

## MATERIAL SAFETY DATA SHEET

Prepared Date: MAY-10, 2012  
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 Contact:  
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### SECTION 1: PRODUCT AND COMPANY INFORMATION

<b>PRODUCT NAME:</b>	TAVANO 5%SC Fungicide (Polyoxin D Zinc Salt, 5% Suspension Concentration product)
<b>JAPAN MAFF REGISTRATION NUMBER:</b>	N/A
<b>EPA REGISTRATION NUMBER:</b>	68173-4-70051
<b>SYNONYM(S):</b>	N/A
<b>COMPANY:</b>	Certis U.S.A. L.L.C. 9145 Guilford Road, Suite 175, Columbia, MD 21046 USA
<b>EMERGENCY TELEPHONE NUMBER:</b>	1-800-255-3924

### SECTION 2: HAZARDS IDENTIFICATION

<b>EMERGENCY OVERVIEW</b>	CAUSES MILD DERMAL SENSITIZATION. AVOID CONTACT WITH SKIN/EYES/CLOTHING. KEEP OUT OF REACH OF CHILDREN.
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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<b>Active Ingredient:</b>	5%
<b>Common chemical name:</b>	Polyoxin D zinc salt
<b>IUPAC name:</b>	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-allofuranuronic acid zinc salt
<b>CAS Name:</b>	b-D-Allofuranuronic acid,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-,zinc salt (1:1) (9CI)
<b>CAS Registration Number:</b>	146659-78-1
<b>Molecular formula:</b>	C <sub>17</sub> H <sub>23</sub> N <sub>5</sub> O <sub>14</sub> Zn (M.W. 586.76)
<b>Inert ingredients:</b>	95%

### SECTION 4: FIRST AID MEASURES

<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>● Take off contaminated clothing.</li> <li>● Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>● Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eye:</b>	<ul style="list-style-type: none"> <li>● Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>● Remove contact lenses, if present, after the first minutes, the continue rinsing eye.</li> <li>● Call a poison control center or doctor for treatment advice.</li> </ul>

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**SECTION 4: FIRST AID MEASURES (Continued)**


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<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>● Call poison control center or doctor immediately for treatment advice.</li> <li>● Have person sip a glass of water if able to swallow.</li> <li>● Do not induce vomiting unless told so by the poison control center or doctor.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>● Do not give anything by mouth to an unconscious person.</li> <li>● Move person to fresh air.</li> <li>● If person is not breathing, call 911 or an ambulance, then give artificial respiration.</li> <li>● Call a poison control center or doctor for further advice.</li> </ul>

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**SECTION 5: FIRE FIGHTING MEASURES**


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**Flammable Limits in Air (5 by volume):**

<b>Upper:</b>	No data available
<b>Lower:</b>	No data available
<b>Flash Point:</b>	No data available
<b>Method Used:</b>	No data available
<b>Auto ignition Temperature:</b>	No data available
<b>LEL/UEL</b>	No data available
<b>Extinguishing Media:</b>	Water spray or dry chemicals
<b>Special Fire Fighting Procedures:</b>	No data available
<b>Hazardous Combustion Products:</b>	No data available

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**SECTION 6: ACCIDENTIAL RELEASE MEASURES**


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<b>Measures for human:</b>	Inside a building, ventilate well until clean-up is completed. During clean-up, workers should wear protective clothes to prevent skin contact.
<b>Measures for environment:</b>	Avoid release of product into rivers or lakes.
<b>Method for removal:</b>	Collect the spilled product in containers and close tightly. Wash the affected area with plenty of water.

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**SECTION 7: HANDLING AND STORAGE**


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<b>Handling:</b>	Handle and open container with care.
<b>Protective Gloves:</b>	Rubber gloves recommended.
<b>Eye Protection:</b>	Safety glasses recommended.
<b>Personal Hygiene:</b>	Wash thoroughly after handling.
<b>Pesticide storage:</b>	Store in dry place away from food or feed. Keep away from children.

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**


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<b>Eye Protection:</b>	Eye protection recommended.
<b>Respiration/Ventilation Requirements:</b>	None.
<b>Skin Protection:</b>	Wear appropriate protective clothing and gloves to prevent skin contact.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**


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<b>Appearance:</b>	Dark Brown Liquid
<b>Physical state:</b>	Viscous liquid suspension
<b>Odor:</b>	Similar to Vegetable oil
<b>pH:</b>	7.01 at 25°C (1% aqueous mixture)
<b>Boiling Point:</b>	No data available
<b>Vapor Pressure:</b>	No data available
<b>Specific Gravity:</b>	1.05 (22°C)
<b>Oxidation/Reduction:</b>	No data available
<b>Explosibility:</b>	No explosive properties

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**SECTION 10: STABILITY AND REACTIVITY**


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<b>Stability:</b>	Stable under normal use and storage conditions
<b>Hazardous Polymerization:</b>	Will not occur.
<b>Flashpoint:</b>	No data available
<b>Flammable Point:</b>	No data available
<b>Auto ignition:</b>	No data available
<b>Incompatibility with Other Materials:</b>	No data available
<b>Hazardous Decomposition Products:</b>	No data available

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**SECTION 11: TOXICOLOGICAL INFORMATION**


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<b>Acute Oral LD<sub>50</sub>:</b>	>5,000 mg/kg (rat) (EPA Toxicity Category IV; practically non-toxic)
<b>Acute Dermal LD<sub>50</sub>:</b>	>5,050 mg/ kg (rat) (EPA Toxicity Category IV; practically non-toxic)
<b>Inhalation LC<sub>50</sub>:</b>	>2.20 mg/L (rat) (EPA Toxicity Category IV; practically non-toxic)
<b>Eye Irritation:</b>	Non-irritating (EPA Toxicity Category IV)
<b>Dermal Irritation:</b>	No irritation observed 48 hours after contact. (EPA Toxicity Category IV)
<b>Dermal Sensitization:</b>	A mild sensitizer in guinea pig.

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**SECTION 12: ECOLOGICAL INFORMATION**


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**Data for the active ingredient:**


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<b>Fish:</b>	Acute LC <sub>50</sub> (96-hr) >100 mg/L (practically non-toxic)
<b><i>Daphnia magna</i> (water flea):</b>	Acute EC <sub>50</sub> (48-hr) = 4.08 mg/L (moderately toxic)
<b>Algae:</b>	Growth Inhibition EbC <sub>50</sub> (0-72-hr) = 6.47 mg/L (moderately toxic) ErC <sub>50</sub> (0-72-hr) = 7.01 mg/L
<b>Honeybee:</b>	Acute oral LD <sub>50</sub> (96-hr) = 28.774 µg/bee (practically nontoxic)
<b>Groundwater:</b>	No contamination is anticipated. Active ingredient readily hydrolyzes.
<b>Bioaccumulation:</b>	No data available on bioaccumulation

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**SECTION 13: DISPOSAL CONSIDERATIONS**


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<b>Disposal Methods:</b>	Dispose of waste and residues in accordance with local authority requirements. Check governmental regulation and local authorities for approved disposal of this material. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.
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**SECTION 14: TRANSPORT INFORMATION**

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**UN-Number:** Not regulated

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**SECTION15: REGULATORY INFORMATION**

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Agricultural Chemicals Regulation Law (Japan), Japanese Chemicals Substances Control Act  
United States: Federal Insecticide Fungicide Rodenticide Act (FIFRA), Federal Food Drug and Cosmetic Act (FFDCA). Food tolerance exemptions: 40 CFR § 180.1285.

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**SECTION16: OTHER INFORMATION**

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None