

| NFPA HAZARD RATING |          |   |              | U.S. TRANSPORT SUMMARY |  |
|--------------------|----------|---|--------------|------------------------|--|
| 0                  | Least    |   |              |                        |  |
| 1                  | Slight   | 1 | Health       |                        |  |
| 2                  | Moderate | 0 | Flammability |                        |  |
| 3                  | High     | 0 | Reactivity   |                        |  |
| 4                  | Severe   |   |              |                        |  |

Not regulated by the U.S. DOT as a hazardous material for ground shipment. See Section 14 for additional information.

| SECTION 1: IDENTIFICATION  |   |
|--|---|
| Product Name:  | Advanced Coating® Zn  |
| EPA Registration #:  | Exempt  |
| Product ID/Unity #:  | 10112803, 10122400  |
| Common Name:   | Liquid zinc oxide   |
| Chemical Description:  | Liquid zinc oxide   |
| Recommended Uses:  | Fertilizer/Seed Treatment product – See product label for full directions for use.  |
| Restrictions for Use:  | See product label for any potential restrictions on use.  |
| Manufactured For:<br>WINFIELD SOLUTIONS, LLC<br>P. O. Box 64589<br>St. Paul, MN 55164-0589           | <b>MEDICAL EMERGENCY TELEPHONE NUMBER: 1-877-424-7452 (24hrs)</b><br><br><b>Non-Emergency Business Inquiries: 1-855-494-6343</b><br>Mon – Fri 8am – 5pm (Central Standard Time) |
| FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL:<br>CHEMTREC 1-800-424-9300 (24 hours) |   |

| SECTION 2: HAZARDS IDENTIFICATION  |   |
|--|---|
| <b>EMERGENCY OVERVIEW:</b> White liquid with no odor. Inhalation of large concentration of vapor or mist may cause respiratory tract irritation. Causes mild eye irritation. |   |
| <b>POTENTIAL HEALTH EFFECTS:</b>   |   |
| Eyes: May irritate or cause tearing of the eyes.   |   |
| Skin: May cause mild skin irritation, including redness and itching.   |   |
| Inhalation: Inhalation of large concentration of vapor or mist may cause respiratory tract irritation and discomfort.  |   |
| Ingestion: May irritate or cause burns to the digestive tract.   |   |
| Preexisting Conditions: Preexisting respiratory conditions may be aggravated by exposures to vapor or mist.  |   |
| Chronic Health Effects: None known   |   |
| Carcinogenicity  | NTP: Not listed                      IARC: Not listed                      OSHA: Not listed |
| <b>OSHA HCS 2012 CLASSIFICATION:</b> Eye Irritation Category 2B; Specific Target Organ Toxicant – Single Exposure Category 3   |   |
| <b>SIGNAL WORD:</b> WARNING  |   |
| <b>HAZARD STATEMENTS:</b><br>Causes eye irritation.<br>May cause respiratory irritation.   |        |
| Percent of product with unknown toxicity: 45.0 - 50.0%   |   |
| <b>PRECAUTIONARY STATEMENTS:</b>   |   |
| Prevention: Wash hands thoroughly after handling. Avoid breathing mist, spray or fumes. Use only outdoors in a well-ventilated area.   |   |

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**Response:** If in eyes: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison control center or doctor for treatment advice if you feel unwell.

**Storage:** Store in a well-ventilated. Keep container tightly closed. Store locked up.

**Disposal:** Dispose of contents/container in accordance with Federal, state and local regulations.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Ingredient | % (wt)       | CAS Reg. # |
|------------|--------------|------------|
| Zinc oxide | 50.0 – 55.0% | 1314-13-2  |
|            |              |            |

\*Ingredients not specifically listed are non-hazardous and/or are considered to be confidential business information under 29 CFR 1910.1200(i).

See Section 8 for exposure limits.

## SECTION 4: FIRST AID MEASURES

**Inhalation:** Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention or call a poison control center for treatment advice if irritation or difficulty breathing occurs.

**Ingestion:** Seek medical attention or call a poison control center immediately for treatment advice. Do not induce vomiting unless instructed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**Eyes:** Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Seek medical attention if irritation persists.

**Skin:** Remove contaminated clothing and wash before re-using. Flush skin with water and then wash with soap and water. Seek medical attention if irritation persists.

## SECTION 5: FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:** Water fog, foam, dry chemical, carbon dioxide (CO<sub>2</sub>), water spray

**Special Fire Fighting Procedures:** Wear NIOSH/MSHA approved self-contained breathing apparatus and full bunker gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Avoid breathing vapors; keep upwind.

**Hazardous Combustion Products:** Thermal decomposition may include toxic and hazardous oxides of zinc.

**Unusual Fire and Explosion Hazards:** Closed containers may explode from vapor expansion in high heat.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

**Environmental Precautions:** Do not allow spilled product to enter sewers or waterways.

**Methods for Containment:** Contain spilled product by diking area with sand or earth.

**Methods for Clean-up:** Cover contained spill with an inert absorbent material such as sand, vermiculite or other appropriate material. Vacuum, scoop or sweep up material and place in a container for disposal. Do not place spilled material back in original container.

**Other Information:** None known.

## SECTION 7: HANDLING AND STORAGE

**Handling:** Ensure adequate ventilation during handling and use. Immediately clean up spills that occur during handling. Keep containers closed when not in use. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. Agitate well prior to use.

**Storage:** Store in a secured area away from children, feed and food products. Store in original container only and in a cool, well-ventilated dry place above the minimum storage temperature.

**Minimum Storage Temperature:** 40°F

**Other Precautions:** Consult Federal, state and local laws and regulations pertaining to storage.

| SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION   |          |           |           |
|--|----------|-----------|-----------|
| Exposure Guidelines  |          |           |           |
| Component:   | OSHA PEL | ACGIH TLV | NIOSH REL |
| Nuisance particulate (liquefied mist)  |          | 10 mg/m3  |           |
| <b>Respiratory Protection:</b> For most well-ventilated conditions, no respiratory protection should be needed. If airborne concentrations exceed permissible levels or if a pre-existing respiratory condition exists, use a NIOSH approved air-purifying respirator with cartridges/canisters approved for general particulates. |          |           |           |
| <b>Engineering Controls:</b> <b>Local Exhaust:</b> Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred.  |          |           |           |
| <b>Protective Gloves:</b> Wear chemically protective gloves.   |          |           |           |
| <b>Eye Protection:</b> Wear chemical goggles or safety glasses and full face shield. Contact lenses are not protective eye devices. An emergency eyewash or water supply should be readily accessible to the work area.  |          |           |           |
| <b>Other Protective Clothing or Equipment:</b> Wear long-sleeve shirt, long pants and shoes plus socks to prevent skin contact.  |          |           |           |
| <b>Work/Hygienic Practices:</b> Never eat, drink, nor use tobacco in work areas. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.  |          |           |           |

| SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES |                            |  |                            |
|---|----------------------------|--|----------------------------|
| Physical State:                             | Liquid                     | Specific Gravity (H <sub>2</sub> O=1): | 2.05 (typical)             |
| Vapor Pressure (mm Hg):                     | Not determined             | Density (lbs/gallon):                  | 17.11 lbs/gallon (typical) |
| Vapor Density (Air=1):                      | Not determined             | Freezing Point:                        | 40°F (4°C)                 |
| Solubility in Water (wt %):                 | 50%                        | Boiling Point/Range:                   | 223°F (106°C)              |
| Viscosity:                                  | Not determined             | pH:                                    | 8.5 – 10.0                 |
| Appearance and odor:                        | White liquid with no odor. | Flash Point:                           | Not combustible            |

| SECTION 10: STABILITY AND REACTIVITY  |  |
|---|--|
| <b>Reactivity:</b> Contact with strong oxidizers may result in a fire.  |  |
| <b>Chemical Stability:</b> Product is stable at ambient temperature and pressure, under normal storage and handling conditions. |  |
| <b>Possibility of Hazardous Reactions:</b> Will not occur   |  |
| <b>Conditions to Avoid:</b> Avoid excessive heat.   |  |
| <b>Incompatible Materials:</b> Strong bases, acids and oxidizers.   |  |
| <b>Hazardous Decomposition Products:</b> Thermal decomposition may include toxic and hazardous oxides of zinc.                  |  |

| SECTION 11: TOXICOLOGICAL INFORMATION  |   |
|--|---|
| <b>ACUTE TOXICITY</b>                  |   |
| <b>Eye Effects:</b>                    | Contact may cause moderate but temporary irritation. Additional effects may include tearing and/or blurred vision.  |
| <b>Skin Effects:</b>                   | Estimated LD50 = 2,004 mg/kg. Contact may cause mild irritation. Prolonged or repeated exposure may lead to reddening of skin, rash, dermatitis, or other skin reactions. |
| <b>Acute Inhalation Effects:</b>       | LC50 is not determined.   |
| <b>Acute Oral Effects:</b>             | LD50 is not determined.   |
| <b>Specific Target Organ Toxicity:</b> | Single, short-term exposure to vapors or mist can cause respiratory tract irritation.   |
| <b>CHRONIC TOXICITY</b>                |   |
| <b>Chronic Effects:</b>                | None known  |
| <b>Carcinogenicity:</b>                | None known  |
| <b>Mutagenicity:</b>                   | None known  |
| <b>Teratogenicity:</b>                 | None known  |
| <b>Reproductive Toxicity:</b>          | None known  |

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**POTENTIAL HEALTH EFFECTS:**

**Eyes:** May irritate or cause tearing of the eyes.  
**Skin:** May cause mild skin irritation, including redness and itching.  
**Inhalation:** Inhalation of large concentration of vapor or mist may cause respiratory tract irritation and discomfort.  
**Ingestion:** May irritate or cause burns to the digestive tract.

**SECTION 12: ECOLOGICAL INFORMATION**

**ENVIRONMENTAL SUMMARY:** Not determined

**ECOTOXICITY DATA:**

**Fish Acute and Prolonged Toxicity:** Not determined  
**Aquatic Invertebrate Acute Toxicity:** Not determined  
**Aquatic Plant Toxicity:** Not determined  
**Bird Acute and Prolonged Toxicity:** Not determined  
**Honeybee Toxicity:** Not determined

**ENVIRONMENTAL EFFECTS:**

**Soil Absorption/Mobility:** Not determined  
**Persistence and degradability:** Not determined  
**Bioaccumulative Potential:** Not determined  
**Other adverse effects:** Not determined

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste:** Dispose of in accordance with applicable Federal, state and local laws and regulations.  
**Container:** Triple rinse and recycle the container or dispose of in accordance with Federal, state and local laws and regulations.  
**RCRA Characteristics:** It is the responsibility of the individual disposing of this product to determine the RCRA classification and hazard status of the waste.

**SECTION 14: TRANSPORT INFORMATION**

**DOT:** This product is not regulated by the U.S. Department of Transportation as a hazardous material for ground (Ground) shipment.  
**IMDG:** This product is not regulated by the IMDG as a hazardous material for shipment by sea.  
**IATA:** This product is not regulated by the IATA as a hazardous material for shipment by air.  
**TDG:** Not determined (Canada)

**SECTION 15: REGULATORY INFORMATION**

**TSCA Inventory:** All components are either listed or exempt from listing on the TSCA inventory.  
**SARA Title III Information:**  
**Section 302 - Extremely hazardous substances:** None listed  
**Section 311/312 - Hazard Categories:** Immediate (Acute)  
**Section 313 -** The following chemicals are subject to the reporting requirements of Section 313 of Title III, Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372:  
 Zinc compounds 50.0 - 55.0%  
**CERCLA -** This product contains the following chemicals which have a reportable quantity (RQ) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):  
 None listed  
**California Proposition 65:** This product does not contain any chemicals known to the state of California to cause cancer and/or reproductive harm.

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## Advanced Coating<sup>®</sup> Zn

**U.S. State Worker and Community Right-To-Know (RTK) Information (CT, IL, MA, MN, NH, NJ, PA, RI):**

| Chemical Name | CAS #     | State(s)       |
|---------------|-----------|----------------|
| Zinc oxide    | 1314-13-2 | IL, NJ, MA, PA |

**Canadian Domestic Substances List:** All components are either on the Non-domestic substances list or the domestic substances list.

**WHMIS Classification:** This product is not approved for use in Canada. WHMIS classification is not determined.

### SECTION 16: OTHER

**Disclaimer:** The information presented herein is based on available data from reliable sources and is correct to the best of WinField Solutions' knowledge. WinField Solutions, LLC makes no warranty, express nor implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

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**Sections Revised:** All