

## GRADUATE® MAX MP

Date: 3/27/2015  
Replaces: 7/24/2013

### 1. PRODUCT IDENTIFICATION

Product identifier on label: **GRADUATE® MAX MP**  
Product No.: A9859E  
Use: Fungicide  
Manufacturer: Syngenta Crop Protection, LLC  
Post Office Box 18300  
Greensboro NC 27419  
Manufacturer Phone: 1-800-334-9481

**Emergency Phone: 1-800-888-8372**

### 2. HAZARDS IDENTIFICATION

Classifications: Inhalation: Category 4  
Eye Damage/Irritation: Category 2B  
Signal Word (OSHA): Warning  
Hazard Statements: Causes eye irritation  
Harmful if inhaled

Hazard Symbols:



Precautionary Statements: Avoid breathing mist, vapors, spray.  
Wash hands and face thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Call a poison center, doctor or Syngenta if you feel unwell.  
If eye irritation persists: Get medical advice.

Other Hazard Statements: None

## GRADUATE® MAX MP

Date: 3/27/2015  
Replaces: 7/24/2013

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	Common Name	CAS Number	Concentration
Glycerin	Glycerin	56-81-5	Trade Secret
Other ingredients	Other ingredients	Trade Secret	<79.6%
4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile	Fludioxonil	131341-86-1	20.4%

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

**4. FIRST AID MEASURES**

Have the product container, label or Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

- Ingestion:** If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- Eye Contact:** If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Skin Contact:** If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Inhalation:** If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Most important symptoms/effects:

Eye irritation

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.

Treat symptomatically.

**5. FIRE FIGHTING MEASURES**

Suitable (and unsuitable) extinguishing media:

Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific Hazards:

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Special protective equipment and precautions for firefighters:

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.

**6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment, and emergency procedures:

Follow exposure controls/personal protection outlined in Section 8.

Methods and materials for containment and cleaning up:

**GRADUATE® MAX MP**

Date: 3/27/2015  
 Replaces: 7/24/2013

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

**7. HANDLING AND STORAGE**

Precautions for safe handling:

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Conditions for safe storage, including any incompatibilities:

Not Applicable

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.**

**FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.**

Occupational Exposure Limits:

Chemical Name	OSHA PEL	ACGIH TLV	Other	Source
Glycerin	15 mg/m <sup>3</sup> TWA (total); 5 mg/m <sup>3</sup> TWA (respirable)	Not Established	Not Established	Not Applicable
Other ingredients	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Fludioxonil	Not Established	Not Established	5 mg/m <sup>3</sup> TWA	Syngenta

Appropriate engineering controls:

Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures:

Ingestion:

Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact:

Where eye contact is likely, use chemical splash goggles.

Skin Contact:

Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.

Inhalation:

A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any N, R, P or HE filter.

## GRADUATE® MAX MP

Date: 3/27/2015  
Replaces: 7/24/2013

---

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Beige opaque liquid  
Odor: Faint aromatic  
Odor Threshold: Not Available  
pH: 7.5 - 9.0  
Melting point/freezing point: Not Available  
Initial boiling point and boiling range: Not Available  
Flash Point (Test Method): Not Available  
Flammable Limits (% in Air): Not Available  
Flammability: Not Applicable  
Vapor Pressure: Fludioxonil 2.9 x 10<sup>(-9)</sup> mmHg @ 77°F (25°C)  
Vapor Density: Not Available  
Relative Density: 1.09 g/ml ; 9.42 lbs/gal @ 68°F (20°C)  
Solubility (ies): Fludioxonil 1.8 mg/l @ 77°F (25°C)  
Partition coefficient: n-octanol/water: Not Available  
Autoignition Temperature: Not Available  
Decomposition Temperature: Not Available  
Viscosity: Not Available  
Other: None

---

### 10. STABILITY AND REACTIVITY

Reactivity: Not reactive.  
Chemical stability: Stable under normal use and storage conditions.  
Possibility of hazardous reactions: Will not occur.  
Conditions to Avoid: Not Available  
Incompatible materials: None known.  
Hazardous Decomposition Products: Not Available

---

### 11. TOXICOLOGICAL INFORMATION

#### Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation

Delayed, immediate and chronic effects of exposure: Eye irritation

#### Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

Ingestion: Oral (LD50 Female Rat) : > 5000 mg/kg body weight (based on a

## GRADUATE® MAX MP

Date: 3/27/2015  
Replaces: 7/24/2013

substantially similar formulation)

Dermal:	Dermal (LD50 Rat) :	> 5050 mg/kg body weight (based on a substantially similar formulation)
Inhalation:	Inhalation (LC50 Rat) :	> 2.09 mg/l air - 4 hours (based on a substantially similar formulation)
Eye Contact:	Mildly Irritating (Rabbit)	
Skin Contact:	Slightly Irritating (Rabbit)	
Skin Sensitization:	Not a Sensitizer (Guinea Pig) (based on a substantially similar formulation)	

### Reproductive/Developmental Effects

Fludioxonil: Delayed development at doses causing maternal toxicity.

### Chronic/Subchronic Toxicity Studies

Fludioxonil: Liver and kidney toxicity at high dose levels.

### Carcinogenicity

Fludioxonil: Marginal increase (7%) of liver tumors (female, rats: 3,000 ppm); Within historical control range (1 to 10%).

Chemical Name	NTP/IARC/OSHA Carcinogen
Glycerin	No
Other ingredients	No
4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile	No

### Other Toxicity Information

None

### Toxicity of Other Components

Glycerin

Repeated or prolonged exposure to concentrated solutions may result in dermatitis.

Other ingredients

Not Applicable

### Target Organs

#### Active Ingredients

Fludioxonil: Liver, kidney

#### Inert Ingredients

Glycerin: Skin

Other ingredients: Not Applicable

## 12. ECOLOGICAL INFORMATION

### Eco-Acute Toxicity

Fludioxonil:

Fish (Rainbow Trout) 96-hour LC50 0.47 ppm

Green Algae 5-day EC50 0.087 ppm

## GRADUATE® MAX MP

Date: 3/27/2015

Replaces: 7/24/2013

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 0.9 ppm

Bird (Bobwhite Quail) 14-day LD50 > 2000 mg/kg

### Environmental Fate

#### Fludioxonil:

The information presented here is for the active ingredient, fludioxonil.

Does not bioaccumulate. Persistent in soil. Stable in water. Low mobility in soil. Sinks in water (after 24 h).

## 13. DISPOSAL CONSIDERATIONS

### Disposal:

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

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

## 14. TRANSPORT INFORMATION

### DOT Classification

Ground Transport - NAFTA  
Not regulated

### Comments

Water Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Fludioxonil), Marine Pollutant

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

### Air Transport

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Fludioxonil)

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

## 15. REGULATORY INFORMATION

### Pesticide Registration:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Caution: Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

### EPA Registration Number(s):

100-1242

### EPCRA SARA Title III Classification:

## GRADUATE® MAX MP

Date: 3/27/2015  
 Replaces: 7/24/2013

Section 311/312 Hazard Classes: Acute Health Hazard  
 Section 313 Toxic Chemicals: None

CERCLA/SARA 304 Reportable Quantity (RQ):  
 None  
 RCRA Hazardous Waste Classification (40 CFR 261):  
 Not Applicable  
 TSCA Status:  
 Exempt from TSCA, subject to FIFRA

### 16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 2  
 Flammability: 1  
 Instability: 0

HMIS Hazard Ratings

Health: 1  
 Flammability: 1  
 Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme
*	Chronic

Syngenta Hazard Category: B,S

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 3/9/2011  
 Revision Date: 3/27/2015 Replaces: 7/24/2013  
 Section(s) Revised: 1-16

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.