

# MATERIAL SAFETY DATA SHEET

Cotoran® 4L

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## 1. IDENTIFICATION

Product name: **Cotoran® 4L**  
Chemical name of active ingredient(s): Fluometuron: 1,1-dimethyl-3-(a,a,a-trifluoro-m-tolyl) urea  
Manufacturer/Registrant: Makhteshim Agan of North America, Inc.  
4515 Falls of Neuse Road, Suite 300  
Raleigh, NC 27609  
Phone: 919-256-9300  
For fire, spill, and/or leak emergencies, contact Infotrac: Phone: 1-800-535-5053  
For medical emergencies and health and safety inquiries, contact Prosar: Phone: 1-877-250-9291

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	%	CAS NO.	OSHA/PEL	ACGIH/TLV	OTHER	NTP/IARC/OSHA (Carcinogen)
Fluometuron	41.7	2164-17-2	NE	NE	NE	IARC: 3
Ethylene glycol	10.0	107-21-1	NE	NE	NE	NA

NE: Not Established

NA: Not Applicable

IARC Group3: The agent (mixture, or exposure circumstance) is unclassifiable as to carcinogenicity to humans.

## 3. HAZARDS IDENTIFICATION

### PHYSICAL PROPERTIES:

Appearance: Aqueous suspension  
Odor: Mild fruit like

**EMERGENCY OVERVIEW:** CAUTION Harmful if absorbed through the skin, swallowed or inhaled. Avoid contact with eyes, skin or clothing. Avoid breathing spray mist.

### POTENTIAL HEALTH EFFECTS:

Inhalation: Slightly toxic.  
Eye Irritation: Moderately irritating.  
Skin Irritation: Non-irritating to the skin of rabbits.  
Skin Absorption: Slightly toxic if absorbed through skin.  
Ingestion: Slightly toxic.

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

**HAZARDOUS COMBUSTION PRODUCTS:** None known.

**HAZARDOUS POLYMERIZATION:** Material is not known to polymerize.

## 4. FIRST AID

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<b>IF IN EYES:</b>	<ul style="list-style-type: none"><li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"><li>Take off contaminated clothing.</li><li>Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"><li>Call a poison control center or doctor immediately for treatment advice.</li><li>Have person sip a glass of water if able to swallow.</li><li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li></ul>

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	<ul style="list-style-type: none"><li>• Do not give anything by mouth to an unconscious person.</li></ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For medical emergencies, you may also call ProSAR 24 hours a day at 1-877-250-9291.	
<b>NOTE TO PHYSICIAN:</b> If ingested, lavage stomach or induce vomiting. A slurry of activated charcoal in water can be left in the stomach. Give a saline laxative and supportive therapy.	

## 5. FIRE FIGHTING MEASURES

**FLASH POINT:** Not applicable.

**FLAMMABLE LIMITS (% IN AIR):** Not Applicable

**AUTOIGNITION TEMPERATURE:** Not Applicable

**FIRE FIGHTING HAZARDS & PROCEDURES:** Prevent human exposure to fires, smoke, fumes or products of combustion. In case of fire, evacuate non-essential personnel from area to prevent exposure to fire, smoke, fumes, or products of combustion. Prevent the use of contaminated buildings, area, and equipment until all have been decontaminated.

**FIRE-FIGHTING EQUIPMENT:** Wear full protective clothing and self-contained breathing apparatus.

**SUITABLE EXTINGUISHING MEDIA:** Dry chemical, carbon dioxide, water spray or foam.

**HAZARDOUS COMBUSTION PRODUCTS:** None known.

## 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:** Review FIRE FIGHTING MEASURES and HANDLING sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

**ACTION TO TAKE FOR SPILLS/LEAKS:** Wear chemical safety glasses with side shields or chemical goggles, rubber gloves, rubber boots, long-sleeved shirt, long pants, head covering, and a NIOSH-approved pesticide respirator with organic vapor cartridge. For small spills, cover the spill with an absorbent material such as sweeping compound (cat litter). Sweep up and place in an approved chemical container. Wash the spill area with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container. Seal the container and dispose of in an approved manner. Rinse the spill area with water to remove any residue. Do not allow wash or rinse water to contaminate water supplies.

## 7. HANDLING AND STORAGE

Do not contaminate water, food, or feed by storage or disposal or cleaning of equipment.

**HANDLING:** Avoid contact with skin or eyes. Wash thoroughly with soap and water after handling. Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.

**STORAGE:** Store material in a well-ventilated, secure area out of the reach of children and domestic animals. Keep container closed when not in use. Storage product in original container only, away from food or feed.

**STORAGE TEMPERATURE (MIN/MAX):** Normal ambient temperatures.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATION AND ON-FARM APPLICATIONS, CONSULT THE PRODUCT LABEL.**

**FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.**

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Some materials that are chemical-resistant to this product are polyethylene or polyvinyl chloride. If you want more options, follow the instructions for Category A on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.
- Chemical-resistant gloves such as polyethylene or polyvinylchloride

## USER SAFETY RECOMMENDATIONS:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**EXPOSURE GUIDELINES:** Refer to Section 2.

**ENGINEERING CONTROLS:** Refer to product label.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** Aqueous suspension

**ODOR:** Mild fruit like

**BOILING POINT:** 103°C±3°C

**SPECIFIC GRAVITY:** 1.16 @ 20° C

**VAPOR PRESSURE:** Approximately 3 mm Hg@ 20°C

**pH:** 8-10 (10% suspension in water)

**SOLUBILITY IN WATER:** 100 mg/L @20°C

## 10. STABILITY AND REACTIVITY

**STABILITY:** Stable under normal conditions.

**HAZARDOUS POLYMERIZATION:** Will Not Occur

**INCOMPATIBLE MATERIALS:** Strong acid and bases.

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

## 11. TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY/IRRITATION STUDIES:

Acute Oral LD50 (Rat):	1,841 mg/kg
Acute Dermal LD50 (Rabbit):	>2,020 mg/kg
Acute Inhalation LC50 (Rat):	>2.8 mg/L (4-hrs)
Eye Irritation(rabbit):	Mildly irritating
Dermal Irritation(rabbit):	non-irritating.
Dermal Sensitization:	Not a skin contact sensitizer

**CHRONIC:** Fluometuron technical was not oncogenic in lifetime feeding studies with rats and mice. In rats and dogs, a treatment-related increase of iron-staining pigment was noted in the spleen and/or kidney at high doses. Fluometuron did not affect reproductive capabilities in rats over three generations, and was not mutagenic in a variety of test systems, and was not teratogenic in rats or rabbits.

**TOXICITY OF OTHER PRODUCTS:** Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice. There is, however, no information suggesting that ethylene glycol has caused birth defects in humans. Severe kidney damage results from swallowing large volumes of ethylene glycol.

## 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL HAZARDS:** This chemical is known to leach through soil into ground water under certain conditions, as a result of registered uses. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

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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 contaminate water when cleaning equipment or disposing of equipment washwaters

## ACUTE TOXICITY (Fluometuron)

Rainbow Trout (96-hr) LC50 =30 - 47 mg/L  
Bluegill Sunfish (96-hr) LC50 =48 - 96 mg/L  
Daphnia magna (48-hr) LC50 = 9.9 mg/L  
Mallard Oral LD50 = 2,974 mg/kg  
Bobwhite 8-day Dietary LC50 = 4,500 ppm  
Mallard 8-day Dietary LC50 = 4,620 ppm

## 13. DISPOSAL CONSIDERATIONS:

**PESTICIDE DISPOSAL:** Do not contaminate water, food, or feed by disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

## 14. TRANSPORT INFORMATION:

### DOT CLASSIFICATION:

Not regulated

### INTERNATIONAL TRANSPORTATION:

**MO (vessel):** Not regulated

**IATA (air):** Not regulated

## 15. REGULATORY INFORMATION:

### SARA TITLE III CLASSIFIED:

**Section 302** Not applicable

**Section 311/312:** Acute Health Hazard  
Chronic Health Hazard

**Section 313 chemical(s):** Ethylene glycol CAS#: 107-21-1

**CA PROPOSITION 65:** Not applicable

**CERCLA REPORTABLE QUANTITY (RQ):** None

**RCRA CLASSIFICATION:** Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

**TSCA:** The ingredients of this product are listed on the TSCA inventory or are exempt.

## 16. OTHER INFORMATION:

HAZARD RATINGS	NFPA	HMIS	0	Least
Health:	2	2	1	Slight
Flammability:	1	1	2	Moderate
Reactivity:	0	0	3	High
			4	Severe

**MSDS DATE:** 8-13-09. Supersedes version dated 12-21-07. Changes made to Sections 2 and 13.

The information contained herein is given in good faith and is believed to be correct, but no warrant, express or implied, is made. Consult Makhteshim Agan of North America, Inc. for further information.