

MATERIAL SAFETY DATA SHEET



Emergency Phone: 800-992-5994
Dow AgroSciences LLC
Indianapolis, IN 46268

FulTime* HERBICIDE

Effective Date: 09-Apr-10
Product Code: 83033
MSDS: 007032

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: FulTime* Herbicide

COMPANY IDENTIFICATION:

Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268-1189

2. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

Tan liquid. May cause eye & skin irritation. Toxic to aquatic organisms and avian species.

EMERGENCY TELEPHONE NUMBER: 800-992-5994

3. COMPOSITION/INFORMATION ON INGREDIENTS:

Component	CAS Number	W/W%
Acetochlor	34256-82-1	24.8
Atrazine	1912-24-9	16.6
Dichlormid	37764-25-3	4.2
Balance		54.4

4. FIRST AID:

EYES: Flush eyes thoroughly with water for several minutes. Remove contact lenses after initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

SKIN: Wash skin with plenty of water.

INGESTION: No emergency medical treatment necessary.

INHALATION: Move person to fresh air; if effects occur, consult a physician.

NOTE TO PHYSICIAN: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES:

FLASH POINT: >200°F (>93°C)

METHOD USED: TCC

EXTINGUISHING MEDIA: Water fog, alcohol foam, carbon dioxide, dry chemical, or halogenated agents.

FIRE-FIGHTING EQUIPMENT: A self-contained breathing apparatus and full protective clothing must be worn in fire conditions.

6. ACCIDENTAL RELEASE MEASURES:

ACTION TO TAKE FOR SPILLS/LEAKS: Absorb small spills with materials such as sand, sawdust, Zorbball, or dirt and shovel into an open drum. Wash exposed body areas thoroughly after handling. Report large spills to Dow AgroSciences at 800-992-5994.

7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep out of reach of children. Avoid contact with eyes. Keep away from food, drink and animal feeding stuffs. Exercise due caution to prevent damage to or leakage of the container. Keep container tightly closed and store in a cool, well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

EXPOSURE GUIDELINES: Although some of the additives used in this product may have exposure guidelines, these additives are encapsulated in the product and no exposure would be expected under normal handling conditions.

ENGINEERING CONTROLS: Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

EYE/FACE PROTECTION: Use chemical goggles.

SKIN PROTECTION: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur.

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RESPIRATORY PROTECTION: For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: organic vapor cartridge.

APPLICATORS AND ALL OTHER HANDLERS: Refer to the product label for personal protective clothing and equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES:

BOILING POINT: Not determined
SPECIFIC GRAVITY: 1.155 g/cm³ @ 25°C
DENSITY @ 68°F (20°C): 9.60 lbs/gal¹
SOLUBILITY IN WATER: Not determined
VISCOSITY @ 68°F (20°C): @ 130-300 cP²
APPEARANCE: Tan liquid
ODOR: Not determined
pH: 10 (1% w/w dilution in deionized water)

¹Varies with temperature

²Varies with shear rate

10. STABILITY AND REACTIVITY:

STABILITY: (CONDITIONS TO AVOID) Stable under normal storage conditions.

INCOMPATIBILITY: Oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: If product is involved in a fire, carbon dioxide and carbon monoxide may be formed.

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION:

POTENTIAL HEALTH EFFECTS: This section includes possible adverse effects, which could occur if this material is not handled in the recommended manner.

EYES: May cause moderate eye irritation.

SKIN: Prolonged contact may cause slight skin irritation with local redness. Not likely to be absorbed through the skin in harmful amounts. For a similar formulation, the LD₅₀ for skin absorption in rats is >2000 mg/kg. Did not cause allergic skin reactions when tested in guinea pigs.

INGESTION: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. The oral LD₅₀ for a similar formulation is >5000 mg/kg.

INHALATION: Excessive exposure may cause irritation to the upper respiratory tract (nose and throat) and lungs. For a similar formulation, the LC₅₀ for rats was >2.50 mg/L aerosol for 4 hours.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: For the active ingredient(s), in animals, effects have been reported on the following organs: blood, central nervous system, kidney, liver, testes, respiratory tract, eye, heart, and muscles.

CANCER INFORMATION: Acetochlor and atrazine have caused cancer in some laboratory animals. For acetochlor, tumors were observed only at levels which produced significant toxicity exceeding the maximum tolerated dose. Dichlormid did not cause cancer in laboratory animals.

TERATOLOGY (BIRTH DEFECTS): Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

REPRODUCTION EFFECTS: For acetochlor, in laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. For atrazine and dichlormid, in animal studies, did not interfere with reproduction.

MUTAGENICITY:

For acetochlor, in-vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were predominantly negative. For atrazine and dichlormid, in-vitro genetic toxicity studies were negative. For atrazine, animal genetic toxicity studies were negative in some cases and positive in other cases.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

MOVEMENT & PARTITIONING:

Bioconcentration potential is moderate (BCF is between 100 and 3000 or the Log Pow between 3 and 5). Potential for mobility in soil is medium (Koc is between 150 and 500).

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DEGRADATION & PERSISTENCE:

Degradation is expected in the atmospheric environment within minutes to hours.

ECOTOXICOLOGY:

Material is highly toxic to aquatic organisms on an acute basis (LC₅₀ or EC₅₀ is between 0.1 and 1 mg/L in the most sensitive species tested).

Material is slightly toxic to birds on an acute basis (LD₅₀ is between 501 and 2000 mg/kg).

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION:

DOT Non-Bulk
NOT REGULATED

DOT Bulk
NOT REGULATED

IMDG

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S
Technical Name: ACETOCHLOR, ATRAZINE
Hazard Class: 9 **ID Number:** UN3082
Packing Group: PG III
EMS Number: F-A,S-F
Marine pollutant.: Yes

ICAO/IATA

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S
Technical Name: ACETOCHLOR, Atrazine
Hazard Class: 9 **ID Number:** UN3082
Packing Group: PG III
Cargo Packing Instruction: 914
Passenger Packing Instruction: 914

Additional Information

MARINE POLLUTANT

15. REGULATORY INFORMATION:

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

U.S. REGULATIONS

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
Atrazine	1912-24-9	16.6%

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Section 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard
A delayed health hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

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OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986:

WARNING: This product contains a chemical(s) known to the State of California to cause cancer. The chemical is Acetochlor.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS:

CHEMICAL NAME	CAS NUMBER	LIST
Atrazine	1912-24-9	PA1

PA1=Pennsylvania Hazardous substance (present at > or = to 1.0%)

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA OR SUPERFUND): To the best of our knowledge, this product contains no chemical subject to reporting under CERCLA.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Health	2
Flammability	1
Reactivity	0

16. OTHER INFORMATION:

MSDS STATUS: Revised Sections: 14
Reference: DR-0379-9777
Replaces MSDS Dated: 24-Mar-10
Document Code: D03-140-007
Replaces Document code: D03-140-006

The Information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made. Consult Dow AgroSciences for Further Information.