



AFFIRM™ WDG

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SECTION 16: OTHER INFORMATION

Reason for issue:	New MSDS (New EPA Registration Number)
Prepared by:	Richard F. Fletcher
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The information in this MSDS is based on data available to us as of the revision data given herein, and believed to be correct. Judgments as to the suitability of information herein for the individual's own uses or purposes are necessarily the individual's own responsibility. Although reasonable care has been taken in the preparation of such information, Cleary Chemicals LLC extends no warranties, makes no representations, and assumes no responsibility as to the accuracy or suitability of such information for application to the individual's purposes or the consequences of its use.

AFFIRM™ WDG

For disease control on Turf, Ornamentals, Christmas Trees, **GROUP 19 FUNGICIDE** and various crops including: cucurbit vegetables, fruit vegetables, pome fruits, strawberries, non-bearing fruit vines, and non-bearing fruit and nut trees.

ACTIVE INGREDIENT:

Polyoxin D zinc salt	11.3%
OTHER INGREDIENTS	88.7%
TOTAL	100.0%

KEEP OUT OF REACH OF CHILDREN**CAUTION****SEE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS****FIRST AID**

• IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
• IF IN EYES:	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
• IF SWALLOWED:	<ul style="list-style-type: none"> Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
• IF INHALED:	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

HOTLINE NUMBERS

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE:

Call CHEMTREC at 1-800-424-9300 or the Poison Control Center - 1-800-222-1222

For Product Use Information Call: 1-800-524-1662

EPA Reg. No. 68173-3-1001

EPA Est. No. 70815-GA-1

Distributed by:
 CLEARY CHEMICALS LLC
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PRECAUTIONARY STATEMENTS**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

CAUTION. Harmful if absorbed through skin, swallowed or inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

All mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Socks
- Shoes
- Chemical-Resistant gloves

User Safety Requirements

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables are available, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is moderately toxic to aquatic invertebrates and fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate. Do not allow runoff into lakes, streams, ponds or public waterways. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

Granules exposed on soil surface may be hazardous to fish and aquatic invertebrates. Collect granules spilled during loading.

Observe the most restrictive of labeling limitations and precautions of all products used in mixtures.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval.

The requirements in this box only apply to uses of this product that are covered by the Worker Protection

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IMO :		
	IMO Label:	NA
	IMO Placard:	NA
	IMDG Code:	NA
European Road/Rail:		
	Class:	NA
	Item NO.:	NA

SECTION 15: REGULATORY INFORMATION**U.S Federal Regulations**

FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act): All pesticides are governed under FIFRA. Therefore, the regulations presented below are pertinent only when handled outside of the normal use and applications of pesticides. This includes waste streams resulting from manufacturing/formulation facilities, spills or misuse of products, and storage of large quantities of products containing hazardous or extremely hazardous substances.

CERCLA (Comprehensive Response Compensation, and Liability Act): NA

EPCRA (Emergency Planning and Community Right-to-Know Act): None

OSHA (Occupational Safety and Health Administration): NA

RCRA (Resource Conservation and Recovery Act): None

SARA Title III (SUPERFUND Amendments and Reauthorization Act):

Section 302 (EHS) TPQ:

NONE

Section 304 (EHS) RQ:

NONE

Section 311/312 CATEGORIES

1. Immediate (Acute) Health Effects; **YES**

2. Delayed (Chronic) Health Effect; **NO**

3. Fire Hazard; **NO**

4. Sudden Release of Pressure Hazard; **NDA**

5. Reactivity Hazard; **NDA**

TSCA (Toxic Substance Control Act): This product is exempt from TSCA Regulation under FIFRA Section 3 (2)(B)(ii) when used as a pesticide.

State Regulations: Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities.

International Regulations:

EEC Classification: NA

Risk Phrases: NA

Safety Phrases: NA

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Oral Toxicity: LD50 (male rat/mice) = 4,916 mg/kg
 LD50 (female rat) = 4,404 mg/kg
 LD50 (female mice) = 3,946 mg/kg

Inhalation Toxicity: LC50 (6 hrs) (male rats) = 2.44 mg/L air
 LC50 (6 hrs) (female rats) = 2.17 mg/L air

Subchronic Toxicity: No treatment related effects were observed following chronic exposure in lab animals. Calculated Oral NOAEL female rat = 1,333 mg/kg/day, male rat = 119 mg/kg/day (TGAI)

Chronic/Carcinogenicity (maximum inactive dose): No evidence of carcinogenicity or other treatment related effects following chronic exposure in lab animals.

Calculated Oral NOAEL female mice = 2,059 mg/kg/day, male mice = 2,470 mg/kg/day (TGAI)

Teratology/Developmental Toxicity: None observed (rabbits, mice)

Mutagenicity: Non-Mutagenic

SECTION 12: ECOLOGICAL INFORMATION

Environmental Fate and Distribution: Product decomposes

Aquatic Organism Toxicity (based on technical material): Rainbow trout LC50 (96-hrs) = 5.1 ppm
 Daphnia EC50 = 1.4 ppm

Avian Toxicity (based on technical material): Mallard duck-oral LD50 >2150 ppm
 Mallard duck-dietary LC50 >5000 ppm

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: End users must dispose of any unused product as per the label recommendations and in accordance with all applicable laws and regulations. Check governmental regulations and local authorities for approved disposal of this material. Preferred method of disposal is by incineration.

RCRA Hazard Class: NA

SECTION 14: TRANSPORT INFORMATION

D.O.T. Shipping Name:	Pesticide, non-regulated
Technical Shipping Name:	NA
Packing Group:	NA
D.O.T. Hazard Class:	NA
U.N./N.A. Number:	NA
Product RQ (lbs):	NA
D.O.T. Label:	NA
D.O.T. Placard:	NA
Marine Pollutant:	NA

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Standard.

Do not enter or allow entry into treated areas during the restricted entry interval (REI) of 4 hours unless wearing appropriate PPE.

PPE required for early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls, socks, shoes, chemical resistant gloves.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in the box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.
 Keep children and pets out of treated area until sprays have dried.

GENERAL INFORMATION

AFFIRM™ WDG is not for use on turf being grown for commercial seed production.

AFFIRM™ WDG is not for homeowner use to treat food crops.

AFFIRM™ WDG is for use in controlling or suppressing certain diseases on cucurbit vegetables, fruiting vegetables, ginseng, grapes, pome fruits, strawberries, and seedlings or transplants of cucurbit vegetables and fruiting vegetables in a Greenhouse, Lath or Shade house, Ornamentals (Greenhouse, Lath or Shade house, Field, Nursery, Container, and Residential and Commercial Landscapes), and Turf (including golf courses, sod, residential lawns, parks, athletic fields, and commercial and institutional grounds) composed of cool and warm season grasses such as Bluegrass, Bentgrass, Fescue, Ryegrass, Bermudagrass, St. Augustinegrass, Zoysiagrass, or their mixtures.

Apply AFFIRM™ WDG as a preventative or curative treatment in conjunction with good management practices.

RESISTANCE MANAGEMENT RECOMMENDATIONS

AFFIRM™ WDG contains a Group 19 fungicide. Fungal isolates with acquired resistance to Group 19 may eventually dominate the fungal population if Group 19 fungicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by AFFIRM™ WDG or other Group 19 Fungicides.

To delay fungicide resistance, consider:

- Avoiding the consecutive use of AFFIRM™ WDG or other target site of action Group 19 fungicides that have a similar target site of action, on the same pathogens.
- Using tank-mixtures or premixes with fungicides from different target site of action Groups as long as the involved products are all registered for the same use and are both effective at the tank mix or prepack rate on the pathogen(s) of concern.
- Basing fungicide use on a comprehensive IPM program.
- Monitoring treated fungal populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors, and/or manufacturer for fungicide resistance management and/or IPM recommendations for specific crops and resistant pathogens.

MIXING AND APPLICATION

When diseases not specified on this label are present or expected, it is appropriate to mix AFFIRM™ WDG with appropriately labeled fungicides. When tank mixing AFFIRM™ WDG with other products, observe all precautions and limitations on each separate product label. It is always advisable to conduct a tank mix



compatibility test when you plan to mix this product with other products. To determine the physical compatibility of this product with other products, use a jar test. Using a quart jar, add the proportionate amounts of the products to approximately one quart of water with agitation. Add dry formulations first, then flowables, then emulsifiable concentrates last. After thorough mixing, allow this mixture to stand for 5 minutes. If the combination remains mixed or can be readily remixed, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank. To assess the potential for phytotoxicity, test tank mixtures on a small number of plants prior to more widespread application.

Do not apply this product through any type of irrigation system.

Mixing instructions for AFFIRM™ WDG:

- Fill spray tank with water to ½ of the intended final volume.
 - Start spray tank agitation.
 - Add the appropriate amount of product to the tank according to the rates in the following tables. Follow the directions above for mixing other products in the spray tank.
 - Agitate to ensure thorough mixing while adding the remaining required water.
 - DO NOT allow the spray mixture to stand without agitation.
- Mix only the amount of spray solution needed to treat the desired area.

For optimum control of labeled diseases, apply AFFIRM™ WDG with sufficient water to provide a thorough coverage.

CUCURBIT VEGETABLES

[Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Gourd, edible (includes hyotan, cucuzza, hechima, Chinese okra), Momordica spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon), Pumpkin, Squash, summer (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), Squash, winter (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash), Watermelon]

Disease Control	Rate	Application Notes
Powdery Mildew (<i>Sphaerotheca</i> sp.)	6.2 oz/acre (0.7 oz ai/acre)	<ul style="list-style-type: none"> • Mix in appropriate spray volume appropriate for sufficient coverage. • For all diseases, spray product preventatively and continue as needed on a 10-14 day interval. • 0 day Preharvest Interval.
Gummy Stem Blight (<i>Didymella bryoniae</i>)		
Gray Mold (<i>Botrytis</i> sp.)		
Corynespora leaf spot (<i>Corynespora cassicola</i>)		
Scab (<i>Cladosporium</i> sp.)		
Early Blight (<i>Alternaria</i> sp.)		

Notes:

- Use in alternation with fungicides that have different modes of action.
- Do not apply more than 5 applications of AFFIRM™ WDG (3.5 oz ai/acre) per season.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Physical State:	Light brown water dispersible granule
Odor:	Earthy, clay like odor
pH:	5.5-7.5
Boiling Point:	NA
Melting Point:	> 240°C
Freezing Point:	NA
Vapor Pressure:	NA
Vapor Density:	NA
Bulk Density:	38-42 lbs/cuft
Evaporation Rate:	NA
Solubility (active ingredient):	
Water, acetone, DMSO:	Up to 0.1 g/L
0.1N hydrochloric acid:	43.5 g/L
0.1N sodium hydroxide:	4.0 g/L
Percent Solids by Weight:	100
Percent Volatile:	0
Volatile Organic Compounds:	
with water:	NDA
without water:	NDA
Molecular Weight:	NDA
Viscosity:	NA

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal use and storage conditions
Hazardous Polymerization:	Will not occur
Flash Point:	NDA
Flammable Point:	NDA
Auto Ignition:	NDA
Incompatibility With Other Materials:	NDA
Hazardous Decomposition Products:	NDA

SECTION 11: TOXICOLOGICAL INFORMATION

Acute:

- Eye Irritation:** Positive – Moderate irritation (rabbits)
- Skin Irritation:** Negative (rabbits)
- Skin Sensitization:** Negative (guinea pigs)
- Dermal Toxicity:** LD50 (rats) >2,000 mg/kg

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SECTION 5: FIRE FIGHTING MEASURES

Flammable Limits in Air (% by volume):	
Upper:	NDA
Lower:	NDA
Flash Point:	NDA
Method Used:	NDA
Auto-ignition Temperature:	NDA
LEL/UEL:	NDA
NFPA Hazard Classification:	
Health:	1
Flammability:	0
Reactivity:	0
Other:	None
Extinguishing Media:	Water spray or dry chemical
Special Fire Fighting Procedures:	NDA
Unusual Fire/Explosion Hazards:	NDA
Hazardous Combustion Products:	NDA

SECTION 6: ACCIDENTAL RELEASE MEASURES

EMERGENCY PHONE NUMBERS

Poison Control Center: 1-800-222-1222

Spill Calls (CHEMTREC): 1-800-424-9300

Sweep up spilled material and place in covered, dry container. Wash spill response materials thoroughly before reuse. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

SECTION 7: HANDLING AND STORAGE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Read entire label. Use strictly in accordance with label precautionary statements and directions. READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL. Handle and open container with care. Avoid inhaling this material. Avoid eye and skin contact with this material. Wash contaminated clothes thoroughly before reuse. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Keep container closed or equipped with a local air exhauster. Handle the container carefully. Do not drop or drag the container. Avoid impacts to the container. Store container in dry conditions without direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Wear suitable eye protection.

Respiratory/Ventilation Requirements: Dust-proof mask.

Skin Protection: Wear appropriate protective clothing and gloves to prevent skin contact.

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FRUITING VEGETABLES (Except Cucurbits)

[Eggplant, Groundcherry, Pepino, Pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Tomato]

Disease Control	Rate	Application Notes
Powdery Mildew (<i>Leveillula taurica</i> , <i>Oidiopsis sipula</i>)	6.2 oz/acre (0.7 oz ai/acre)	<ul style="list-style-type: none"> Mix in appropriate spray volume appropriate for sufficient coverage. For all diseases, spray product preventatively and continue as needed on a 10-14 day interval. 0 day Preharvest Interval.
Botrytis Rot (<i>Botrytis sp.</i>) Early Blight (<i>Alternaria solani</i>)		

Disease Suppression

Anthraco-nose

(*Colletotricum coccodes*)

Notes:

- Use in alternation with fungicides that have different modes of action.
- Do not apply more than 5 applications of AFFIRM™ WDG (3.5 oz ai/acre) per season.

GINSENG (Except California)

Foliar Disease Control	Rate	Application Notes
Alternaria blight (<i>Alternaria panax</i>)	6.2 oz/acre (0.7 oz ai/acre)	<ul style="list-style-type: none"> Apply as a foliar spray every 7–10 days. Apply prior to disease development and when conditions are conducive for disease.¹
Botrytis blight (<i>Botrytis cinerea</i>)		

Root and Crown Disease Control	Rate	Application Notes
Cylindrocarpon root rot (<i>Cylindrocarpon destructans</i>)	6.2 oz/acre (0.7 oz ai/acre)	<ul style="list-style-type: none"> Apply as a drench every 14 days.

Rhizoctonia root and crown rot
(*Rhizoctonia solani*)

- Apply as a drench every 14–28 days.

Notes:

- Apply within 2 weeks following plant emergence and continue throughout the season.
- ¹Consult your local extension agent or local recommendations for information relating to proper timing for control of these diseases.
- Use in alternation with fungicides that have different modes of action.
- Do not apply more than 3 applications of AFFIRM™ WDG (2.1 oz ai/acre) per season.



GRAPES

Disease Control	Rate	Application Notes
Botrytis Bunch Rot (<i>Botrytis cinerea</i>) Powdery Mildew (<i>Uncinula necator</i>)	6.2 oz/acre (0.7 oz ai/acre)	<ul style="list-style-type: none"> Mix in appropriate spray volume appropriate for sufficient coverage. For Botrytis Bunch Rot control, spray product at veraison and 7 days prior to harvest. For Powdery Mildew control, begin sprays preventatively and continue as needed on a 14 day interval. 0 day Preharvest Interval. Do not apply by air.
Disease Suppression Powdery Mildew (<i>Uncinula necator</i>)		<ul style="list-style-type: none"> For Powdery Mildew suppression, begin sprays preventatively and continue as needed on a 14 day interval.

Notes:

- Use in alternation with fungicides that have different modes of action
- Do not apply more than 3 applications of AFFIRM™ WDG (2.1 oz ai/acre) per season.
- Not for use in California

POME FRUITS

[Apple, Crabapple, Loquat, Mayhaw, Pear, Oriental Pear, Quince]

Disease Control	Rate	Application Notes
Powdery Mildew (Apple: <i>Podosphaera leucotricha</i>) (Pear: <i>Phyllactinia mali</i>) Alternaria Leaf Spot (<i>Alternaria mali</i>) Blotch (<i>Diplocarpon mali</i>)	6.2 oz/acre (0.7 oz ai/acre)	<ul style="list-style-type: none"> Mix in appropriate spray volume appropriate for sufficient coverage. Start sprays for scab control at green tip and continue as needed on a 7-10 day interval. For Powdery Mildew control, begin preventatively and repeat as necessary on a 10-14 day interval. Use of an alternation program with a sterol inhibiting fungicide is recommended. 0 day Preharvest Interval.
Disease Suppression Scab (<i>Venturia sp.</i>)		

Notes:

- Use in alternation with fungicides that have different modes of action.
- Do not apply more than 6 applications of AFFIRM™ WDG (4.2 oz ai/acre) per season.

AFFIRM™ WDG

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION:

- CAUSES MODERATE EYE IRRITATION
- AVOID CONTACT WITH EYES/SKIN/CLOTHING
- AVOID BREATHING SPRAY MIST
- KEEP OUT OF REACH OF CHILDREN

Acute Health Hazards

Eye: Causes moderate eye irritation. The degree of the irritation/injury will depend upon the amount and duration of exposure.

Skin: Harmful if absorbed through the skin. Avoid contact with skin and clothing. Wash thoroughly with soap and water after handling. Prolonged exposure may cause skin sensitization.

Ingestion: Harmful if swallowed.

Inhalation: Harmful if inhaled.

Chronic Health Hazards (Including Cancer): Chronic exposures to low level amounts of this material are not carcinogenic.

Teratology (Birth Defects) Information: No evidence of carcinogenicity or other treatment related effects was observed in animal testing.

Mutagenicity: No evidence of mutagenicity was observed during animal testing.

Reproductive and Developmental: No evidence of reproductive or developmental toxicity was observed during animal testing.

SECTION 4: FIRST AID MEASURES

Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Inhalation: Move person to fresh air. If person is not breathing, call 9-1-1 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Ingestion: Call poison Control Center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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MATERIAL SAFETY DATA SHEET

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Please read the entire document. This Material Safety Data Sheet contains important environmental, health and toxicology information for your employees, and anyone who will use, transport, store, dispose of or handle this product. Please make sure this information is given to them. It also contains information to help you meet community right-to-know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this MSDS must be given to the buyer or the information contained herein must be incorporated in your MSDS.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: AFFIRM™ WDG
EPA REGISTRATION NUMBER(S): 68173-3-1001
SYNONYM(S): Polyoxin D Zinc Salt, TM-43803

COMPANY

Cleary Chemicals LLC
 178 Ridge Road, Suite A
 Dayton, NJ 08810

EMERGENCY TELEPHONE NUMBERS

HEALTH EMERGENCY: 1-800-222-1222
 SPILL EMERGENCY: 1-800-424-9300
 POISON CONTROL CENTER: CHEMTREC

SECTION 2: CONFIRMATION/INFORMATION ON INGREDIENTS

Active Ingredient(s)/ Hazardous Inert Ingredient(s)	CAS #	Exposure Limits*	% Weight	% Volume
Polyoxin D Zinc Salt	146659-78-1	TWA ^a OSHA PEL ^b : None ACGIH TLV ^c : None NIOSH REL ^d : None	11.3	NA

Only the identities of the active ingredient(s) and any hazardous inert ingredients are listed. Specific information on all of this product's ingredients can be obtained by the treating medical professional or spill emergency responder for the management of exposures, spills, or safety assessments.

*Source: *Guide to Occupational Exposure Values 2000*, published by ACGIH

^a**TWA**: Time-weighted average exposure concentration for a conventional 8-hour (TLV, PEL) or up to a 10-hour (REL) workday and a 40-hour workweek.

^b**OSHA PEL**: Occupational Safety and Health Administration Permissible Exposure Limits.

^c**ACGIH TLV**: American Conference of Governmental Industrial Hygienists, Inc., Threshold Limit Values.

^d**NIOSH REL**: National Institute for Occupational Safety and Health Recommended Exposure Limits.

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STRAWBERRIES

Disease Control	Rate	Application Notes
Anthracnose Leaf and Fruit Rot (<i>Colletotrichum sp.</i>)	6.2 oz/acre (0.7 oz ai/acre)	<ul style="list-style-type: none"> • Mix in appropriate spray volume appropriate for sufficient coverage. • Begin applications preventatively and continue as needed on a 7–10 day interval. • 0 day Preharvest Interval. • Do not apply by air. • Use of adjuvant may enhance coverage.
Botrytis Fruit Rot (<i>Botrytis cinerea</i>)		
Powdery Mildew (<i>Sphaerotheca macularis</i>)		

Notes:

- Use in alternation with fungicides that have different modes of action.
- Do not apply more than 3 applications of AFFIRM™ WDG (2.1 oz ai/acre) per season.

ORNAMENTALS*

Foliar Disease Control	Rate	Application Notes
Anthracnose (<i>Colletotrichum</i>)	0.25 – 0.5 lb/100 gal/acre (0.03 – 0.06 lb ai/100 gal/acre)	<ul style="list-style-type: none"> • Apply as a full coverage foliar spray every 7 – 10 days with sufficient water for plant type and maturity (50-300 gallons/acre).
*Botrytis blight (<i>Botrytis cinerea</i>)		
Curvularia Downy Mildew (<i>Pernospora sp.</i> , <i>Plasmopara sp.</i>)		<ul style="list-style-type: none"> • Apply prior to disease development and when conditions are conducive to disease development. Consult your local extension agent or local recommendations for information relating to proper timing for control of these diseases.**
Powdery Mildew (<i>Oidium sp.</i> , <i>Erysiphe sp.</i> , <i>Sphaerotheca sp.</i>)		
Rhizoctonia aerial blight (<i>Rhizoctonia solani</i>)		
*Alternaria blight (<i>Alternaria panax</i>)	0.5 lb/100gal/acre (0.06 lb ai/100 gal/acre)	
Petiole Rot (<i>Myrothecium</i>)		
Apple scab (<i>Venturia inequalis</i>)		

*Alternaria blight
(*Alternaria panax*)
 Petiole Rot
(*Myrothecium*)
 Apple scab
(*Venturia inequalis*)

Root and Crown Disease Control	Rate	Application Notes
***Rhizoctonia root and crown rot (<i>Rhizoctonia solani</i>)	0.25 – 0.5 lb/100gal/acre (0.03 – 0.06 lb ai/100 gal/acre)	<ul style="list-style-type: none"> • Apply as a soil drench every 14 – 28 days.
Black Root Rot (<i>Thielaviopsis</i>)	0.5 lb/100gal/acre (0.06 lb ai/100 gal/acre)	

Notes:

- * Control
- **Consult your local extension agent or local recommendations for information relating to proper timing for control of these diseases.
- *** Includes Christmas tree (Nursery and plantation), non-bearing fruit vines, non-bearing fruit trees, and non-bearing nut trees
- Use in alternation with fungicides that have different modes of action.

TURF GRASSES

Disease	Rate	Application Notes
Control		
Brown Patch (<i>Rhizoctonia solani</i>)	2.4 lbs /acre (0.27 lb ai/acre)	<ul style="list-style-type: none"> • Repeat treatment on a 7-14 day schedule where environmental conditions are conducive to development of diseases. Consult your local extension agent or local recommendations for information relating to proper timing for control of these diseases. • When symptoms are present, best control will be achieved by using a shorter interval. • For best results apply after mowing. • Apply to obtain thorough plant coverage in a minimum of 66 gallons water per acre. • Make two-three applications on a 7-day interval schedule. • Use a penetrating wetting agent.
Large Patch (<i>Rhizoctonia solani</i>)		
Aids in Control (except California)		
Cool Season Brown Patch or Yellow Patch (<i>Rhizoctonia cerealis</i>)		
Foliar and Basal Anthracnose (<i>Colletotrichum cereale</i>)		
Gray Snow Mold (<i>Typhula ishikariensis</i> and <i>Typhula incarnate</i>)		
Leaf Spot/Melting Out (<i>Dreschlera poae</i>)		
Pink Snow Mold (<i>Microdochium nivale</i>)		
Red Thread (<i>Laetisaria fuciformis</i>)		
Rhizoctonia Damping Off (<i>Rhizoctonia solani</i>)		
Rhizoctonia Leaf and Sheath Blight (<i>Rhizoctonia zeae</i>)		
Waitea Patch (Brown Ring Patch) (<i>Waitea circinata</i>)		
Zoysia Patch (<i>Rhizoctonia solani</i>)		
Aids in Suppression (except California)		
Gray Leaf Spot (<i>Pycularia grisea</i>)		
Suppression and Short Term Control:		
Fairy Ring (including <i>Marasmius spp.</i> , <i>Lepiota, spp.</i> and <i>Agarius spp.</i>)	1 oz/1000 sq ft in minimum of 1 gallon of water (0.27 lb ai/acre in 66 gallons of water)	

- Immediately following application, water in the treatment with sufficient irrigation (1/8-1/4") to wet the active root zone.

Notes:

- With the exception for treatment of Fairy Ring, irrigation or rainfall soon after treatment with AFFIRM™ WDG will decrease disease control. For best control, do not irrigate for 12 hours after treatment.
- Use in alternation with fungicides that have different modes of action.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Store in dry place away from food or feed.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Offer for recycling, if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed, by State and local authorities, by burning. If burned, stay out of smoke.

**FOR 24-HOUR CHEMICAL EMERGENCY (Spill, Leak, Fire or Accident) ASSISTANCE:
CALL CHEMTREC 1-800-424-9300**

Warranty and Disclaimer Statement

1. The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Cleary Chemicals LLC (Cleary), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.
2. Cleary warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.
3. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Cleary, and is subject to the inherent risks described above. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, CLEARY DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, CLEARY, MANUFACTURER, AND SELLER DISCLAIM AND SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE, HANDLING, APPLICATION, STORAGE, OR DISPOSAL OF THIS PRODUCT OR FOR DAMAGES IN THE NATURE OF PENALTIES, AND THE USER AND BUYER WAIVE ANY RIGHT THAT THEY MAY HAVE TO SUCH DAMAGES. NO AGENT, REPRESENTATIVE OR EMPLOYEE OF CLEARY IS AUTHORIZED TO MAKE ANY WARRANTY, GUARANTEE OR REPRESENTATION BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE WARRANTIES CONTAINED HEREIN.**
4. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE TOTAL LIABILITY OF CLEARY, MANUFACTURER, AND SELLER, SHALL BE LIMITED TO THE PURCHASE PRICE PAID, OR AT CLEARY'S ELECTION, THE REPLACEMENT OF THE PRODUCT.**

AFFIRM® is a trademark of Cleary Chemical, LLC.

AFFIRM™ WDG

For disease control on Turf, Ornamentals, Christmas Trees, **GROUP 19 FUNGICIDE** and various crops including: cucurbit vegetables, fruit vegetables, pome fruits, strawberries, non-bearing fruit vines, and non-bearing fruit and nut trees.

ACTIVE INGREDIENT:

Polyoxin D zinc salt 11.3%
 OTHER INGREDIENTS 88.7%
 TOTAL 100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS

FIRST AID

• IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
• IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
• IF SWALLOWED:	<ul style="list-style-type: none"> • Call poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
• IF INHALED:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.

HOTLINE NUMBERS

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE:

Call CHEMTREC at 1-800-424-9300 or the Poison Control Center - 1-800-222-1222

For Product Use Information Call: 1-800-524-1662

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