



NUFARM AGRICULTURE INC.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

DISTRIBUTED BY:

Nufarm Agriculture Inc.
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Calgary, AB. T1Y 7J7
Phone Number: (800)868-5444

PRODUCT:**Affirm WDG Fungicide****PCP NUMBER:**

32920

DATE PREPARED:

December 1, 2017

PREPARER:

Nufarm Agriculture Inc.; Regulatory Affairs & Research Department

CHEMICAL FAMILY/USE:

Fungicide

FORMULA: $C_{17}H_{23}N_5O_{14}Zn$ **CHEMICAL SYNONYMS:**

Zinc 5-(2-amino-5-*O*-carbamoyl-2-deoxy-L-xylonamido)-1-(5-carboxy-1,2,3,4-tetrahydro-2,4-dioxypyrimidin-1-yl)-1,5-dideoxy- β -D-allofuranuronate (IUPAC); Zinc 5-[[2-amino-5-*O*-(aminocarbonyl)-2-deoxy-L-xylonoyl]amino]-1-(5-carboxy-3,4-dihydro-2,4-dioxo-1(*2H*)-pyrimidinyl)-1,5-dideoxy- β -D-allofuranuronate (CAS)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Values are not product specifications.

Hazardous Ingredients	% w/w	CAS NO.
Polyoxin D zinc salt	10 – 30%	146659-78-1

* Percentage of total amount.

Other ingredients are non-hazardous and/or proprietary.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: KEEP OUT OF REACH OF CHILDREN. Avoid contact with skin and clothing. 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.

SYMPTOMS OF OVER EXPOSURE: Mild skin redness.

PRIMARY ROUTES OF EXPOSURE: Eye and skin contact, ingestion and inhalation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

4. FIRST AID MEASURES

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

If in 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 centre or doctor for treatment advice.

If swallowed: Call a poison control centre 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 centre or doctor. Do not give anything by mouth to an unconscious person.

If inhaled: 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 centre or doctor for further treatment advice.



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Take container, label, or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION: Treat symptomatically.

5. FIRE FIGHTING MEASURES

FLASH POINT: NA

FLAMMABLE LIMITS: NA

EXTINGUISHING MEDIA: water spray, dry chemicals.

HAZARDOUS DECOMPOSITION PRODUCTS: not known

FIRE-FIGHTING INSTRUCTIONS: Keep up-wind to avoid fumes. Keep run-off water out of sewers and water sources. Dike for water control. Protective equipment for fire-fighters

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: Stop leak if possible without risk. Shovel into dry containers. Cover and move the containers. Flush the area with water. Do not discharge onto the ground or into water courses. For waste disposal see section 13.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING: Do not use in confined spaces without adequate ventilation and/or respirator. Provide good ventilation. Avoid handling which leads to dust formation. Avoid inhalation of dust and contact with skin and eyes.

PRECAUTIONS TO BE TAKEN IN STORAGE: Store in tightly closed original container in a dry, cool and well-ventilated place. Keep away from food, drink and animal feeding stuffs.

STORAGE TEMPERATURE (MIN/MAX): Normal ambient temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

The following recommendations for exposure controls/personal protection are intended for the manufacture, formulation, packaging and use of this product. For commercial applications and/or on-farm applications consult the product label.

HAND PROTECTION: Use protective gloves.

EYE PROTECTION: Wear protective goggles or face shield.

SKIN PROTECTION: Wear appropriate clothing to prevent any possibility of skin contact.

RESPIRATORY PROTECTION: Dust mask/respirator.

ADDITIONAL PROTECTIVE MEASURES: Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke. Wash hands at the end of each work shift and before eating, smoking and using the toilet.

ENGINEERING CONTROLS: Provide adequate general and local exhaust ventilation.

9. PHYSICAL AND CHEMICAL PROPERTIES

NOTE: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

APPEARANCE: Powder, dust

COLOUR:..... Dark brown

ODOR: Earth



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EXPLOSIVE PROPERTIES: Not explosive

10. STABILITY AND REACTIVITY

REACTIVITY: No specific reactivity hazards associated with this product.
STABILITY: Stable under normal temperature conditions and recommended use.
HAZARDOUS POLYMERIZATION: Will not polymerise.
HAZARDOUS DECOMPOSITION PRODUCTS: Not known.
INCOMPATIBILITY (MATERIALS TO AVOID): No incompatible groups noted.
CONDITIONS TO AVOID: Not known.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (Rat): 4916 mg/kg (toxic dose 1); 4404 mg/kg (toxic dose 2)
 Acute Dermal LD₅₀ (Rat): > 2000 mg/kg
 Eye Irritation (Rabbit): Moderately irritating
 Dermal Irritation (Rabbit): Not irritating.
 Dermal Sensitization (Guinea Pig): ... Not sensitising.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: The product contains a substance which is harmful to aquatic organisms and which may cause long term adverse effects in the aquatic environment. To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to: heavy rainfall, moderate to steep slope, bare soil, poorly draining soil (e.g., soils that are compacted or fine textured such as clay).

Acute Toxicity:
 LC50 96 hours (Cyprinus carpio (Common carp) 90 ppm
 EC50 48 hours (Daphnia magna) 6.59 mg/L
 EC50 (Pseudokirchneriella subcapitata) 1.31 mg/L

Degradability: There are no data on the degradability of this product.
 Bioaccumulative Potential: No data available on bioaccumulation.
 Mobility: no data
 Other Adverse Effects: This product does not contain any PBT or vPvB substances.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Disposal should be made in accordance with federal, provincial and local regulations. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean up of spills.

Do not reuse container for any purpose. If applicable, return container in accordance with return program. If a recyclable container, dispose of at a container collection site. Contact local distributor, dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site, triple or pressure rinse the empty container adding



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rinsings to spray tank, and make container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

14. TRANSPORT INFORMATION

CANADIAN TDG DESCRIPTION (Road & Rail): Not regulated. Not dangerous for transport by road/rail in Canada. Contact manufacturer for updates to transport information.

DOT CLASSIFICATION: Not regulated.

INTERNATIONAL TRANSPORTATION: IMO (vessel): Not regulated. **IATA (air):** Not regulated.

15. REGULATORY INFORMATION

WHMIS HAZARD CLASS: Exempt

WHMIS TRADE SECRET: Exempt. (This product is regulated under the Pest Control Products Act - WHMIS exempt.)

16. OTHER INFORMATION

EMERGENCY TELEPHONE NUMBERS:

For spills or transportation accidents, Chemtrec, 1-800-424-9300.

For health or environmental emergencies, ProPharma, 1-877-325-1840.

For product and use information, Nufarm Agriculture Inc., 1-800-868-5444.

REVISIONS:

NAp - new

ADDITIONAL INFORMATION:

Abbreviations used throughout the MSDS are:

NA	= Not available
NAp	= Not applicable
N/E	= None Established.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Company references utilized in preparation of the MSDS.

END OF MSDS