dusts exceed acceptable levels, wear a NIOSH approved pesticide respirator.

EYE PROTECTION: Chemical goggles or shielded safety glasses.

SKIN PROTECTION: Wear protective clothing: long-sleeved shirts and pants, shoes with socks. Wear rubber or chemical-resistant gloves.

	OSHA PEL 8 hr TWA	ACGIH TLV-TWA
Ferbam	15 mg/m ³ (total dust)	10 mg/m ³

PERSONAL PROTECTIVE EQUIPMENT (PPE): Applicators and other handlers must wear: rubber or other chemical-resistant, water proof gloves, long-sleeved shirt and long pants, protective eyewear, and chemical resistant headgear for overhead exposure. In addition, a properly-fitted NIOSH-approved dust/mist filtering respirator with MSHA/NIOSH approval prefix TC-21C or a NIOSH approved respirator with any N, R, P, or HE filter must be worn by applicators, and handlers when performing any operation where exposure to Ferbam is likely. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOUR: Black granular solid with no odor	SOLUBILITY: Negligible
SPECIFIC GRAVITY (Water = 1): 0.53 g/ml	pH: Not established
VAPOUR PRESSURE: Not applicable	
PERCENT VOLATILE (by volume): Not applicable	
Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.	

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Excessive heat and moisture.

INCOMPATIBILITY: Oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may generate toxic and/or hazardous gases.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (male rat): >5000 mg/kg	Acute Dermal LD₅₀ (rabbit) : >4000 mg/kg
Eye Irritation (rabbit): May cause irritation and injury lasting several days	Skin Irritation (rabbit): May cause irritation
Inhalation LC₅₀ (male rat): 0.4 mg/L (4H) (Technical)	Skin Sensitization (Guinea Pig): Not a sensitizer
Carcinogenic Potential: OSHA: not listed; NTP: no human data found; IARC: Group 3 (Unclassifiable as to Carcinogenicity in Humans); ACGIH: TLV-A4 (Not Classifiable as a Human Carcinogen).	

12. ECOLOGICAL INFORMATION

This product is toxic to fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water when cleaning equipment or disposing of equipment wash waters or rinsate.

13. DISPOSAL CONSIDERATIONS

Do not reuse containers for any purpose. Completely empty bag into application equipment. Container is to be disposed of at a container collection site. Contact your local dealer/distributor for the location of the nearest collection site. Before taking container to the collection site: make the empty container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Do not contaminate water, food, or feed by storage or disposal.

14. TRANSPORT INFORMATION

DOT/TDG Shipping Description: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (FERBAM) 9, UN3077, III ERG GUIDE 171
U.S. Surface Freight Classification: INSECTICIDES OR FUNGICIDES, INSECT OR ANIMAL REPELLENTS; NOI; OTHER THAN POISON (NMFC 102120; CLASS: 60)
IMDG Shipping Description: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (FERBAM), 9, UN3077, III MARINE POLLUTANT

Consult appropriate ICAO/IATA regulations for shipment requirements in the Air shipping mode.

15. REGULATORY INFORMATION

NFPA & HMIS Hazard Ratings:		NFPA		HMIS
2	Health	0	Least	2 Health
1	Flammability	1	Slight	1 Flammability
0	Instability	2	Moderate	0 Reactivity
		3	High	H PPE
		4	Severe	

SARA Hazard Notification/Reporting

SARA Title III Hazard Category: Immediate Y Fire N Sudden Release of Pressure N
 Delayed N Reactive N

Reportable Quantity (RQ) under U.S. CERCLA: Not listed
SARA, Title III, Section 313: Ferbam (CAS: 14484-64-1) 76.0%
RCRA Waste Code: Not listed
CA Proposition 65: Not listed

16. OTHER INFORMATION

MSDS STATUS: All sections revised to 16-section format

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/ Regulatory Services

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