



The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

DuPont  
Material Safety Data Sheet

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"DuPont" "BREAKFREE" ATZ HERBICIDE  
M0000665 Revised 14-NOV-2006  
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CHEMICAL PRODUCT/COMPANY IDENTIFICATION  
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Material Identification

"DuPont", "BREAKFREE" are trademarks of DuPont.

Tradenames and Synonyms

DPX-QDN33  
ACETOCHLOR  
ATRAZINE

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)

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COMPOSITION/INFORMATION ON INGREDIENTS  
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Components

Material	CAS Number	%
ACETOCHLOR	34256-82-1	32.6
*ATRAZINE	1912-24-9	24.4
2-Chloro-2'methyl-6'-ethyl-N-ethoxymethylacetanilide [2-chloro-4-(ethylamino)-6-(isopropylamino)-s-triazine] and related triazines		
INERT INGREDIENTS INCLUDING:		43
PROPYLENE GLYCOL	57-55-6	
DICHLORMID	37764-25-3	

\* 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.

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HAZARDS IDENTIFICATION  
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## Emergency Overview

WARNING. Causes substantial but temporary eye injury.  
Harmful If Swallowed. Do not get in eyes or on clothing.  
Avoid contact with skin. Prolonged or frequently repeated  
skin contact may cause allergic reactions in some  
individuals.

## Potential Health Effects

Based on components, skin contact with Breakfree ATZ may cause  
skin irritation with discomfort or rash. Atrazine has been  
infrequently associated with skin sensitization in humans.

Based on components, eye contact with Breakfree ATZ may cause eye  
irritation with discomfort, tearing, or blurring of vision.

Ingestion of large amounts may cause irritation of the mouth and  
stomach with nonspecific discomfort, such as nausea, or weakness;  
or gastrointestinal irritation abdominal pain, nausea, vomiting,  
and diarrhea.

## 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.

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FIRST AID MEASURES  
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## First Aid

IF SWALLOWED: Call a poison control center or doctor  
immediately for treatment advice. Do not induce vomiting  
unless told to do so by a poison control center or  
doctor. Do not give anything by mouth to an unconscious  
person.

IF IN EYES: Hold eye open and rinse slowly and gently with  
water for 15-20 minutes. Remove contact lenses, if present,  
after the first 5 minutes, 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 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.

## (FIRST AID MEASURES - Continued)

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 treatment information.

## Notes to Physicians

Probable mucosal damage may contraindicate the use of gastric lavage.

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FIRE FIGHTING MEASURES  
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## Flammable Properties

Flash Point (Test Method): > 212°F (>100°C)  
Method Use: TCC

UNUSUAL FIRE, EXPLOSION AND REACTIVITY HAZARDS:  
If heated above the flashpoint, vapors can flow along surfaces to distant ignition sources and flash back.

## Extinguishing Media

Water Fog, "Alcohol" Foam, CO2, Dry Chemical.

## Fire Fighting Instructions

Wear self-contained breathing apparatus (SCBA) and full protective equipment.

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ACCIDENTAL RELEASE MEASURES  
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## 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

Soak up with sawdust, sand, oil dry or other absorbent material. Dispose of in an approved container.

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HANDLING AND STORAGE  
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## Handling (Personnel)

Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing 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.

## Handling (Physical Aspects)

Do not use or store near heat or open flame.

## Storage

Do not contaminate water, food or feed by storage.

Keep container tightly closed when not in use. Do not store near seeds, fertilizer, or feedstuffs. Can be stored at temperatures as low as -30°F.

Keep out of reach of children.

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EXPOSURE CONTROLS/PERSONAL PROTECTION  
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## Engineering Controls

When handlers use closed systems or enclosed 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.

## Personal Protective Equipment

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

Mixers, loaders, applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants.
- Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinylchloride.
- Chemical-resistant footwear plus socks.
- Protective eyewear.
- Chemical-resistant headgear for overhead exposure.

## (EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

- Chemical-resistant apron when mixing/loading, cleaning up spills, or cleaning equipment, or otherwise exposed to the concentrate.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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 made of any waterproof material such as polyethylene or polyvinyl chloride.
- Shoes plus socks.
- Protective eyewear.

## Exposure Guidelines

## Applicable Exposure Limits

## ATRAZINE

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

## PROPYLENE GLYCOL

PEL (OSHA) : None Established  
 TLV (ACGIH) : None Established  
 AEL \* (DuPont) : None Established  
 WEEL (AIHA) : 50 ppm, total; 10 mg/m<sup>3</sup>, aerosol only  
 (8 hr TWA)

\* 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.

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PHYSICAL AND CHEMICAL PROPERTIES  
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## Physical Data

Appearance: Tan colored opaque liquid  
 Odor: Faint Aromatic  
 Boiling Point: Not determined  
 Specific Gravity: 1.114 g/mL  
 Density @68°F (20°C): 9.28 lbs/gal\*  
 pH: Not determined  
 Solubility in water: Not determined

\*Varies with temperature

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STABILITY AND REACTIVITY  
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## Chemical Stability

Stable at normal conditions.

## Incompatibility with Other Materials

Incompatibility: Oxidizing agents

## Decomposition

Hazardous Decomposition Products: If product is involved in a fire, carbon dioxide, carbon monoxide, hydrogen chloride, nitrogen dioxide, and sulfur dioxide may be formed.

## Polymerization

Polymerization will not occur.

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TOXICOLOGICAL INFORMATION  
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## Animal Data

## Breakfree ATZ

Oral LD50:	> 5000 mg/kg in male rats
Oral LD50:	2242 mg/kg in female rats
Skin Absorption LD50:	> 5000 mg/kg in rats
Inhalation 4 hour LC50:	> 6.23 mg/L in rats

## 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.

## (TOXICOLOGICAL INFORMATION - Continued)

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.

## ACETOCHLOR

A 3-month feeding study in rats caused body weight loss and decreased food consumption. The no-observable-effect-level was 40 mg/kg.

Acetochlor has produced tumors in some laboratory animals. Tests in animals indicate developmental toxicity but only at maternally toxic dose level. Reproduction toxicity was only observed with maternal toxicity. Acetochlor is not mutagenic based on the weight of evidence; it was negative in some tests and positive in others.

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ECOLOGICAL INFORMATION  
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## Ecotoxicological Information

## AQUATIC TOXICITY:

## ACETOCHLOR

96 hour LC50 - Bluegill sunfish: 1.3 mg/L.  
96 hour LC50 - Rainbow trout: 0.36 - 1.2 mg/L.  
48 hour LC50 - Daphnia magna: 8.6 - 16 mg/L

## AQUATIC TOXICITY:

## 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

## AVIAN TOXICITY

## Atrazine

LC50 - Bobwhite Quail: > 5000 ppm  
LC50 - Mallard Duck: > 5000 ppm

## AVIAN TOXICITY

## Acetochlor

## (ECOLOGICAL INFORMATION - Continued)

Acute LD50 is 501 to 2000 mg/kg: Slightly toxic to birds  
Dietary LC50 is > 5000 mg/kg: practically non-toxic

Atrazine  
LC50/EC50 - Bees: > 100 ug/bee

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DISPOSAL CONSIDERATIONS  
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## Waste Disposal

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

Rinse spray equipment. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

## ENVIRONMENTAL HAZARDS:

This product is toxic to fish and aquatic invertebrates. 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 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 washwaters.

See product label for additional Environmental Precautions.

## Container Disposal

Triple rinse (or equivalent); then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

For Bulk and Mini-Bulk Container Disposal and Refilling: Refer to the product label for instructions and additional precautions.

Do not refill or transport damaged or leaking containers.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!

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TRANSPORTATION INFORMATION  
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## Shipping Information

DOT:  
Not regulated by DOT

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REGULATORY INFORMATION  
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## U.S. Federal Regulations

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes  
Chronic : Yes  
Fire : No  
Reactivity : No

In the United States this product is regulated by the US Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

EPA Reg. No. 352-724

## State Regulations (U.S.)

CALIFORNIA PROP 65:  
This product contains a chemical, Acetochlor, known to the State of California to cause cancer.

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OTHER INFORMATION  
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## NFPA, NPCA-HMIS

NFPA Rating  
Health : 2  
Flammability : 1  
Reactivity : 0

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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

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