

MATERIAL SAFETY DATA SHEET

4670

Zeneca Inc.

Wilmington, Delaware 19880
 P.O. Box 4000, 1000 Lakeside Drive
 Newark, Delaware 19801
 Chemical Division

SECTION 1 - IDENTIFICATION

Product name: **4670**

Hazard summary (as req) used by: **MSD** Hazard Group: **III** (see also GHS) **III**
 Physical hazard: **None**
 Health hazard: **Toxicant (eye, target)**

Read the entire MSDS for a more complete description of the hazards of this product.

Ingredient	Concentration	Hazard
Diethylamine (CAS: 109-89-6)	11.8	Eye Irritant
Ammonia (CAS: 7664-41-7)	51.7	Eye Irritant
Other ingredients (including solvents)	36.5	Not known

Ingredient not previously identified and proprietary or confidential. Values are for product concentration.

SECTION 2 - PHYSICAL DATA

Appearance and odor: **opaque liquid with odor similar to off-putting sulfur**
 Boiling point: **no data**
 Vapor pressure (mm Hg @ 20°C): **no data**
 Vapor density (air = 1): **no data**
 Solubility in water: **no data**
 pH: **10-11 (1% a/s in H₂O)**
 Specific gravity: **1.14**
 Volatile by volume: **no data**

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

Flash point: **Above 200°F, 93°C (MCC)**
 Autoignition temperature: **No data**
 Flammable limits (LFL): **No data**

Extinguishing media:

Water, fog, foam, carbon dioxide, dry chemical, unreactive agents

Special fire fighting protective equipment:

Self-contained breathing apparatus with full facepiece and protective clothing.

SECTION 4 FIRE AND EXPLOSION HAZARD DATA (continued)

Unusual fire and explosion hazards:
None known.

SECTION 5 REACTIVITY DATA

Stability:
Stable under normal conditions.

Incompatibility:
Oxidizing agents.

Hazardous decomposition products:
Combustion products: Carbon dioxide, carbon monoxide.

Hazardous polymerization:
Will not occur.

SECTION 6 HEALTH HAZARD ASSESSMENT

*** General:

This description of toxicological properties is based on experimental results and experience with the material.

Ingestion:

The acute oral LD₅₀ in rat was 2,858 mg/kg (female) and 5470 mg/kg (male). This material is classified as "slightly toxic" by ingestion.

*** Eye contact:

This material was severely irritating in rabbit eye irritation studies. Although one of six rabbits showed corneal opacities beyond 10 days, eye irritation scores for all animals were generally low. Although the product is FIFRA-labeled "corrosive," the product will not induce ocular burns, but may induce slowly-evolving corneal damage.

*** Skin contact:

This material was mildly irritating in rabbit dermal irritation studies. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

*** Skin absorption:

The LD₅₀ was greater than 2000 mg/kg. Systemically toxic concentrations of this product will probably not be absorbed through human skin.

*** Inhalation:

The LC₅₀ was greater than 3.34 mg/L. Based on active ingredient, vapors and aerosols may irritate eyes, nose and respiratory passages.

*** Other effects of overexposure:

An elevated incidence of mammary tumors was observed in female Sprague-Dawley rats during a long-term feeding study with Atrazine Technical. This response did not occur in male rats or mice and is considered to be sex- and strain-specific. Atrazine is listed as a Class 2B carcinogen by IARC. In other long-term feeding studies, very high doses of atrazine caused signs of cardiotoxicity in dogs and mice. Atrazine caused no adverse reproductive effects and was not teratogenic in rats or rabbits. Atrazine is not mutagenic.

SECTION 6 HEALTH HAZARD ASSESSMENT (continued)

Chronic studies in animals with Acetochlor have shown that high doses produce nasal tumors (rats) and lung tumors (mice). However, it is not classified as a carcinogen by IARC, NTP, or OSHA. Acetochlor is classified by the EPA as a B2 carcinogen. High doses of an herbicidal antidote included in this product produced slight liver toxicity in rats and dogs and slight degenerative changes in voluntary muscle in dogs but not rats. However it was not mutagenic, clastogenic, or teratogenic.

First aid procedures:

Skin: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention.

*** **Eyes:** Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and treated by medical personnel.

*** **Ingestion:** If victim is alert and not convulsing, rinse mouth out and give 200-300ml (1 cup) of water to dilute material. Immediately contact Zeneca's Emergency Information Network at 1-800-F-A-S-T-M-E-D (327-8633). Vomiting should only be induced under the direction of a physician or a poison control center. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer water. Immediately transport victim to an emergency facility.

Inhalation: Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 7 SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled:

Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. A small spill can be handled routinely. Use adequate ventilation or wear an air-supplied respirator to prevent inhalation. Wear suitable protective clothing and eye protection to prevent skin and eye contact. Use the following procedures:

1. Do not allow material to enter streams, sewers or other waterways.
2. Spread a suitable absorbent such as clay on the spill, and shovel into an open drum.
3. Carefully cover the contaminated areas with common, household detergent (e.g. TIDE, registered trademark Proctor & Gamble Company). Using a stiff brush and small amounts of water, work the detergent into the remaining spilled material forming a slurry. Brush the slurry into cracks and crevices and allow to stand for 2-3 minutes. Be careful to completely avoid skin or eye contact. Do not splatter on oneself or bystanders.
4. Spread absorbent on the slurry liquid and shovel mixture into the open drum.
5. Repeat #3 and 4 if necessary.
6. Rinse with a small amount of water and use absorbent to collect the wash solution. Shovel into the open drum.
7. Seal drum and dispose of contaminated material in a facility permitted for hazardous waste. Large spills should be handled according to a spill plan. Otherwise, in case of emergency call, day or night, 800-328-9100, Chemtrec.

***This line of section contains revisions or new statements since the last issue date.

The information herein is given in good faith but no warranty, expressed or implied, is made.

Buy registration number: 10182 163

Other determined regulations: known to the State of California to cause cancer. This product contains a chemical California Proposition 65 WARNING.

Labels and other regulations (40 CFR 155, 170, and 172): This product does not contain any chemicals subject to the reporting requirements of 40 CFR section 172.

TSCE (Toxic Substances Control Act) Regulations, 40 CFR 710: This product is a pesticide and is exempt from TSCE regulation.

SECTION 10. REGULATORY INFORMATION

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SECTION 7. SPILL OR LEAK PROCEDURES (continued)

Disposal method:

This material is toxic to fish and wildlife. Do not contaminate waterways by cleaning of equipment or by disposal of wastes. Untreated effluent should not be discharged where it will drain into lakes, streams, or ponds. Discarded product is not a hazardous waste under RCRA, 40 CFR 261.

Container disposal:

Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container and puncture or otherwise destroy empty container before disposal.

SECTION 8 SPECIAL PROTECTION INFORMATION

TLV® or suggested control value:

No ACGIH TLV or OSHA PEL is assigned to this mixture. Zeneca has established an employee exposure limit of 0.1 mg/M³ for Acetochlor. Minimize exposure in accordance with good hygiene practice. The ACGIH TLV for Atrazine is 5 mg/M³ as an 8-hour TWA.

Ventilation:

This product is intended for use outdoors where engineering controls are not necessary. If use conditions are different (e.g. product reformulation or repackaging), use ventilation adequate to maintain safe levels.

Respiratory protection:

When needed, use MSHA/NIOSH approved respirator for pesticides.

Protective clothing:

Skin contact should be prevented through the use of impervious gloves, footwear, long-sleeved clothing, and wide brimmed hat. Remove contaminated clothing and wash before reweaving. Wash separately from other laundry.

This product is FIFRA regulated. Refer to product labeling for required and user personal protection equipment.

Eye protection:

Eye contact with the material should be avoided through the use of chemical safety glasses, goggles or a faceshield, selected in regard to exposure potential.

Other protective equipment:

An adequate supply of clean potable water should be available to allow thorough flushing of skin and eyes in event of contact with this compound.

SECTION 9 SPECIAL PRECAUTIONS OR OTHER COMMENTS

Special precautions or other comments:

Prevent eye contact. Do not store near feed, food, or within the reach of children. Containers should be stored in a cool, dry, well-ventilated area away from flammable materials and sources of heat or flame.

Exercise due caution to prevent damage to or leakage from the container.



MATERIAL SAFETY DATA SHEET

Ciba-Gelgy Corporation
Plant Protection Division
Post Office Box 18300
Greensboro, NC 27419

In Case of Emergency, Call
Ciba-Gelgy: 1-800-888-8372
CHEMTREC: 1-800-424-9300

I. MATERIAL IDENTIFICATION

Product Name: Bicep® II

CAS #: 1912-24-9 (Atrazine)
51218-45-2 (Metolachlor)
98730-04-2 (Benoxacor)

Active Ingredient (%): Atrazine (29.7); Metolachlor (36.6); Benoxacor (1.2)

Chemical Name: Atrazine: 2-chloro-4-ethylamino-6-isopropylamino-s-triazine

Metolachlor: 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)acetamide

Benoxacor: 4-(dichloroacetyl)-3,4-dihydro-3-methyl-2H-1, 4-benzoxazine

Chemical Class: Triazine/Chloroacetamide Herbicide w/safener

EPA Signal Word: Caution

II. REGULATORY INFORMATION

SARA Title III Classification

Acute and Chronic Health Hazard. Section 313

Chemical: Ethylene Glycol (CAS No. 107-21-1, 4%)

Proposition 65 (CA Only)

Not Determined.

Reportable Quantity (RQ)

None.

RCRA Classification

Not Applicable.

DOT Classification

No Label or Placard Required.

B/L Freight Classification

Compound; Tree and Weed Killing, N.O.S.

NFPA Hazard Ratings

Health	2
Flammability	0
Reactivity	0

0 Least
1 Slight
2 Moderate
3 High
4 Severe

III. HAZARDOUS INGREDIENTS

Material	OSHA PEL	ACGIH TLV	NTP/IARC/OSHA Carcinogen
Atrazine	5 mg/m ³	5 mg/m ³	IARC, 2B
Benoxacor	None	None	No
Ethylene Glycol (3.5)	125 mg/m ³ (ceiling)	125 mg/m ³	No
Metolachlor	None	None	No
Thickening Agent (Nuisance Dust)	10 mg/m ³ (total dust)	10 mg/m ³	No

IV. FIRST AID PROCEDURES

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If poisoning is suspected, immediately contact a physician, the nearest hospital, or the nearest Poison Control Center. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given.

- Ingestion:** If victim is fully conscious, immediately give 1 or 2 glasses of water to drink and induce vomiting. Never give anything by mouth to an unconscious person. Apply artificial respiration if necessary.
- Eye Contact:** Immediately rinse eyes with a large amount of running water. Hold eyelids apart to rinse the entire surface of the eye and lids. Do not apply any medicating agents except on the advice of a physician.
- Skin Contact:** Wash with plenty of soap and water, including hair and under fingernails. Do not apply any medicating agents except on the advice of a physician. Remove contaminated clothing and wash before reuse.
- Inhalation:** Move victim from contaminated area to fresh air. Apply artificial respiration if necessary.

Notes to Physician

There is no specific antidote if Bicep II is ingested. If a large amount has been ingested and emesis has been inadequate, lavage stomach. Metolachlor and atrazine have a high affinity for activated charcoal. five g/kg of activated charcoal suspension (50 g/400 ml water) can be given to absorb remaining toxicant. Give a suitable saline laxative and supportive therapy. Skin reactions have been treated with antihistamines and ointments containing an anti-inflammatory agent.

Based on the acute oral LD₅₀ in rats, ingestion of 3 ounces or more may be fatal to an adult human.

Medical Conditions Likely to be Aggravated by Exposure

Individuals with known hypersensitivity to atrazine or metolachlor should not be exposed to Bicep II. Individuals with allergic history or pre-existing dermatitis should use extra care in handling this product.

V. HEALTH HAZARD INFORMATION

Symptoms of Acute Exposure

Exposure to Bicep II may cause irritation to eyes and skin, or diarrhea can result. A skin sensitization (allergic) reaction may occur in sensitive individuals. Exposure to metolachlor is reported to cause headache or nausea, usually subsiding within 24 hours.

Acute Toxicity/Irritation Studies

- Ingestion:** slightly toxic
Oral LD₅₀ (Rat) = 1,440 (females), 3,060 (males) mg/kg body weight
- Dermal Absorption:** slightly toxic
Dermal LD₅₀ (Rabbit) = >2,010 mg/kg body weight
- Inhalation:** slightly toxic
Inhalation LC₅₀ (Rat) = >2.5 mg/l air - 4 hours
- Eye Contact:** mildly irritating (Rabbit)
- Skin Contact:** slightly irritating (Rabbit)
- Skin Sensitization:** not sensitizing (Guinea Pig)

Note: Although Bicep II was negative in a skin-sensitization study, both active ingredients and the safener used in this product were positive for sensitizing potential.

Chronic Toxicity Studies

ATRAZINE

Long-term exposure to low levels of atrazine is not known to cause any chronic ill effects in humans. An elevated incidence of mammary tumors was observed in female Sprague-Dawley rats during a long-term feeding study with Atrazine Technical. This response did not occur in male Sprague-Dawley rats, F-344 male or female rats, or mice and is considered to be sex and strain-specific. Atrazine caused no adverse reproductive effects over two generations of rats and was not teratogenic in rats or rabbits. Atrazine was not mutagenic in studies using several model systems currently recognized as valid for determining the mutagenic potential of pesticides.

It has been reported to cause chromosome aberrations in barley seeds and to be converted to a mutagenic agent in corn plants, but these findings have been successfully refuted. A metabolite of atrazine, 2,3-diamino-6-chloro-s-triazine (DACT), has caused cardiotoxicity in dogs at high doses.

METOLACHLOR

In two separate studies in mice, metolachlor did not induce tumors or other long-term toxic effects. No adverse effects were observed in two long-term studies in rats, except at extremely high doses where a small number of females developed benign liver tumors. This liver response has been observed in rats given high doses of many other compounds and may only reflect the extremely high dose used. Additional studies showed that metolachlor does not cause reproductive, teratogenic, or mutagenic effects.

BENOXACOR

Subchronic feeding studies with benoxacor indicated that the stomach, liver, and kidney were target organs at high doses. Chronic studies in mice and rats showed that an elevated incidence of tumors were found in the non-glandular portion of the stomach, a histomorphologic region not present in man. Benoxacor was not teratogenic in rats or rabbits. Although preliminary testing for mutagenicity produced some weakly positive results, repeat studies were negative for mutagenic potential.

Toxicity of Other Components

Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice. There is, however, no information suggesting that ethylene glycol has caused birth defects in humans. Severe kidney damage results from swallowing large volumes of ethylene glycol. Bicep II also contains a small amount of a thickening agent, reported by the manufacturers to be a nuisance dust.

VI. PERSONAL PROTECTION AND PRECAUTIONS

- Ingestion:** Store the material in a well-ventilated, secure area out of the reach of children and domestic animals. Do not store food, beverages, or tobacco products in the storage area. Prevent eating, drinking, tobacco usage, and cosmetic application in areas where there is a potential for exposure to the material. Always wash thoroughly after handling.
- Eye Contact:** To avoid eye contact, wear chemical safety glasses or goggles.
- Skin Contact:** To avoid skin contact, wear rubber gloves, waterproof boots, long-sleeved shirt, long pants, and hat.
- Inhalation:** To avoid breathing mist, wear a NIOSH-approved dust or pesticide respirator.

VII. PHYSICAL HAZARD INFORMATION

Fire and Explosion

Flash Point (Test Method): >199°F (Setaflash CC)
 Flammable Limits (% in Air): Not Available
 Autoignition Temperature: Not Available

Reactivity

Stability: Stable
 Hazardous Polymerization: Will Not Occur
 Conditions to Avoid: None Known

Hazardous Decomposition Products: Hazardous decomposition products may include but are not limited to carbon monoxide, hydrogen cyanide, acetonitrile.

Physical Properties

Appearance: Off-White Liquid
 Odor: Latex Paint
 Melting Point: Not Applicable
 Solubility in H₂O: Atrazine: 33 ppm @ 20°C
 Metolachlor: 760 ppm @ 22°C
 Boiling Point: 102°C +/- 5°C

Specific Gravity: 1.11 @ 20°C (Typical)
Vapor Pressure: 2×10^{-9} mmHg @ 20°C
pH: 5-9 (10% slurry)
Evaporation Rate: Not Available

Unusual Fire, Explosion and Reactivity Hazard
Bicep II is an NFPA Class III B liquid.

VIII. ENVIRONMENTAL PROTECTION

In Case of Spill or Leak

Wear chemical safety glasses or goggles, rubber gloves, waterproof boots, long-sleeved shirt, long pants, hat, and a NIOSH-approved dust or pesticide respirator. For small spills, cover the spill with an absorbent material such as sweeping compound (pet litter). Sweep up the material and place in an approved chemical container. Wash the spill area with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container. Seal container and handle in an approved manner. Flush the spill area with water to remove any residue. Do not allow wash water to contaminate water supplies.

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.

Disposal

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

Questions concerning the safe handling of Bicep II should be referred to:

Ciba-Geigy Corporation
Environmental Safety & Compliance
1-800-334-9481

Issued Date: 4/10/87
Revised Date: 11/23/93

Supersedes: 9/22/93

<p>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.</p>
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people — 20 adults and two juveniles. That brings the number of people charged by the narcotics bureau this year to 59.

Those arrested so far include:

■ Michael A. Alexander, 22, for one count of aggravated trafficking in cocaine, a third-degree felony, and one count of aggravated trafficking in cocaine, a second-degree felony with actual incarceration of three years;

■ Brian Barnes, 36, for one count of drug abuse, a fourth-degree felony, and possession of methamphetamine;

■ Shannon M. Coleman, 21, for two counts of aggravated trafficking in LSD, a first-degree felony with actual incarceration of five years on each count;

■ Cheryl L. Ickes, 31, Bremen, for one count of drug abuse for possession of cocaine and one count of trafficking in marijuana for cultivating marijuana, both fourth-degree felonies, and 61 counts of possession of drug paraphernalia, three counts of possession of a controlled substance and one count of drug abuse, all misdemeanors;

■ Michael E. Moore Jr., 19, for one count of trafficking in marijuana, a fourth-degree felony;

■ Mark A. Pariscott, 32, for one count of aggravated trafficking in LSD, a first-degree felony with actual incarceration of five years, and one count of trafficking in marijuana, a fourth-degree felony;

■ Amanda J. Presley, 39, for one count of aggravated trafficking in cocaine, a second-degree felony with actual incarceration of three years, and one count of aggravated trafficking in cocaine, a third-degree felony;

■ Kimberly J. Presley, 19, for one count of aggravated trafficking in cocaine, a second-degree felony with actual incarceration of three

Part of Sharp Road closed

Fairfield County Engineer Frank Anderson on Thursday closed Sharp Road Southeast between U.S. 33 and Old Logan Road Southeast for three days.

The closure was necessary for bridge work.

City to fog for mosquitoes

Lancaster Street Department will fog for mosquitoes from 5 to 7 p.m. Saturday from Mount Pleasant Avenue to Cherry Street; Sixth Avenue to Lawrence Street including Cherokee Drive; Main Street to Locust Street; and Brooks Avenue to Ewing Street including Della Avenue.

The schedule is subject to weather. If it rains, the area will be rescheduled at a later date.

Anyone with respiratory problems should keep their windows closed.

Truck spills herbicides

A truck traveling on Cedar Hill Road in Bloom Township Wednesday evening spilled herbicides.

James F. Watson, 32, of 215 Washington Ave., Canal Winchester, told Fairfield County Sheriff's Office he was northbound on Cedar Hill Road approaching the Marcy Road intersection when his load shifted and fell from the back of his truck, a sheriff's office re-

caster man Wednesday evening crashed in Millersport.

The pilot, Richard Thomas Vaughn, age not available, of 315 S. Cherry St., told Fairfield County Sheriff's Office his engine quit shortly after taking off from Buckeye Lake.

Vaughn told deputies he was traveling west to east and trying to land in a field, which resulted in the crash. The crash occurred on state Route 37 in Millersport.

He was checked by medics but not transported.

Baby injured in Wednesday crash

An accident at West Fair Avenue and North Memorial Drive sent an infant to the hospital Wednesday.

Shania Schwader, 4 weeks, of 3650 Logan-Lancaster Road, was treated at Fairfield Medical Center and released following the accident, a hospital spokesman said.

The infant was a passenger in a car driven by Stephanie Schwader, 21, of 3650 Logan-Lancaster Road. Schwader began turning left onto North Memorial Drive from westbound Fair Avenue when her car was hit by an eastbound car driven by Steven M. Levin, 17, of 2780 County Line Road, according to a Lancaster police report.

The light for east/west traffic turned yellow while Levin continued through the intersection, and Schwader failed to yield to his car and began turning left. Levin tried to avoid hitting Schwader's car, but their front ends collided, according to the report.

Schwader was cited for failing to yield on a left turn, according to the report.

