

Syngenta Crop Protection, LLC
Post Office Box 18300
Greensboro, NC 27419

In Case of Emergency, Call
1-800-888-8372

1. PRODUCT IDENTIFICATION

Product Name:	LUMAX EZ HERBICIDE	Product No.:	A19414A
EPA Signal Word:	Caution		
Active Ingredient(%):	Atrazine (10.20%)	CAS No.:	1912-24-9
Chemical Name:	2-chloro-4-ethylamino-6-isopropylamino-s-triazine		
Chemical Class:	Triazine Herbicide		
Active Ingredient(%):	Mesotrione (2.71%)	CAS No.:	104206-82-8
Chemical Name:	2-[4-(methylsulfonyl)-2-nitrobenzoyl]-1,3-cyclohexanedione		
Chemical Class:	Benzoylcyclohexanedione Herbicide		
Active Ingredient(%):	s-Metolachlor (27.10%)	CAS No.:	87392-12-9
Chemical Name:	Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)-,(S)		
Chemical Class:	Chloroacetanilide Herbicide		
EPA Registration Number(s):	100-1442	Section(s) Revised:	1

2. HAZARDS IDENTIFICATION

Health and Environmental

Harmful if inhaled. May be harmful in contact with skin. Irritating to eyes and skin. May cause an allergic skin reaction.

Hazardous Decomposition Products

Flammable hydrogen gas may be formed on contact with incompatible metals. See "Conditions to Avoid", Section 10.

Physical Properties

Appearance: Light brown liquid

Odor: Paint

Unusual Fire, Explosion and Reactivity Hazards

Flammable hydrogen gas may be formed on contact with incompatible metals. See "Conditions to Avoid", Section 10.

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

3. COMPOSITION/INFORMATION ON INGREDIENTS
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Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Attapulgate Clay	Not Established	Not Established	Not Established	IARC 2B
Atrazine (10.20%)	Not Established	5 mg/m ³ TWA	5 mg/m ³ TWA **	IARC Group 3
s-Metolachlor (27.10%)	Not Established	Not Established	10 mg/m ³ TWA ***	No
Mesotrione (2.71%)	Not Established	Not Established	10 mg/m ³ TWA ***	No

** recommended by NIOSH

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.
Syngenta Hazard Category: C, S

4. FIRST AID MEASURES

Have the product container, label or Material Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

Ingestion: If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Eye Contact: If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

Skin Contact: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

Inhalation: 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 Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Notes to Physician

There is no specific antidote if this product is ingested.

Treat symptomatically.

Persons suffering a temporary allergic reaction may respond to treatment with antihistamines or steroid creams and/or systemic steroids.

Medical Condition Likely to be Aggravated by Exposure

None known.

5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash Point (Test Method): Not Available

Flammable Limits (% in Air): Lower: Not Applicable Upper: Not Applicable

Autoignition Temperature: Not Available

Flammability: Not Available

Unusual Fire, Explosion and Reactivity Hazards

Flammable hydrogen gas may be formed on contact with incompatible metals. See "Conditions to Avoid", Section 10.

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of Fire

Use dry chemical, foam or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g.

commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Spray solutions of this product should be mixed, stored and applied using only plastic, plastic-lined steel, stainless steel or fiberglass/plastic containers. Concentrate should not be stored or maintained in long-term contact with galvanized steel, carbon steel, aluminum, brass or cast iron.

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.

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

- Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.
- Eye Contact: Where eye contact is likely, use chemical splash goggles.
- Skin Contact: Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.
- Inhalation: A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH certified respirator with any N, R, P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance: Light brown liquid
- Odor: Paint
- Melting Point: Not Applicable
- Boiling Point: Not Available
- Specific Gravity/Density: 1.100 g/cm³ @ 68°F ; 9.180 lbs/gal @ 68°F
- pH: 4.7 (1% solution in deionized H₂O @ 77°F [25°C])

Solubility in H₂O

- Atrazine : 33 mg/l @ 68°F (20°C)
- Mesotrione : 160 mg/l @ 68°F (20°C) (99.7% pure)
- s-Metolachlor: 0.48 g/l @ 77°F (25°C)

Vapor Pressure

- Atrazine : 2.9 x 10⁽⁻⁷⁾ mmHg @ 68°F (20°C)
- Mesotrione : < 4.3 x 10⁽⁻⁸⁾ mmHg @ 68°F (20°C)
- s-Metolachlor: 2.8 x 10⁽⁻⁵⁾ mmHg @ 77°F (25°C)

10. STABILITY AND REACTIVITY

- Stability: Stable under normal use and storage conditions.
- Hazardous Polymerization: Will not occur.
- Conditions to Avoid: Concentrate should not be stored in galvanized steel, carbon steel or aluminum. Brass and/or cast iron fittings should not be used. Spray solutions should not be mixed, stored or applied in containers other than plastic, plastic-lined steel, stainless

or fiberglass/plastic.

Materials to Avoid:

See "Conditions to Avoid", Section 10.

Hazardous Decomposition Products:

Flammable hydrogen gas may be formed on contact with incompatible metals. See "Conditions to Avoid", Section 10.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:

Oral (LD50 Female Rat) : 5000 mg/kg body weight

Dermal:

Dermal (LD50 Rat) : > 5000 mg/kg body weight

Inhalation:

Inhalation (LC50 Rat) : > 2.58 mg/l air - 4 hours

Eye Contact:

Mildly Irritating (Rabbit)

Skin Contact:

Moderately Irritating (Rabbit)

Skin Sensitization:

A skin sensitizer (Guinea Pig)

Reproductive/Developmental Effects

Atrazine : None observed.

Mesotrione : Not a reproductive hazard.

s-Metolachlor: None observed.

Chronic/Subchronic Toxicity Studies

Atrazine : Cardiotoxicity in long term study with high doses (dogs).

Mesotrione : Animal studies showed evidence of reduced bodyweight gain, increased liver and kidney weights, blood effects (polycythemia, reduced white blood cell count) and eye effects (cataract formation, keratitis).

No known neurotoxic effects based on animal studies.

s-Metolachlor: None observed.

Carcinogenicity

Atrazine : Mammary tumors (female Sprague-Dawley rats), sex and strain specific.

None observed (male Sprague-Dawley rats, F-344 rats or mice).

Mesotrione : Not carcinogenic in animal studies. Not mutagenic.

s-Metolachlor: Benign liver tumors at high dose levels (female rats).

Other Toxicity Information

None

Toxicity of Other Components

Attapulgit Clay

May cause eye irritation.

Target Organs

Active Ingredients

Atrazine : Heart

Mesotrione : Eye

s-Metolachlor: Liver

Inert Ingredients

Attapulgit Clay: Eye

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

Atrazine :

Fish (Rainbow Trout) 96-hour LC50 4.5 ppm
Green Algae 5-day EC50 49 ppb
Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 6.9 ppm
Bird (Bobwhite Quail) 12-day LD50 940 mg/kg

s-Metolachlor:

Fish (Rainbow Trout) 96-hour LC50 11.9 ppm
Green Algae 5-day EC50 0.008 ppm
Bird (Bobwhite Quail) LD50 Oral > 2510 mg/kg
Invertebrate (Water Flea) 48-hour EC50 26 ppm

Mesotrione :

Fish (Rainbow Trout) 96-hour LC50 > 114 ppm
Green Algae 5-day EC50 1.9 ppm
Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 840 ppm
Bird (Bobwhite Quail) 14-day LD50 > 2000 mg/kg

Environmental Fate

Atrazine :

The information presented here is for the active ingredient, atrazine.
Low bioaccumulation potential. Not persistent in soil. Stable in water. Highly mobile in soil. Will leach. Sinks in water (after 24 h).

Mesotrione :

The information presented here is for the active ingredient, mesotrione.
Not persistent in soil. Stable in water. Moderate mobility in soil. Sinks in water (after 24 h).

s-Metolachlor:

The information presented here is for the active ingredient, s-metolachlor.
Low bioaccumulation potential. Not persistent in soil. Stable in water. Sinks in water (after 24 h).

13. DISPOSAL CONSIDERATIONS

Disposal

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA

Not regulated.

Comments

Water Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (s-Metolachlor, Atrazine), Marine Pollutant

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

Air Transport

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (s-Metolachlor, Atrazine)

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Atrazine (10.20%) (CAS No. 1912-24-9)

California Proposition 65

This product does not contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

CERCLA/SARA 304 Reportable Quantity (RQ)

Not Applicable

RCRA Hazardous Waste Classification (40 CFR 261)

Not Applicable

TSCA Status

Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 2
Flammability: 1
Instability: 0

HMIS Hazard Ratings

Health: 2
Flammability: 1
Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 1/31/2012

Revision Date: 8/10/2012

Replaces:

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

End of MSDS