

MATERIAL SAFETY DATA SHEET

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SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

- a. **Product Identifier:** MAXIM® POTATO SEED PROTECTANT.
Registration Number: 26647
Formulation Number: A9687E (Cdn. Formulation)
Chemical Class: Substituted Benzodioxalcarbonitrile Fungicide.
- 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:** Powder fungicide for coating seed potatoes.
- 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.** None other than in 2g.
- b. **Ingredients present which are on the WHIMS Ingredient Disclosure List at, or above, the minimum concentration specified on the List.** None.
- c. **Ingredients with unknown toxicological properties:** None.
- d. **Ingredients the supplier believes may be harmful:** None other than as in 2g.
- 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 Products Regulations.**
Fludioxonil - 0.5% (wt./wt.) CAS Number 131341-86-1
Chemical Name: 4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile.
- g. **Exposure limits for ingredients:** Particulates Not Otherwise Classified TLV-TWA (ACGIH) 10mg/m³; Talc TLV 2 mg/m³; Calcite TLV 10 mg/m³; Tremolite (non-asbestiform) TLV 8 mg/m³; Respirable nuisance dust TLV (OSHA) 5 mg/m³

SECTION 3 HAZARDS IDENTIFICATION

Potential Health Effects:

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

Acute: May be mildly irritating via ocular, dermal and inhalation routes. Product is of low toxicity via the ingestion route however, medical attention should be sought.

Chronic: Target organs for fludioxonil are the liver and kidneys. Target organs for the inert ingredients are the eyes, skin and respiratory system.

- vi) **Medical conditions known to be aggravated:**
Individuals with pre-existing respiratory disorders should be careful when 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.

FIRST AID INSTRUCTIONS:

EYES:	Flush eyes with copious amounts of clean water for 15 minutes, holding eye lids apart in order to rinse the entire surface of the eye and lids. Obtain medical attention if irritation occurs. Do not apply any medicating agents except on the advice of a physician.
INGESTION:	Call a doctor or poison control centre immediately. If victim is fully conscious, give 1 or 2 glasses of water to drink and induce vomiting under the direction of a physician. Never give anything by mouth to an unconscious person. Apply artificial respiration if necessary.
INHALATION:	Remove person to fresh air. Apply artificial respiration if necessary.
SKIN:	Remove contaminated clothing and wash before re-use. Thoroughly wash the affected skin with soap and water. Obtain medical attention if irritation occurs.

Notes to Physician: There is no specific antidote for this product if ingested. If a large amount has been ingested and emesis is inadequate, lavage stomach; however, it would be difficult to swallow significant amounts. Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

1. **Flash point and method:** Not Applicable
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 and carbon dioxide.
5. **Conditions under which flammability could occur:** Product is Non Flammable.
6. **Extinguishing media:** All are compatible. Avoid excessive water.
7. **Special fire fighting procedures:** Self-contained breathing apparatus and full protective clothing are to be worn. Treat as solid chemical type fire where discharges to the environment are to be controlled as quickly as possible. Use of buildings, area and equipment is to be prevented until properly decontaminated.
8. **Sensitivity to explosion by mechanical impact:** None.
9. **Sensitivity to explosion by static discharge:** Possible dust explosion hazard.

SECTION 6 ACCIDENTAL RELEASE MEASURES

- a. **Procedures for dealing with a release or spill:** Wear protective clothing (see Section 8) Sweep up carefully, keeping dust to a minimum 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 the container, label appropriately and handle in an approved manner. Flush the area with water to remove any residue. Do not allow wash water to contaminate water supplies. On soils, skim off the upper contaminated layer and collect for disposal. Follow local spill reporting regulations.

SECTION 7 HANDLING AND STORAGE

- a. **Handling practices:**
KEEP OUT OF REACH OF CHILDREN. Avoid dust. Work in a well ventilated area. Avoid contact with skin, eyes and clothing. Wear appropriate protective clothing. Do not eat, drink or smoke during handling. At end of work shift or breaks, remove protective clothing and wash hands before eating, smoking, drinking, using the toilet or cosmetics. Clean up spilled material, equipment, and work area immediately after use.
- b. **Appropriate storage practices/requirements:**
Store the product in its original container only in a well ventilated cool, dry, secure area set aside for fungicides. Keep out of the reach of unauthorised persons. Keep separate from other pesticide products to prevent cross contamination. Rotate stock. Clean up any spilled product and patch broken bags immediately.
- c. **National Fire Code Classification:** Not applicable.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

- a. **Applicable control measures, including engineering controls:** Ensure work areas have ventilation, containment and procedures sufficient to maintain airborne levels below the TLV. Warehouses, production areas, parking lots and waste holding facilities must have adequate containment to prevent environmental contamination. Provide separate shower and eating facilities. KEEP OUT OF REACH OF CHILDREN AND ANIMALS. Keep out of water supplies, ground water or open water. This product is practically non-toxic to birds but is toxic to vertebrates and fish.
- b. **Personal protective equipment for each exposure route:**
Eye contact: Wear safety glasses or goggles when direct exposure to product, dust and washing equipment.
Skin contact: Wear full-length coveralls and a hat. Wear nitrile gloves and an apron if direct contact with the product is likely.
Inhalation: Use a NIOSH approved dust mask or pesticide respirator if ventilation is not adequate. 3M 8710 or equivalent.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

- a. **Appearance of Formulation:** Light brownish coloured powder
- b. **Formulation Type:** Dry, powder, seed treatment
- c. **Odour:** Wood-like.
- d. **pH:** 5 – 7 (1% solution in water).
- e. **Vapour pressure and reference temperature:** Not applicable.
- f. **Vapour density:** Not available.
- g. **Melting point:** Not applicable.
- h. **Specific gravity or density:** 28 - 30 grams/100mls.
- i. **Evaporation rate:** Not applicable.
- j. **Water/oil partition coefficient:** Not available.
- k. **Odour threshold:** Not available.
- l. **Viscosity:** Not applicable
- m. **Solubility in water:** 1.8 mg/L @ 25°C (fludioxonil).

SECTION 10 STABILITY AND REACTIVITY

- a. **Chemical stability:** Stable under standard conditions.
- b. **Conditions to avoid:** Temperatures above 30°C
- c. **Incompatibility with other materials:** None known
- d. **Hazardous decomposition products:** Can decompose at high temperatures forming toxic gases.
- e. **Hazardous polymerization:** Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on product:	Information on active ingredient: (Fludioxonil)
a. LD50 (species and route) Acute Oral LD50 (Rat): - <u>practically non-toxic</u> exceeds 5,000 mg/Kg. Acute Dermal LD50: (Rat) - <u>slightly toxic</u> 2,000 mg/Kg.	Exceeds 5,000mg/kg. Exceeds 2,000mg/kg (rabbit)
b. Inhalation LC50 4 hour acute (rat) – practically non-toxic > 5.16 mg/L. (4 hours)	> 2.6 mg/L
c. Irritation data. Eye (Rabbit): Slightly irritating Skin (Rabbit): Non-irritating.	Slightly irritating Non-irritating.
d. Sensitisation data. Skin (Guinea pig): Non - sensitiser.	Sensitising.
e. Results of studies on the active ingredient - Fludioxonil. Carcinogenicity Potential: Marginal increase (7%) in liver tumours in (female rats:dosed at 3,000 ppm); This is within the historical control range of 1 - 10%. Reproductive Hazard Potential: Delayed development only at doses causing maternal toxicity. Mutagenic Potential: Genotoxic in one study: negative in five others.	
f. Other materials that show synergistic toxic effects together with the product: None known.	

SECTION 12 ECOLOGICAL INFORMATION

Summary of Effects of active ingredient (Fludioxonil):

Practically non-toxic to birds but highly toxic to aquatic invertebrates and fish.

SECTION 13 DISPOSAL CONSIDERATIONS.

Waste disposal information: Do not reuse bags. Dispose of empty bags in accordance with local, provincial and federal regulations. If in doubt, consult the Provincial Ministry of The Environment. Industrial/commercial waste can only be handled by licensed facilities. Waste shipments must be securely packed and properly labelled. Only licensed carriers can be used and proper documents must accompany the shipment.

SECTION 14 TRANSPORT INFORMATION

Transportation of Dangerous Goods Classification (Road): Not regulated.

SECTION 15 REGULATORY INFORMATION

WHMIS classification for product: Exempt.
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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