

## MAXIM® MZ

Date: 7/31/2018  
 Replaces: 6/22/2015

### 1. PRODUCT IDENTIFICATION

Product identifier on label: **MAXIM® MZ**  
 Product No.: A13677B  
 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: Reproductive Toxicity: Category 2  
 Signal Word (OSHA): Warning  
 Hazard Statements: Suspected of damaging fertility or the unborn child

Hazard Symbols:



Precautionary Statements: Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Wear protective gloves, protective clothing, eye protection.  
 If exposed or concerned: Get medical advice/attention.  
 Store locked up.  
 Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: May form combustible dust concentrations in air.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
Talc	Talc	14807-96-6	Trade Secret
Other ingredients	Other ingredients	Trade Secret	93.80%
Zinc ion and manganese-ethylene-bis-dithio carbamate	Mancozeb	8018-01-7	5.70%
4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile	Fludioxonil	131341-86-1	0.50%

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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:

Not Applicable

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:

DO NOT expose mancozeb containing material to high temperatures or small quantities of water as spontaneous combustion and fire may result. Keep containers tightly closed when not in use. Do not allow containers to be exposed to rain or dampness. Check containers for warmth and remove warm containers to open areas for disposal. Mancozeb is combustible. Do not expose this material to flames or sparks. Minimize dusting as mancozeb dust can form explosive clouds. Please consult Syngenta if handling large quantities of this material.

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:

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. Sweep up material and place in a 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.

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**7. HANDLING AND STORAGE**

Precautions for safe handling:

Store in a well-ventilated and dry area. Do not wet or heat this product during storage as decomposition and the threat of fire can result. Check for hot containers and immediately remove any identified to open areas for cooling and/or disposal. When handling, avoid material transfers that could expose the product to frictional heating. Additional precautions may be found in Sections 2 and 5.

This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material. Electrical equipment should be compatible with the flammability characteristics of this material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents.

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:

Store locked up.

**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
Talc	20 mppcf (containing <1% quartz) TWA	2 mg/m <sup>3</sup> (respirable; <1% crystalline silica) TWA	2 mg/m <sup>3</sup> (respirable; <1% quartz) TWA	NIOSH
Other ingredients	Not Established	Not Established	Not Established	Not Applicable
Mancozeb	Not Established	Not Established	1 mg/m <sup>3</sup> TWA	Manufacturer
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 dust-proof chemical 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.

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**Inhalation:**

A particulate filter respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use NIOSH certified respirator with any N, R, P or HE filter. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Grayish tan solid

Odor: Odorless

Odor Threshold: Not Available

pH: 6.2 @ 77°F (25°C)

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Applicable

Flash Point (Test Method): Not Applicable

Flammable Limits (% in Air): Not Available

Flammability: Combustible powder

Vapor Pressure: Fludioxonil 2.9 x 10<sup>(-9)</sup> mmHg @ 77°F (25°C)

Mancozeb Negligible

Vapor Density: Not Available

Relative Density: 0.48 g/ml

Solubility (ies): Fludioxonil 1.8 mg/l @ 77°F (25°C)

Mancozeb Dispersible

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: None known.

Incompatible materials: None known.

Hazardous Decomposition Products: None known.

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### 11. TOXICOLOGICAL INFORMATION

#### Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Not Applicable

Delayed, immediate and chronic effects of exposure: Not Applicable

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

Ingestion:	Oral (LD50 Rat) :	> 5000 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 5000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 2.64 mg/l air - 4 hours
Eye Contact:	Mildly Irritating (Rabbit)	
Skin Contact:	Non-Irritating (Rabbit)	
Skin Sensitization:	Not a Sensitizer (Guinea Pig)	

#### Reproductive/Developmental Effects

Fludioxonil: Delayed development at doses causing maternal toxicity.

Mancozeb: Suspected of damaging the unborn child.

#### Chronic/Subchronic Toxicity Studies

Fludioxonil: Liver and kidney toxicity at high dose levels.

Mancozeb: Thyroid, liver and nervous system effects seen in laboratory animals at high, repeat doses.

Hind leg paralysis and retinopathy observed at 750 ppm (rat and dog studies).

#### Carcinogenicity

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

Mancozeb: Did not show carcinogenic or mutagenic effects in animal experiments.

Chemical Name	NTP/IARC/OSHA Carcinogen
Talc	IARC Group 3
Other ingredients	No
Zinc ion and manganese-ethylene-bis-dithio carbamate	No
4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile	No

#### Other Toxicity Information

None

#### Toxicity of Other Components

Other ingredients

Not Established

Talc

Limited potential for respiratory disease.

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Target OrgansActive Ingredients

Fludioxonil: Liver, kidney  
Mancozeb: Thyroid, liver, blood, eye, skin, respiratory system

Inert Ingredients

Other ingredients: Not Established  
Talc: Respiratory tract

**12. ECOLOGICAL INFORMATION**

## Eco-Acute Toxicity

## Mancozeb:

Fish (Rainbow Trout) 96-hour LC50 0.64 ppm  
Green Algae 5-day EC50 47 ppb  
Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 0.58 ppm

## Fludioxonil:

Fish (Rainbow Trout) 96-hour LC50 0.47 ppm  
Green Algae 5-day EC50 0.087 ppm  
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).

## Mancozeb:

The information presented here is for the active ingredient, mancozeb.  
Not persistent in soil or 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, Solid, N.O.S. (Fludioxonil), Marine Pollutant  
Hazard Class: Class 9  
Identification Number: UN 3077

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Packing Group: PG III

Air Transport  
 Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Fludioxonil)  
 Hazard Class: Class 9  
 Identification Number: UN 3077  
 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. Avoid contact with eyes, skin, or clothing.

EPA Registration Number(s):  
 100-1158

**EPCRA SARA Title III Classification:**

Section 311/312 Hazard Classes: Acute Health Hazard  
 Fire Hazard  
 Reactive Hazard

Section 313 Toxic Chemicals: Mancozeb 5.70% (CAS No. 8018-01-7)

**California Proposition 65:**

ATTENTION: This product can expose you to chemicals including mancozeb and ethylene thiourea which are known to the State of California to cause cancer and ethylene thiourea which are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**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: 1  
 Flammability: 2  
 Instability: 1

HMIS Hazard Ratings

Health: 1  
 Flammability: 2  
 Reactivity: 1

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

Syngenta Hazard Category: D

For non-emergency questions about this product call:

1-800-334-9481

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Original Issued Date: 11/13/2003  
Revision Date: 7/31/2018 Replaces: 6/22/2015  
Section(s) Revised: 15

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