

MATERIAL SAFETY DATA SHEET

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SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

- a. **Product Identifier** PRIMEXTRA® II MAGNUM®
Registration Number: 25730
Formulation Number: A9562C
Chemical Classes: Chloroacetanilide and triazine herbicides with substituted benzoxazine safener
Synonym: BICEP LITE II® MAGNUM
- b. **Name of Supplier, Address and Emergency Telephone Number** - See above.
- c. **Name of Manufacturer, Address and Emergency Telephone Number** - See above.
- d. **Product Use:** Water-based liquid herbicide to be mixed with water for weed control on corn. The safener, benoxacor increases the tolerance of corn to the herbicide.
- e. **Date of MSDS Preparation (Y/M/D):** 03-09-18
- f. **Name and Telephone Number of Party Responsible for MSDS Preparation:**
Prepared by Regulatory & Biology Development Department of Syngenta Crop Protection Canada, Inc. For further information, please contact 1-87S-YNGENTA (1-877-964-3682).

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

- a. **Chemical Identity and CAS Registry No. of hazardous ingredients (WHMIS Controlled Products) present at 1.0%, or 0.1% as appropriate, by weight.**
Ethylene Glycol CAS No. 107-21-1
- b. **Ingredients present which are on the WHMIS Ingredient Disclosure List at, or above, the minimum concentration specified on the List:** Ethylene glycol
- c. **Ingredients with unknown toxicological properties:** None.
- d. **Ingredients the supplier believes may be harmful:** None.
- e. **Generic chemical identity and Registry Number for trade secret ingredients registered under the Hazardous Materials Information Review Commission:** Not applicable.
- f. **Ingredient concentration in units of wt./wt., vol./vol. or wt./vol. expressed as:** i) actual concentration, or ii) a range as specified in the Controlled Product Regulations.
Alpha-metolachlor - 35.8% (w/w) CGA-77102, CAS No. 87392-12-9. *Chemical name:*
(1S)-2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl) acetamide
Atrazine (and related triazines) - 28.7% (w/w) G-30027, CAS No. 1912-24-9. *Chemical name:*
2-chloro-4-(ethylamino)-6-(isopropylamino)-s-triazine
Benoxacor - 1.8% (w/w) CAS No. 98730-04-2, CGA 154281. *Chemical name:*
4-(Dichloroacetyl)-3,4-dihydro-3-methyl-2H-1,4-benzoxazine
Ethylene glycol - 4.5% (w/w) CAS No. 107-21-1
Surfactant blend - 3-7% (w/w)
Preservatives, antifoam - 1-5% (w/w)
Water - 10-30 % (w/w)
N.B. Alpha-metolachlor is the active isomer of metolachlor.
- g. **Exposure limits for ingredients:**
1996 ACGIH TLV -TWA Atrazine 5 mg/m³
1996 ACGIH TLV - STEL Ceiling Ethylene glycol 100 mg/m³

SECTION 3 HAZARDS IDENTIFICATION

Potential Health Effects:

- a. **Relevant routes of exposure:** Skin, eyes, lungs, mouth
- b. **Adverse health effects from exposure to product or ingredients of product:**
 - i) length of exposure
 - ii) severity of effect
 - iii) target organ
 - iv) type of effect
 - v) signs and symptoms

Exposure to PRIMEXTRA® II MAGNUM® can cause eye, skin or respiratory tract irritation. Diarrhea can result. Prolonged exposure to metolachlor is reported to cause headache or nausea, usually subsiding within 24 hours. A skin (allergic) reaction may occur occasionally in sensitive individuals. The target organ for alpha-metolachlor is the liver. Target organ for atrazine is the heart. Sub-chronic feeding studies with benoxacor indicated that the stomach, liver and kidney were target organs at high doses. One of the surfactants in this product is severely irritating to eyes, skin and respiratory tract. Target organs for the surfactants are the eyes and skin.

PRIMEXTRA® II MAGNUM® contains a small amount of ethylene glycol. Severe kidney damage results from swallowing large volumes of ethylene glycol. Exposure to high concentrations of ethylene glycol may affect the hematopoietic system and central nervous system with headache, dizziness and drowsiness. Target organs for ethylene glycol are the blood, kidneys and central nervous system.

vi) **medical conditions known to be aggravated:** Individuals with known sensitivity to metolachlor or atrazine should not be exposed to this product. Individuals with allergic history or pre-existing dermatitis should use extra care in handling this product.

SECTION 4 FIRST AID MEASURES

If POISONING IS SUSPECTED, immediately contact the poison information centre, doctor or nearest hospital. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given. Call the Syngenta Emergency Line [**1-800-327-8633 (1-800-FASTMED)**], for further information.

- EYES:** Immediately rinse eyes with a large amount of running water. Hold eyelids apart and rinse entire surface of eyes and lids. Obtain medical attention or contact a poison information centre.
- SKIN:** Immediately remove contaminated clothing and wash skin, hair and fingernails thoroughly with soap and water. Obtain medical attention or contact poison information centre if irritation occurs. Do not apply any medicating agents except on the advice of a physician. Wash contaminated clothing before re-use.
- INHALATION:** Move to fresh air, clean up, and rest. Apply artificial respiration if necessary.
- INGESTION:** Call a poison information centre or doctor immediately. Give water to drink. Never give anything by mouth to an unconscious person. Do not induce vomiting.

NOTE TO PHYSICIAN: PRIMEXTRA® II MAGNUM® contains the chloroacetanilide herbicide, alpha-metolachlor and the triazine herbicide, atrazine. There is no specific antidote. Treat symptoms. If a large amount has been ingested and emesis has been inadequate, lavage stomach. The active ingredients in this product have a high affinity for activated charcoal. A suspension of activated charcoal in water can be given to absorb the remaining toxicant. Give a saline laxative and supportive therapy. Skin reactions have been treated with antihistamines and anti-inflammatory ointments.

SECTION 5 FIRE FIGHTING MEASURES

1. **Flash point and method:** >93.3°C Setaflash
2. **Upper and lower flammable (explosive) limits in air:** Not available
3. **Autoignition temperature:** Not available
4. **Hazardous combustion products:** Thermal decomposition products may include carbon monoxide, carbon dioxide, hydrogen cyanide, acetonitrile, hydrogen chloride, oxides of sulfur, hydrogen sulphide, oxides of nitrogen, ammonia.
5. **Conditions under which flammability could occur:** High temperature, open flames.
6. **Extinguishing media:** Dry chemical, foam or carbon dioxide.
Fire fighters should wear full protective clothing and self-contained breathing apparatus. Evacuate non-essential personnel from the area to prevent human exposure to fire, smoke, fumes, or products of combustion. Treat as a liquid chemical type fire where discharges to the environment are to be controlled as quickly as possible. Prevent use of contaminated buildings, area, and equipment until decontaminated. Avoid using excessive water, and prevent spread of extinguishing agent into the environment.
7. **Sensitivity to explosion by mechanical impact:** None.
8. **Sensitivity to explosion by static discharge:** None.

SECTION 6 ACCIDENTAL RELEASE MEASURES

- a. **Procedures for dealing with release or spill:** Wear proper protective clothing (see Section 8). Stop further release or spread of contamination. Pump or scoop large amounts of liquid into an approved chemical container. Absorb remaining liquid or smaller spills with clay or sand. Sweep up and place in a chemical container. Wash area with a small amount of water containing a strong detergent, sweep up and add to the container. Flush the area with water. Do not allow wash or rinse water to contaminate water supplies. Seal the container and handle in an approved manner. On soils, skim off the upper contaminated layer and collect for disposal in an approved manner.

SECTION 7 HANDLING AND STORAGE

- a. **Handling practices:** Avoid contact with eyes or prolonged contact with skin. Avoid inhalation of vapours or spray mist. After work, remove protective equipment and clean thoroughly. Wash hands before eating, drinking, smoking, or using the toilet. Always wash thoroughly after handling. Clean up spilled material immediately, and clean equipment, and work area after use. Wash contaminated clothing separately from household laundry. Keep product, wash or rinse water, and contaminated materials out of water, away from crops, non-target plants, and away from access by people, animals or birds.
- b. **Appropriate storage practices/requirements:** KEEP OUT OF REACH OF CHILDREN and animals. Store in original container only, in a well ventilated, cool, dry, secure area set aside for herbicides. Keep separate from other products to prevent cross contamination. Rotate stock. Avoid excessive heat and keep away from open flames. Keep out of water supplies, ground water or open water.

National Fire Code classification: Not regulated

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

- a. **Applicable control measures, including engineering controls:** Ensure work areas have ventilation and procedures sufficient to maintain airborne levels below the exposure limit. Do not eat, drink, use tobacco or apply cosmetics in areas where there is a potential for exposure to this material. Provide separate shower and eating facilities. Warehouses, production areas, parking lots and waste holding facilities must have adequate containment to prevent environmental contamination.
- b. **Personal protective equipment for each exposure route:**
Eye contact: To protect eyes, wear safety glasses with side shields or goggles when direct exposure to product, splash or spray is likely.

- Skin contact:** For skin protection, wear full length work clothing, enclosed boots, and a hat. In addition, wear nitrile gloves and an apron if direct contact with the product or spray mix is likely.
- Inhalation:** To avoid breathing spray or mist or if ventilation is not adequate, wear an approved pesticides respirator or supplied-air respirator.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

- a. **Appearance:** Off-white liquid.
- b. **Formulation type:** Suspension Concentrate.
- c. **Odour:** Latex paint
- d. **pH:** 5 – 7 (1% solution @ 25°C)
- e. **Vapour pressure and reference temperature:** 2.50x10⁻⁵ mm Hg at 25°C (S-Metolachlor)
2.9 x10⁻⁷ mmHg at 25° C (Atrazine)
- f. **Vapour density:** Not available.
- g. **Boiling point:** Not available
- h. **Freezing point:** - 7°C.
- i. **Density:** 1.10 g/cc at 20° C
- j. **Evaporation Rate:** Not available.
- k. **Solubility in Water:** 33 mg/L @ 20°C (Atrazine)
0.48 g/L @ 25°C (S-Metholachlor)
- l. **Viscosity:** 633 cps

SECTION 10 STABILITY AND REACTIVITY

- a. **Chemical stability:** Stable under normal use and storage conditions.
- b. **Conditions to avoid:** None known.
- c. **Incompatibility with other materials:** Certain plastics, particularly PVC, and rubber dissolve or soften in contact with metolachlor. Avoid strong oxidising agents such as hydrogen peroxide, bromine, chromic acid and nitric acid. Metolachlor is hydrolysed by strong alkalis and strong mineral acids.
- d. **Hazardous decomposition products:** None known
- e. **Hazardous polymerisation:** Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on product:

- a. **LD50 (species and route)**
Acute Oral - rat, 4824 mg/kg
Acute Dermal - rabbit, >2000 mg/kg
LC50 (species)
Acute inhalation (4 hour) - rat, >2.93 mg/L
- b. **Irritation data**
Skin: Slightly irritating (rabbit)
Eye: Moderately irritating (rabbit)
- c. **Results of studies on:**
Sensitisation:
Tests with guinea pigs showed that PRIMEXTRA® II MAGNUM® was a skin sensitiser.
Carcinogenicity:
In studies with metolachlor a small number of female rats developed benign liver tumors at extremely high dose levels.
Atrazine produced mammary tumours in female Sprague-Dawley rats which were sex and strain specific. No carcinogenic potential was observed with atrazine in male Sprague-Dawley rats, F-344 rats or mice. Atrazine is on the IARC list, 2B.
Chronic studies with benoxacor in mice and rats showed that an elevated incidence of tumours were found in the non-glandular portion of the stomach, a histomorphologic region not present in man.
Reproductive toxicity/Teratogenicity:

Metolachlor did not affect reproductive capabilities in rats over two generations, and was not teratogenic in rats or rabbits. Alpha-metolachlor was not teratogenic in rats or rabbits. No reproductive hazard potential was found with atrazine. Benoxacor was not teratogenic in rats or rabbits. PRIMEXTRA® II MAGNUM® contains ethylene glycol which 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.

Mutagenicity:

In studies, alpha-metolachlor was not mutagenic. Atrazine was not mutagenic. Benoxacor technical was not mutagenic in a number of model systems.

Chronic exposure:

In two separate feeding studies with mice, metolachlor did not induce tumors or other long-term toxic effects. In two long-term feeding studies with metolachlor in rats no toxic effects were found except at very high doses where a small number of females developed benign liver tumors.

Atrazine produced cardiotoxicity in a long-term study with high doses in dogs. Benoxacor produced stomach, liver and kidney toxicity at high doses.

- d. **Other materials that show synergistic toxic effects together with the product:**
None known.

SECTION 12 ECOLOGICAL INFORMATION

Alpha-metolachlor is moderately toxic to bluegill, slightly toxic to trout, slightly toxic to daphnia magna, and moderately toxic to mysid shrimp. Alpha-metolachlor is practically non-toxic to birds (bobwhite quail and mallard ducks). Atrazine has a low toxicity to fish and wildlife.

SECTION 13 DISPOSAL CONSIDERATIONS

- a. **Waste disposal information:** Do not reuse jugs. Rinse thoroughly three times, adding the rinse water to the spray mixture. Dispose of containers in accordance with local regulations. Return reusable containers for refill. Consult provincial environment ministry for advice on waste disposal. Waste shipments must be securely packed, properly labelled, and documented.

SECTION 14 TRANSPORT INFORMATION

- a. **Shipping information such as shipping classification:**
TRANSPORTATION OF DANGEROUS GOODS CLASSIFICATION - ROAD/RAIL:
Proper shipping name: Not regulated (Clear Language)

SECTION 15 REGULATORY INFORMATION

- a. **WHMIS classification for product:** Exempt
b. This MSDS has been prepared in accordance with WHMIS requirements, but the data are presented under 16 headings.

SECTION 16 OTHER INFORMATION

The information and recommendations contained herein are based on information believed to be correct. However, no guarantee or warranty of any kind, expressed or implied is made with respect to the information provided herein.

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