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DuPont
Material Safety Data Sheet

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M0000381 "DuPont" "BASIS" GOLD HERBICIDE
Revised 1-OCT-2007

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"BASIS" is a registered trademark of DuPont.

"DuPont" is a trademark of DuPont.

Corporate MSDS Number : DU008229

Tradenames and Synonyms

DPX-MP886
ATRAZINE
NICOSULFURON
RIMSULFURON

Company Identification

MANUFACTURER/DISTRIBUTOR
DuPont
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

Product Information : 1-800-441-7515 (outside the U.S.
302-774-1000)
Transport Emergency : CHEMTREC 1-800-424-9300(outside U.S.
703-527-3887)
Medical Emergency : 1-800-441-3637 (outside the U.S.
302-774-1000)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

| Material | CAS Number | % |
|--|-------------|-------|
| NICOSULFURON | 111991-09-4 | 1.34 |
| 2-[[4,6-DIMETHOXYPYRIMIDIN-2-YL)AMINOCARBONYL] AMINOSULFONYL]-N,N-DIMETHYL-3- PYRIDINECARBOXAMIDE | | |
| RIMSULFURON | 122931-48-0 | 1.34 |
| N((4,6-DIMETHOXYPYRIMIDIN-2-YL)AMINOCARBONYL)- 3-(ETHYLSULFONYL)-2-PYRIDINESULFONAMIDE | | |
| *ATRAZINE | 1912-24-9 | 82.44 |
| 2-CHLORO-4-(ETHYLAMINO)-6-(ISOPROPYLAMINO)-S- TRIAZINE | | |
| COMPOUNDS RELATED TO ATRAZINE | | 4.34 |
| INERT INGREDIENTS | | 10.54 |

(COMPOSITION/INFORMATION ON INGREDIENTS - Continued)

* 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.

HAZARDS IDENTIFICATION

Emergency Overview

CAUTION! Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Do not breathe dust or spray mist. Avoid contact with eyes, skin or clothing.

Potential Health Effects

Based on animal data, eye contact with Basis Gold may cause eye irritation with discomfort, tearing, or blurring of vision.

Based on data from a component, skin contact with Basis Gold may cause skin irritation with discomfort or rash.

Inhalation of the dust may cause irritation of the upper respiratory passages, with coughing.

Ingestion may cause irritation of the mouth and stomach with nonspecific discomfort, such as nausea, or weakness.

Gross over-exposure by inhalation or ingestion may cause abnormal liver function as detected by laboratory tests.

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 SWALLOWED:

Call poison control center or doctor immediately for treatment. 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.

(FIRST AID MEASURES - Continued)

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 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 the eye. Call a poison control center or doctor for 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

There is no specific antidote for atrazine. If this product is ingested, induce emesis or lavage stomach. The use of an aqueous slurry of activated charcoal may be considered.

FIRE FIGHTING MEASURES

Flammable Properties

The material poses no explosion hazard in granular form.

Like most organic powders or crystals, under severe dusting conditions, this material may form explosive mixtures in air.

Fire and Explosion Hazards:

Hazardous gases/vapors produced in fire are carbon monoxide, hydrogen cyanide, acetonitrile.

Extinguishing Media

Water, Foam, Dry Chemical, CO2.

Fire Fighting Instructions

Keep personnel removed and upwind of fire. Runoff from fire control may be a pollution hazard.

If area is exposed to fire and conditions permit, let fire burn itself out. Burning chemicals may produce by-products more toxic than the original material. If product is on fire, wear self-contained breathing apparatus and full protective equipment. Use water spray. Control 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.

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus. Avoid dust generation.

Initial Containment

Prevent material from entering sewers, waterways, or low areas.

Spill Clean Up

Shovel or sweep up. Avoid causing dust. Dispose of in an approved container. Small spills may be collected with absorbent materials. Flush spill area with water. Do not allow to contaminate groundwater systems.

HANDLING AND STORAGE

Handling (Personnel)

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Wash clothing after use. 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/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothes. 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

Store the product in the original container only. Do not contaminate water, other pesticides, fertilizer, food, or feed in storage. Avoid contact with water. In case of a spill, dispose of wastes in compliance with local, state and federal regulations.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

When handlers use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standards (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Use only with adequate ventilation. Keep container tightly closed.

Do not generate dust.

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.

Always follow the label instructions when handling this product.

Mixers, loaders, cleaners of equipment or spills, and other handlers must wear:

- Coveralls over long sleeved shirt and long pants.
- Chemical Resistant Gloves Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber) equal to or greater than 14 mils.
- Chemical-resistant footwear plus socks.
- A NIOSH approved dust mist filtering respirator with any N, R, P, or HE filter or a NIOSH-approved dust/mist filtering respirator with approval number prefix TC-21C.

Applicators and all other handlers exposed to the dilute must wear:

- Long sleeved shirt and long pants,
- Shoes plus socks
- Chemical Resistant Gloves Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), equal to or greater than 14 mils.

See engineering controls for additional requirements.

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

(EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

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 Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber) greater than or equal to 14 mils.
- Chemical resistant footwear plus socks.

Exposure Guidelines

Applicable Exposure Limits

NICOSULFURON

PEL (OSHA) : None Established
 TLV (ACGIH) : None Established
 AEL * (DuPont) : 5 mg/m³, 8 & 12 Hr. TWA, respirable dust
 dust

RIMSULFURON

PEL (OSHA) : None Established
 TLV (ACGIH) : None Established
 AEL * (DuPont) : 5 mg/m³, 8 & 12 Hr. TWA, total dust

ATRAZINE

PEL (OSHA) : None Established
 TLV (ACGIH) : 5 mg/m³, 8 Hr. TWA, A4
 AEL * (DuPont) : 0.5 mg/m³, 8 & 12 Hr. TWA, total dust

* 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

Form : Granular.
 Color : Tan.
 Odor : Odorless.
 Density : 0.47 g/cc
 Melting Point : 172-177 C (342-351 F) (Atrazine)
 Vapor Pressure : 6.6 x 10⁻⁷ mm/Hg (Atrazine)
 pH : Not Available
 Solubility in Water : Negligible
 Specific Gravity : 1.19

STABILITY AND REACTIVITY

Chemical Stability

Stable.

Decomposition

Hazardous gases or vapors can be released, including carbon monoxide, hydrogen cyanide, acetonitrile.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Basis Gold

| | |
|-------------------------|--|
| Oral LD50: | 2245 mg/kg in rats (Slightly toxic) |
| Inhalation 4 hour LC50: | > 5.3 mg/L in rats (Slightly toxic) |

Basis Gold is a mild eye irritant, but is not a skin sensitizer in animal tests.

ATRAZINE

LD50, rabbit: (Dermal) 7500-9300 mg/kg.

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.

NICOSULFURON

In a short-term, repeated dose study in rats and mice with the active ingredient, Nicosulfuron, there were no toxicologically significant changes; the NOEL for each study was 2200 mg/kg. In 90-day feeding studies in mice the number of certain types of white blood cells was reduced; however, this was not observed in dogs or rats. This observation was not associated with bone marrow effects was not reproducible in mice exposed up to 18-months to Nicosulfuron. There were no other toxicologically significant changes during these 90-day tests. In a one-year feeding study in dogs Nicosulfuron caused decreased body weight and increased liver weights in male dogs; the NOEL was 5000 ppm for male dogs and 20,000 ppm for female dogs.

Tests in rats and mice with Nicosulfuron demonstrate no carcinogenic activity. Tests in animals demonstrate no reproductive or developmental toxicity. Nicosulfuron has not produced genetic damage in bacterial or mammalian cell cultures or in animals.

RIMSULFURON

Single inhalation exposures to Rimsulfuron caused nonspecific effects such as weight loss, and irritation.

Single dermal exposures to Rimsulfuron caused nonspecific effects such as weight loss.

Repeated and long-term ingestion exposures in animals with Rimsulfuron resulted in non-specific body weight, organ weight, and mild hematologic and clinical chemistry changes. A 1-year feeding study in dogs resulted in mild tracheal effects.

(TOXICOLOGICAL INFORMATION - Continued)

Rimsulfuron did not demonstrate carcinogenic effects in long-term feeding studies in rats or mice. Rimsulfuron did not cause developmental or reproductive effects in animals. Rimsulfuron did not produce genetic damage in bacterial or mammalian cell cultures or in animals.

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

ATRAZINE

96 hour LC50 - Rainbow trout: 4.5 ppm.

AVIAN TOXICITY:

ATRAZINE

LC50 - Bobwhite Quail: > 5000 ppm.

LC50 - Mallard Duck: > 5000 ppm.

AQUATIC TOXICITY:

NICOSULFURON

96 hour LC50 - Bluegill sunfish: > 1000 mg/L.

96 hour LC50 - Rainbow trout: > 1000 mg/L.

48 hour EC50 - Daphnia magna: > 1000 mg/L.

AVIAN TOXICITY:

NICOSULFURON

Acute Oral LD50 - Bobwhite Quail: > 2250 mg/kg.

Acute Dietary LC50 - Bobwhite Quail: > 5620 ppm.

Acute Dietary LC50 - Mallard Duck: > 5620 ppm.

AQUATIC TOXICITY:

RIMSULFURON

96 hour LC50 - Rainbow trout: > 390 mg/L.

96 hour LC50 - Bluegill sunfish: > 390 mg/L.

96 hour LC50 - Carp: > 900 mg/L.

AVIAN TOXICITY:

RIMSULFURON

Acute Oral LD50 - Bobwhite Quail: > 2250 mg/kg.

Acute Oral LD50 - Mallard Duck: > 2000 mg/kg.

Acute Dietary LC50 - Bobwhite Quail: > 5620 ppm.

Acute Dietary LC50 - Mallard Duck: > 5620 ppm.

DISPOSAL CONSIDERATIONS

Waste Disposal

Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to applicable Federal, state, or local procedures.

ENVIRONMENTAL HAZARDS

Atrazine, one of the active ingredients of DuPont "Basis" Gold, is a pesticide that can move (seep or travel) through soil and can contaminate groundwater that may be used as drinking water. Atrazine has been found in groundwater. Users are advised not to apply "Basis" Gold where the water table (groundwater) is close to the surface and where the soils are very permeable (i.e., well drained soils). Local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

Atrazine is toxic to 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 by cleaning of equipment or disposal of wastes.

Container Disposal

Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Water Soluble Packaging: Do not reuse the outer box or the resealable bags. When all water-soluble packets are used, the outer packaging should be clean and may be disposed of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by open burning. If it is burned, stay out of smoke. If the resealable bag contacts the formulated product in any way, the bag must be triple-rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer wrap as described above.

TRANSPORTATION INFORMATION

Shipping Information

DOT/IMO
Proper Shipping Name : NOT REGULATED

REGULATORY INFORMATION

U.S. Federal Regulations

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes
Chronic : Yes
Fire : No
Reactivity : No
Pressure : 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. 352-585

***** RESTRICTED USE PESTICIDE*****

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 Rating
Health : 2
Flammability : 0
Reactivity : 0

NPCA-HMIS Rating
Health : 2
Flammability : 0
Reactivity : 0

(Continued)

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, Delaware 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