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DuPont
Material Safety Data Sheet

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"DuPont" "CINCH" ATZ LITE HERBICIDE
M0000482 Revised 10-OCT-2005

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"CINCH" is a registered trademark of DuPont.

"DuPont" is a trademark of DuPont.

Tradenames and Synonyms

CINCH ATZ LITE
Atrazine
S-Metolachlor

Company Identification

MANUFACTURER/DISTRIBUTOR
DuPont
1007 Market Street
WILMINGTON, DE 19898

PHONE NUMBERS

Product Information : 1-(800)441-7515
Transport Emergency : CHEMTREC: 1-800-424-9300
Medical Emergency : 1-(800)441-3637 (outside of U.S.
302-774-1000)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
*ATRAZINE	1912-24-9	28.1
2-chloro-4-ethylamino-6-isopropylamino-s-triazine		
S-METOLACHLOR	87392-12-9	35.8
Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)-,(S)		
ATRAZINE RELATED COMPOUNDS		0.6
INERT INGREDIENTS INCLUDING:		35.5
* ETHYLENE GLYCOL	107-21-1	
(Not to exceed 6%)		

* Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

(COMPOSITION/INFORMATION ON INGREDIENTS - Continued)

Components (Remarks)

"CINCH" ATZ LITE contains 2.67 lbs. atrazine + related per gallon and 3.33 lbs. of S-metolachlor active ingredient per gallon.

HAZARDS IDENTIFICATION

Emergency Overview

CAUTION! Causes moderate eye irritation. Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with eyes, skin or clothing. Avoid breathing vapor or spray mist. This product may cause skin sensitization reactions in some people.

Potential Health Effects

Skin contact with Cinch ATZ Lite may cause skin irritation with discomfort or rash. This product may cause skin sensitization reactions in some people.

Eye contact with Cinch ATZ Lite may cause eye irritation with discomfort, tearing, or blurring of vision.

Effects attributable to Ethylene Glycol, a component of Cinch ATZ Lite, by inhalation or ingestion may include headache and nausea; irritation of the nose and throat with sneezing, sore throat or runny nose. Gross overexposure may cause central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness; altered kidney function which may be accompanied by abnormal urine volume, low back pain, discomfort or edema; kidney failure; deposits of calcium oxalate in the brain, spinal cord and kidneys; liver abnormalities; high blood pressure; irregular heart beat with a strange sensation in the chest, "heart thumping", apprehension, lightheadedness, feeling of fainting, dizziness, weakness, sometimes progressing to loss of consciousness and death. Other effects may include congestive heart failure; retention of acid in the blood, making oxygen less available in the blood stream and leading to symptoms of increased pulse rate, nausea, vomiting, confusion and weakness which may progress to loss of consciousness; low blood sugar; low blood calcium with muscle twitching; involuntary movement of the eyes; facial paralysis; or fatality.

Individuals with preexisting diseases of the central nervous system, liver, or kidneys may have increased susceptibility to the toxicity of excessive exposures.

(HAZARDS IDENTIFICATION - Continued)

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

IF IN EYES: Hold eye open and rinse slowly and gently with plenty of water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, and 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 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical emergencies involving this product.

FIRE FIGHTING MEASURES

Flammable Properties

FIRE AND EXPLOSION:

Flash Point (Test Method):	>200°F (Setaflash)
Flammable Limits (% in Air):	Lower: Not Applicable Upper%: Not Applicable
Autoignition Temperature:	Not Available
Flammability:	Not Applicable

UNUSUAL FIRE, EXPLOSION AND REACTIVITY HAZARDS:

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

(FIRE FIGHTING MEASURES - Continued)

Fire and Explosion Hazards:

Not a fire or explosion hazard.

Extinguishing Media

Use dry chemical, foam, or CO2 extinguishing media.

Fire Fighting Instructions

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.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Spill Clean Up

Control the spill at its source. Contain the spill to prevent it from spreading, contaminating soil, or entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Exposure Controls / Personal Protective Equipment section of MSDS. If a solid, sweep up material and place in a compatible disposal container. If a liquid, 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.

For minor spills, leaks, etc., follow all precautions indicated on the product label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.

In the event of a major spill, fire, or other emergency, call 1-800-424-9300, day or night.

HANDLING AND STORAGE

Handling (Personnel)

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. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Storage

Do not contaminate water, food, or feed by storage.

Store the material in a well-ventilated, secure area out of the reach of children and domestic animals.

Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Engineering Control Statements: Mixers and loaders supporting aerial applications are required to use closed systems. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)]. When using the closed system, the mixers' and loaders' PPE requirements may be reduced or modified as specified in the WPS.

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for agricultural pesticides [40 CFR 170.240(d)(6)]. Pilots must wear the PPE required on the product labeling for applicators, however, they need not wear chemical-resistant gloves when using an enclosed cockpit.

Flaggers supporting aerial applications must use an enclosed cab that meets the definition on the Worker Protection Standard for agricultural pesticides [40 CFR 170.240(d)(5)] for dermal protection.

When applicators use closed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(5)], the handler PPE requirements may be reduced or modified as specified in the WPS.

(EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

Personal Protective Equipment

Some materials that are chemical resistant to this product are listed below. If you want more options follow the instructions for Category A on the EPA chemical resistance category selection chart.

Mixers, loaders, applicators, flaggers, and other handlers must wear:

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves, such as barrier laminate, butyl rubber greater than or equal to 14 mils, polyvinyl chloride (PVC) greater than or equal to 14 mils, or viton greater than or equal to 14 mils.
- Shoes plus socks.
- Chemical-resistant apron, when mixing/loading, cleaning up spills, or cleaning equipment, or otherwise exposed to the concentrate.

See Engineering Controls for additional requirements.

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.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls.
- Chemical-resistant gloves, such as barrier laminate, butyl rubber greater than or equal to 14 mils, polyvinyl chloride (PVC) greater than or equal to 14 mils, or viton greater than or equal to 14 mils.
- Shoes plus socks.

Exposure Guidelines

Applicable Exposure Limits

ATRAZINE

PEL (OSHA)	: None Established
TLV (ACGIH)	: 5 mg/m ³ , 8 Hr. TWA, A4
AEL * (DuPont)	: 0.5 mg/m ³ , 8 & 12 Hr. TWA, total dust

ETHYLENE GLYCOL

(Applicable Exposure Limits - Continued)

PEL (OSHA) : None Established
TLV (ACGIH) : Ceiling: 39.4 ppm, 100 mg/m³, aerosol, A4
AEL * (DuPont) : 50 ppm, 8 Hr. TWA, vapor
10 mg/m³, 8 Hr. TWA, particulate

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Appearance: Off-White Liquid
Odor: Latex Paint
Melting Point: Not Applicable
Boiling Point: 216°F
Specific Gravity/Density: 1.12 g/cm³ @ 68°F (20°C)
pH: 6.7 [1% solution in H₂O @ 77°F (25°C)]
Solubility in H₂O:
Atrazine 33 mg/L @ 68°F (20°C)
S-Metolachlor 0.48 g/L @ 77°F (25°C)
Vapor Pressure:
Atrazine 2.9 x 10⁽⁻⁷⁾ mmHg @ 68°F (20°C)
S-Metolachlor 2.8 x 10⁽⁻⁵⁾ mmHg @ 77°F (25°C)

STABILITY AND REACTIVITY

Chemical Stability

Stability: Stable under normal use and storage conditions.

Conditions to Avoid

Conditions to Avoid: None Known

Decomposition

Hazardous Decomposition Products: Can decompose at high temperatures forming toxic gases.

Polymerization

Hazardous Polymerization: Will Not Occur

TOXICOLOGICAL INFORMATION

Animal Data

Cinch ATZ Lite

Oral LD50: 4824 mg/kg in rats
Dermal LD50: > 2000 mg/kg in rabbits
Inhalation 4 hour LC50: > 2.9 mg/L in rats

Cinch ATZ Lite is slight skin irritant, a slight eye irritant, and a skin sensitizer in animal tests.

ATRAZINE

Effects in animals from single inhalation exposure to an 80% wettable powder produced no observed signs of toxicity.

Toxicity described in animals from the administration of single oral doses include central nervous system effects, hypoactivity and frequent urination. In a 90-day feeding study in rats, repeated oral dosing of 0.6 to 34 mg/kg bw/day resulted in decreased body, liver and kidney weight in high dose males. Iron pigments were found in the spleen of male and female rats at the high dose level. Long term (2-year) dietary studies in rats resulted in decreased body weight, decrease in red cell parameters (female rats only), and changes in clinical chemical parameters at 0.6 mg/kg bw/day and above. Cardiotoxicity was observed in a long-term study with high doses in dogs.

Atrazine is a weak carcinogen in one female rat strain producing an increased incidence of mammary tumors in a two year feeding study at 3.5 mg/kg bw/day and above. There were no tumors at 1.5 mg/kg/day and below. Atrazine was negative for carcinogenicity in mice and was also negative in a different rat strain. Based on this unique tumor response in a single rat strain and a review of multiple studies, EPA and IARC have concluded that atrazine is not likely to be carcinogenic to humans. Tests in rats and rabbits indicate that Atrazine may have developmental toxicity but only at maternally toxic dose levels of 70 mg/kg/day and above. It is not a unique hazard to the conceptus. Tests in animals demonstrate no reproductive toxicity.

The weight of evidence from bacterial and mammalian cell cultures and from animal tests indicate atrazine does not cause genetic damage.

ETHYLENE GLYCOL

Repeated ingestion exposure to Ethylene Glycol caused histopathological changes of the kidneys and bone marrow; kidney effects with oxalate crystal deposition; altered hematology, and decreased body weight. Long-term exposure caused kidney effects with oxalate crystal deposition; histopathological changes of the kidneys, liver, blood vessels, testes, and sperm; and decreased body weight.

(TOXICOLOGICAL INFORMATION - Continued)

No deaths occurred in animals exposed by inhalation to saturated vapors of Ethylene Glycol. Repeated inhalation exposure caused histopathological changes of the liver and lungs; eye irritation; and clouding of the eye (corneal opacity).

In animal testing Ethylene Glycol has not caused carcinogenicity. Reproductive data on adult animals show interference with reproduction only at levels which produce other toxic effects in the adult animal. Tests have shown Ethylene Glycol to cause developmental toxicity in animals. Ethylene Glycol has not produced genetic damage in bacterial cultures. There are reports indicating that Ethylene Glycol does not produce genetic damage in some animal or mammalian cell culture tests; however, there are reports in the literature that suggest positive results.

S-Metolachlor

Animal testing indicates that S-Metolachlor did not cause reproductive/developmental effects. S-Metolachlor was found not to cause mutagenicity. Benign liver tumors were observed at high dose levels in female rats.

ECOLOGICAL INFORMATION

Ecotoxicological Information

Ethylene Glycol

96 hour LC50 - Fathead minnows: 49,000 mg/L

Atrazine

96 hour LC50 - Rainbow trout: 4.5 ppm

LC50/EC50 - Trout: 9.9 ppm

LC50/EC50 - Bluegill: 54.5 ppm

LC50/EC50 - Daphnia: > 31 ppm

S-Metolachlor

LC50/EC50 - Trout: 12 ppm

LC50/EC50 - Bluegill: 3.16 ppm

LC50/EC50 - Daphnia: 26 ppm

AVIAN TOXICITY:**Atrazine**

8-Day Dietary LC50 - Bobwhite Quail: > 5000 ppm

8-Day Dietary LC50 - Mallard Duck: > 5000 ppm

LC50/EC50 - Bees: > 100 ug/bee

S-Metolachlor

8-Day Dietary LC50/EC50 - Bobwhite Quail: > 5620 ppm

8-Day Dietary LC50/EC50 - Mallard Duck: > 5620 ppm

LC50/EC50 - Bees: > 200 ug/bee

DISPOSAL CONSIDERATIONS

Waste Disposal

Pesticide Disposal:

Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Open dumping is prohibited. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state, or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office.

ENVIRONMENTAL HAZARDS

Atrazine, one of the active ingredients in Cinch ATZ Lite, is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water or rinsate.

Waste Management

Characteristic Waste: Under certain circumstances, discarded product may exhibit TCLP hazardous characteristics. A hazardous waste determination should be done on a case-by-case basis.

Listed Waste: Not Applicable

Container Disposal

Container Disposal (2.5 gal.)

Do not reuse empty container. Triple rinse (or equivalent), puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by State and local authorities. If burned, keep out of smoke.

For minor spills, leaks, etc., follow all precautions indicated on the product label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-424-9300, day or night.

Container Disposal (Bulk and Mini Bulk)

When this container is empty, replace the cap and seal all openings that have been opened during use; and return the container to the point of purchase or to a designated

(DISPOSAL CONSIDERATIONS - Continued)

location named at the time of purchase of this product. The container must only be refilled with this pesticide product. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, contact DuPont at 1-800-424-9300. If not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling. Disposal of this container must be in compliance with State and local regulations.

For minor spills, leaks, etc., follow all precautions indicated on the product label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-424-9300, day or night.

TRANSPORTATION INFORMATION

Shipping Information

DOT/IMO/ICAO:

Proper Shipping Name : Not Regulated by DOT/IMO/ICAO unless a single package contains 5,000 or more pounds Ethylene Glycol. (See DOT/IMO/ICAO shipping description below.)

Proper Shipping Name : Environmentally Hazardous Substances, Liquid, n.o.s., (Ethylene Glycol)

Hazard Class : 9

UN/NA Number : UN 3082

Packaging Group : III

Marine Pollutant : No

Reportable Quantity : Yes (5,000 pounds)

REGULATORY INFORMATION

U.S. Federal Regulations

EPA Reg. No. 352-623

EPCRA SARA Title III Classification

Section 311/312:

Acute and Chronic Health Hazard

Section 313 Toxic Chemicals:

Atrazine (28.1%) (CAS No. 1912-24-9);

Ethylene Glycol (not to exceed 6%) (CAS No. 107-21-1)

CERCLA/SARA 302 Reportable Quantity (RQ)

Report product spills > 10,800 gal. (Based on Ethylene
Glycol [RQ= 5000 lbs.] content in the formulation)

RCRA Hazardous Waste Classification

Under certain circumstances, discarded product may exhibit
TCLP hazardous characteristics. A hazardous waste
determination should be done on a case-by-case basis.

TSCA Status

Exempt from TSCA, subject to FIFRA.

RESTRICTED USE PESTICIDE
(GROUND AND SURFACE WATER CONCERNS)FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR
PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE
USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.
THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND
SURFACE WATER CONCERNS. USERS MUST READ AND FOLLOW ALL
PRECAUTIONARY STATEMENTS AND INSTRUCTIONS FOR USE IN ORDER
TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND AND
SURFACE WATER.-----
OTHER INFORMATION

NFPA, NPCA-HMIS

NFPA Hazard Ratings:

Health: 2

Flammability: 1

Instability: 0

HMIS Hazard Ratings:

Health: 2

Flammability: 1

Reactivity: 0

(Continued)

0 Minimal
1 Slight
2 Moderate
3 Serious
4 Extreme

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS: DuPont Crop Protection
Address : Wilmington, DE 19898
Telephone : 1-888-638-7668

Indicates updated section.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS