



Safety Data Sheet

Issue Date: 13-Aug-2009

Revision Date: 25-Sept-2015

Version 2

1. IDENTIFICATION

Product Identifier

Product Name

Cotoran 4L

Other means of identification

SDS #

ADAMA-004

Registration Number(s)

EPA Reg. No. 66222-181

Recommended use of the chemical and restrictions on use

Recommended Use

EPA registered pesticide.

Details of the supplier of the safety data sheet

Manufacturer Address

Makhteshim Agan of North America, Inc. (d/b/a ADAMA)
3120 Highwoods Blvd., Suite 100
Raleigh, NC 27604
1-919-256-9300

Emergency Telephone Number

Emergency Telephone (24 hr)

For fire, spill and/or leak contact INFOTRAC:
1-800-535-5053 (North America) 1-352-323-3500 (International)
For medical emergencies and health/safety inquiries, contact PROSAR:
1-877-250-9291

2. HAZARDS IDENTIFICATION

This chemical is a product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-EPA registered chemicals. Please see Section 15 for additional EPA information.

Appearance Aqueous suspension

Physical State Liquid

Odor Mild Fruit

Classification

Specific target organ toxicity (repeated exposure)

Category 2

Hazards Not Otherwise Classified (HNOC)

May be harmful if swallowed

Signal Word

Warning

Hazard Statements

May cause damage to organs through prolonged or repeated exposure

**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Get medical advice/attention if you feel unwell

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Fluometuron	2164-17-2	41.7
Proprietary Solvent	Proprietary	Up to 10

4. FIRST-AID MEASURES

First Aid Measures

General Advice	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice.
Skin Contact	Take off immediately all contaminated clothing. Drench affected area with water for at least 15 minutes. Seek medical attention.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Seek medical advice.
Ingestion	Immediately call a poison center or doctor/physician. DO NOT induce vomiting. If conscious, drink 8-10 oz. of water promptly. Never give anything by mouth to an unconscious person. Obtain medical attention. Do not induce vomiting unless directed by medical personnel.

Most important symptoms and effects

Symptoms	Eye contact may be slightly irritating.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing MediaFoam. Dry chemical. Water spray (fog). Carbon dioxide (CO₂). Foam or dry chemical systems are preferred to prevent environmental damage from excessive water runoff.**Unsuitable Extinguishing Media** Not determined.

Specific Hazards Arising from the Chemical

Product is not flammable.

Hazardous Combustion Products Fumes and smoke.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.
Environmental Precautions	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	Clean up small spills immediately, use proper personal protection. Absorb spill with absorbent material such as pet litter. After removal, flush contaminated area thoroughly with water containing a strong detergent. Sweep up and place in a chemical container. Seal the container and handle in an approved manner. Flush spill area with water, collect rinse water in containers for proper disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment. Wash thoroughly after handling before eating, drinking, smoking, or using toilet facilities. Do not eat, drink, smoke, or apply cosmetics while handling this product. Keep containers closed when not in use.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Store away from incompatible materials. Keep/store only in original container. Store at ambient conditions.
Incompatible Materials	Strong acids and bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Proprietary Solvent	Ceiling: 100 mg/m ³ aerosol only	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m ³	-

Appropriate engineering controls**Engineering Controls**

Please refer to the product label. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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 protective gear as specified below:

Individual protection measures, such as personal protective equipment**Eye/Face Protection**

Avoid contact with eyes.

Skin and Body Protection

Wear long-sleeved shirt, long pants, and shoes plus socks. Polyethylene gloves or other impervious gloves.

Respiratory Protection

Ensure adequate ventilation, especially in confined areas. Wear an appropriate NIOSH/MSHA approved respirator if ventilation is inadequate.

General Hygiene Considerations

Wash contaminated clothing before reuse. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical State	Liquid	Odor	Mild Fruit
Appearance	Aqueous suspension	Odor Threshold	Not determined
Color	Not determined		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	6.0-8.0		
Melting Point/Freezing Point	Not determined		
Boiling Point/Boiling Range	100-106 °C / 212-228 °F		
Flash Point	> 93 °C / > 20 °F		
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	Liquid-not applicable		
Upper Flammability Limits	Not applicable		
Lower Flammability Limit	Not applicable		
Vapor Pressure	Approx. 3 mmHg @ 20°C		
Vapor Density	Not determined		
Specific Gravity	1.16 @ 20°C		
Water Solubility	100 mg/L @ 20°C	3.77 ppm at 25°C	
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Auto-ignition Temperature	Not applicable		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidizing Properties	Not determined		
Bulk Density	9.5-10.0 lb/gal		

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Contact with incompatible materials. Keep out of reach of children.

Incompatible Materials

Strong acids and bases.

Hazardous Decomposition Products

Smoke may be acrid and fumes irritating.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Avoid contact with eyes.

Skin Contact Avoid contact with skin.

Inhalation Avoid breathing vapors or mists.

Ingestion May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Fluometuron 2164-17-2	= 1450 mg/kg (Rat)	> 2 g/kg (Rat) > 10 g/kg (Rabbit)	-
Proprietary Solvent	= 4000 mg/kg (Rat)	= 9530 µL/kg (Rabbit)	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Not classifiable as a human carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Fluometuron 2164-17-2		Group 3		

IARC (International Agency for Research on Cancer)

Group 3 IARC components are "not classifiable as human carcinogens"

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Product Information (Numerical measures of toxicity)**Acute Oral LD50 (Rat):** >1,841 mg/kg**Acute Dermal LD50 (Rabbit):** >2,02, mg/kg**Acute Inhalation LC50 (Rat):** >2.8 mg/L (4-hr)**Eye Irritation:** Mildly irritating.**Dermal Irritation:** Non-irritating.**Dermal Sensitization:** Not a skin contact sensitizer.**12. ECOLOGICAL INFORMATION****Ecotoxicity**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Proprietary Solvent	6500 - 13000: 96 h Pseudokirchneriella subcapitata mg/L EC50	41000: 96 h Oncorhynchus mykiss mg/L LC50 14 - 18: 96 h Oncorhynchus mykiss mL/L LC50 static 27540: 96 h Lepomis macrochirus mg/L LC50 static 40761: 96 h Oncorhynchus mykiss mg/L LC50 static 40000 - 60000: 96 h Pimephales promelas mg/L LC50 static 16000: 96 h Poecilia reticulata mg/L LC50 static	EC50 = 10000 mg/L 16 h EC50 = 620 mg/L 30 min EC50 = 620.0 mg/L 30 min	46300: 48 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Proprietary Solvent	-1.93

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods****Disposal of Wastes**

Do not contaminate water, food, or feed by storage or disposal. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION**DOT**

Pack size less than 119 Gallons (450 L): Not Regulated

Pack size over 119 Gallons (450 L): UN 3082, Environmentally hazardous substance, liquid, N.O.S. (Flumeturon), 9, PG III, Marine pollutant

IATA UN 3082, Environmentally hazardous substance, liquid , N.O.S. (Flumeturon), 9, PGIII

IMDG UN 3082, Environmentally hazardous substance, liquid , N.O.S. (Flumeturon), 9, PGIII, Marine Pollutant

15. REGULATORY INFORMATION

International Inventories

TSCA Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Proprietary Solvent	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Fluometuron - 2164-17-2	2164-17-2	40.5-42.95	1.0
Proprietary Solvent	Proprietary	Up to 10	1.0

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Fluometuron 2164-17-2	X	X	X
Proprietary Solvent	X	X	X

EPA Pesticide Registration Number 66222-181

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA Pesticide Label

Signal Word: Caution

Avoid contact with eyes, skin or clothing. Causes moderate eye irritation. Harmful if absorbed through skin, swallowed or inhaled. Avoid breathing spray mist.

Difference between SDS and EPA pesticide label

	EPA	OSHA
Signal Word	Caution	Warning
Acute toxicity - Oral	Harmful if swallowed	May be harmful if swallowed
Acute toxicity - Dermal	Harmful if absorbed through the skin	N/A
Acute toxicity - Inhalation (Vapors)	Harmful if inhaled	N/A
Serious eye damage/eye irritation	Causes moderate eye irritation	N/A
STOT - repeated exposure	N/A	May cause damage to organs through prolonged or repeated exposure

16. OTHER INFORMATION**NFPA****Health Hazards****Flammability****Instability****Special Hazards**

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None

HMIS**Health Hazards****Flammability****Physical Hazards****Personal Protection**

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See section 8

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25-Sept-2015

Revision Note:

Updated format from 29-Apr-2014

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet