

# MATERIAL SAFETY DATA SHEET

Syngenta Crop Protection Canada Inc.  
140 Research Lane, Research Park  
Guelph, ON  
N1G 4Z3

Tel. Office (519) 836-5665

Tel. Emergency: 1-800-327-8633 (1-800-FAST-MED)

## SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

- a. **Product Identifier:** MAXIM® 480 FS Colourless fungicide  
Registration Number: 27001  
Chemical Classes: Phenylpyrrole fungicide  
Synonym: MAXIM® 4FS  
Formulation No: A9459B
- 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:** MAXIM® 480 FS colourless is a fungicide seed treatment for control of fungal diseases in corn. It is diluted with water prior to use.
- 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 Claudia Thum at (519) 837-5338

## 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 number 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:** None
- 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.  
Fludioxonil 40.3% w/w (CGA-173506) CAS number 131341-86-1  
*Chemical name: 4-(2,2-difluoro-1,3-benzdioxol-4-yl)-1H-pyrrole-3-carbonitrile*  
Surfactants 1-5% w/w  
Ethylene glycol 8-12% w/w  
Water 30-60% w/w
- g. **Exposure limits for ingredients:**  
Ethylene glycol: 1995-1996 ACGIH TLV / STEL 39.4 ppm, 100 mg/m<sup>3</sup> (Ceiling)

### 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

May cause eye, skin or respiratory irritation. Target organs for fludioxonil are liver and kidneys. In a long-term feeding study with fludioxonil in rats there was a very slight increased incidence of liver tumours.

MAXIM® 480 FS colourless fungicide contains ethylene glycol which has been shown to produce dose-related teratogenic effects in rats and mice. There is no information suggesting that ethylene glycol has caused birth defects in humans. 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.

vi) **medical conditions known to be aggravated:** None known

### 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:** Flush eyes well with plenty of water. Obtain medical attention.  
**SKIN:** Wash with soap and water. Obtain medical attention if irritation persists.  
**INHALATION:** Move person to fresh air. Apply artificial respiration if necessary.  
**INGESTION:** Repeatedly administer medicinal charcoal in a large volume of water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Call a physician or contact poison information centre.

**NOTE TO PHYSICIAN:** If ingested, induce emesis or lavage stomach. There is no specific antidote. Treat symptoms.

### SECTION 5 FIRE FIGHTING MEASURES

1. **Flash point and method:** 98.3° C - PMCC
2. **Upper and lower flammable (explosive) limits in air:** Not available
3. **Autoignition temperature:** Not available
4. **Hazardous combustion products:** None known
5. **Conditions under which flammability could occur:** None known
6. **Extinguishing media:** Dry chemical, foam, 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. Prevent use of contaminated buildings, area and equipment until decontaminated.
7. **Sensitivity to explosion by mechanical impact:** No

8. **Sensitivity to explosion by static discharge:** No

Not regulated under the National Fire Code.

#### SECTION 6 ACCIDENTAL RELEASE MEASURES

**Procedures for dealing with release or spill:**

Wear protective clothing as described in Section 8. For small spills, cover the spill with an absorbent material such as pet litter. Sweep up and place in a suitable chemical container. Wash the spill area with a small amount of water containing a strong detergent, absorb with absorbent material, sweep up and place in the chemical container. Seal and label the container, and dispose of it in an approved manner. Flush the spill area with water to remove any residue. Do not allow wash water to contaminate water supplies or any body of water.

#### SECTION 7 HANDLING AND STORAGE

- a. **Handling practices:** Keep MAXIM® 480 FS colourless fungicide and seed treated with it out of reach of children and animals. Avoid contact with eyes, skin or clothing and avoid breathing vapours or spray mist. Do not eat, drink, smoke, or apply cosmetics in areas where there is a possibility of exposure to this material. Always wash thoroughly after handling. Remove contaminated clothing, and wash it before wearing again. Prevent contamination of any body of water.
- b. **Appropriate storage practices/requirements:** Store MAXIM® 480 FS colourless fungicide in the original, closed containers in a well-ventilated, secure area set aside for pesticides. Do not store food, beverages, or tobacco in the same area. PREVENT PRODUCT FROM FREEZING.

#### SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

- a. **Applicable control measures, including engineering controls:** Avoid contact with skin, eyes and clothing, and avoid breathing vapour or spray mist. Ensure adequate ventilation to maintain air-borne concentrations below the TLV.
- b. **Personal protective equipment for each exposure route:**  
To avoid eye contact, wear safety glasses with side shields, or chemical goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.  
To avoid skin contact, wear chemical resistant (such as nitrile or butyl) gloves, coveralls, chemical resistant boots and a head covering.  
To avoid ingestion, do not eat, drink, smoke or apply cosmetics in areas where there is a potential for exposure to this material. Wash thoroughly with soap after handling.  
To avoid breathing vapour or mist, wear an approved pesticide respirator.

#### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

- a. **Appearance:** Off-white liquid
- b. **Formulation Type:** Flowable Solution for Seed Treatment.
- c. **Odour:** Sweet, like latex paint
- d. **pH:** 7 - 8 (1% solution in water @ 25° C)
- e. **Vapour pressure and reference temperature:**  $2.9 \times 10^{-9}$  mmHg @ 25°C (fludioxonil)
- f. **Vapour density:** Not available
- g. **Boiling point:** Not available
- h. **Freezing point:** - 12°C

- i. **Density:** 1.22 g/cm<sup>3</sup>
- j. **Evaporation Rate:** Not available
- k. **Water/oil partition coefficient:** Not available
- l. **Solubility in water:** 1.8 mg/L @ 25°C (fludioxonil)
- m. **Viscosity:** 450 - 750 LVT #2 @ 30 rpm

#### SECTION 10 STABILITY AND REACTIVITY

- a. **Chemical stability:** Stable under normal use and storage conditions.
- b. **Conditions to avoid:** Excessive heat
- c. **Incompatibility with other materials:** Strong oxidisers
- d. **Hazardous decomposition products:** Can decompose at high temperatures forming toxic gases.
- e. **Hazardous polymerisation:** Will not occur

#### SECTION 11 TOXICOLOGICAL INFORMATION

##### Information on product:

- a. **LD50 (species and route)**

Acute, oral (LD50, rat)	> 5050 mg/kg	<u>Practically Non-Toxic</u>
Acute dermal (LD50, rabbit)	> 2020 mg/kg	<u>Slightly Toxic</u>

  
**LC50 (species)**

Acute inhalation (LC50, rat)	>3.77 mg/L air -4 hour	<u>Slightly Toxic by Inhalation.</u>
------------------------------	------------------------	--------------------------------------
- b. **Irritation data**

Primary eye irritation, rabbit	<u>Minimally Irritating</u>
Primary skin irritation, rabbit	<u>Non-Irritating</u>
- c. **Results of studies on:**
  - Sensitisation:**  
Dermal sensitisation, guinea pig - Not a Sensitiser
  - Carcinogenicity:**  
Fludioxonil was not oncogenic in mice. Results of a long-term feeding study with fludioxonil in rats showed a marginally increased incidence of liver tumours in female rats at the maximum tolerated dose (3,000 ppm).
  - Reproductive toxicity:**  
None observed in studies with fludioxonil in rats.
  - Teratogenicity:**  
Fludioxonil was not teratogenic in studies with rats and rabbits. MAXIM® 480 FS 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:**  
Fludioxonil showed some genotoxicity in one mutagenicity study, but five studies using various test systems were negative for mutagenic potential.
  - Chronic exposure:**  
Changes in urine colour (predominantly blue) occurred following repeated dosing in all species tested.
- d. **Other materials that show synergistic toxic effects together with the product:** None known

## SECTION 12 ECOLOGICAL INFORMATION

Fludioxonil is moderately to highly toxic to aquatic organisms. It is practically non-toxic to birds. It is practically non-toxic to bees. On soil surfaces fludioxonil degrades rapidly. It has a low solubility in water. The possibility of adverse effects on the aquatic environment from the use of MAXIM® 480 FS colourless fungicide as a seed treatment is very low.

## SECTION 13 DISPOSAL CONSIDERATIONS

### **Waste disposal information:**

Do not re-use product containers. Dispose of used containers, unwanted product and residues in accordance with local environmental regulations.

## SECTION 14 TRANSPORT INFORMATION

- a. **Shipping information such as shipping classification:**  
TRANSPORTATION OF DANGEROUS GOODS CLASSIFICATION - ROAD/RAIL  
Not regulated.

## SECTION 15 REGULATORY INFORMATION

- a. **WHMIS classification for product:** Exempt  
b. **A statement that the MSDS has been prepared to meet WHMIS requirements, except for use of the 16 headings.**  
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.

® Registered trademark of a Syngenta group company