

## SAFETY DATA SHEET

EMERGENCY CALL: 1-800-424-9300 (CHEMTREC)

### 1. IDENTIFICATION

**PRODUCT NAME:** Orbus ESQ  
**DESCRIPTION:** Liquid fungicide  
**EPA REG. NO.:** 91234-246  
**COMPANY IDENTIFICATION:** Atticus, LLC  
 940 NW Cary Parkway, Suite 200  
 Cary, NC 27513

### 2. HAZARD IDENTIFICATION

#### DANGER

Causes serious eye damage (H318)  
 Harmful if inhaled (H332)  
 May be harmful in contact with skin (H313)  
 Very toxic to aquatic life with long lasting effects (H400+H410)



#### HAZARD CLASSIFICATION

Health Hazards	Category	Physical Hazards	Category
Serious eye damage / eye irritation	1	None	-
Acute toxicity, inhalation	4	<b>Environmental Hazards</b>	<b>Category</b>
Acute toxicity, dermal	5		
		Hazardous to the aquatic environment, short-term	1
		Hazardous to the aquatic environment, long-term	1

#### HAZARDS NOT REQUIRING CLASSIFICATION

None

#### PRECAUTIONARY STATEMENTS

Avoid breathing mist/spray. Use only outdoors or in a well-ventilated area. Wash hand and exposed skin thoroughly after handling. Wear eye protection/face protection. (P261+P264+P271+P280)

**IF IN EYES:** Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help. (P305+P354+P338+P317)

**IF INHALED:** Remove person to fresh air and keep comfortable for breathing. Get medical help. (P304+P340+P317)

**IF ON SKIN:** Get medical help. (P302+P317)

Avoid release to the environment not in accordance with the product label. Collect spillage. (P273+P391)

Dispose of contents / container in accordance with local regulations. Refer to the product label for specific disposal instructions. (P501)

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Common Name	Chemical Name	CAS #	Composition
Fluazinam	2-Pyridinamine, 3-chloro-N-[3-chloro-2,6-dinitro-4-(trifluoromethyl)phenyl]-5-(trifluoromethyl)-	79622-59-6	21.80%
Difenoconazole	1H-1,2,4-Triazole, 1-[[2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-methyl-1,3-dioxolan-2-yl]methyl]-	119446-68-3	9.50%

**NOTE:** Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

### 4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical assistance, call SafetyCall: 1-844-685-9173. For chemical emergency: spill, leak, fire, exposure or accident, call CHEMTREC: 1-800-424-9300.

**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 center or doctor for treatment advice.

**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 center or doctor for treatment advice.

**IF ON SKIN OR CLOTHING:** 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.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

## 5. FIREFIGHTING MEASURES

**Flash Point:** >230.0°F (>110.0°C)

**Fire and Explosion Hazards:** None known.

**Extinguishing Medium:** Dry Chemical, foam, or CO<sub>2</sub> extinguishing media. If water is used to fight fire, dike and collect runoff.

**Fire Fighting Equipment:** Firefighters should wear full protective clothing and self-contained breathing apparatus.

**Fire Fighting Instructions:** Evacuate area of all unnecessary personnel and fight fire from a safe distance upwind. Contain contaminated water / firefighting water; do not allow to enter drains or waterways. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.

**Hazardous Combustion Products:** During a fire, irritating and possible toxic gases may be generated by thermal decomposition or combustion.

**NFPA Ratings:** Health – 3 / Flammability – 1 / Reactivity - 0

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Isolate area and keep unnecessary and unprotected personnel from entering. Wear suitable personal protective clothing and equipment as described in Section 8 of this document.

**Environmental Precautions:** Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

**Spill Cleanup:** Dike spill using suitable absorbent or impervious materials such as sand or clay. Collect and contain contaminated absorbent and place in an appropriate container for disposal. Pump any free liquid into an appropriate closed container and decontaminate tools and equipment following cleanup. Collect washings for disposal.

## 7. HANDLING AND STORAGE

**Handling:** Avoid contact with skin, eyes or clothing. Harmful if inhaled. Avoid breathing vapor or spray mist. Harmful if swallowed. 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.

**Storage:** Store in a tightly closed container in a cool, dry place. Store in original container and out of reach of children, preferably in a locked storage area.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

**Protective Clothing:** Applicators, and other handlers must wear: Protective eyewear, long-sleeved shirt and long pants, socks, shoes, water-proof or chemical-resistant gloves including barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils, or Viton ≥ 14 mils.

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** opaque light yellow liquid

**Odor:** moderately sweet and sour

**Melting/freezing point:** not available

**Boiling point/Boiling range:** not available

**Flammability:** not available

**Flammability limits (upper/lower):** not available

**Flash point:** >230.0°F (>110.0°C)

**Auto-ignition temperature:** not available

**Decomposition temp.:** not available

**pH:** 4.5-5.5

**Pycnometer viscosity:** 1.16 g/cm<sup>3</sup> (9.68 lbs./gal. at 25°C)

**Solubility:** not available

**Partition coefficient:** not available

**Vapor pressure:** not available

**Density:** 9.0-10.0 lb./gal

**Particle characteristics:** not available

## 10. STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:** None known.

**CHEMICAL STABILITY:** Stable under all normal use and storage conditions.

**INCOMPATIBILITY WITH OTHER MATERIALS:** None known.

**HAZARDOUS DECOMPOSITION PRODUCTS:** None known.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**The following data is from a substantially similar product:**

**ORAL TOXICITY (rat LD<sub>50</sub>):** >5,000 mg/kg (EPA Category IV)

**DERMAL TOXICITY (rat LD<sub>50</sub>):** >2,000 mg/kg (EPA Category III)

**INHALATION TOXICITY (rat LC<sub>50</sub>):** >1750 mg/m<sup>3</sup> (EPA Category III)

**EYE IRRITATION:** Corrosive to eyes (Rabbits)

**SKIN IRRITATION:** Mild or slight irritation (Rabbits)

**SKIN SENSITIZATION:** Not a contact sensitizer (Guinea Pigs)

**CARCINOGENICITY:**

**EPA:** Suggestive evidence of carcinogenicity, but not sufficient to assess human carcinogenic potential (fluazinam, difenoconazole)

**ACGIH:** Not Listed

**NTP:** Not listed

**IARC:** Not listed

**OSHA:** Not Listed

*FLUAZINAM*

**MUTAGENIC TOXICITY:** No evidence of mutagenic effects during in vivo and in vitro assays.

**REPRODUCTIVE TOXICITY:** No evidence of reproductive or developmental toxicity in animal studies.

*DIFENOCONAZOLE*

**DEVELOPMENTAL TOXICITY:** A developmental study with difenoconazole in rats showed no significant fetal effects, while a developmental study in rabbits showed a slight increase in abortions (2/15 pregnant does).

**REPRODUCTIVE TOXICITY:** A guideline reproductive study in rats showed decreased pup weights and maternal body weight at the same doses but did not show any reproductive effects.

**CHRONIC/SUBCHRONIC TOXICITY:** Kidney and liver effects at high doses (>5000 ppm; rats); Eye effects in dogs at high dose levels.

**TARGET ORGANS:** Brain, liver, kidney, gastrointestinal tract

## 12. ECOLOGICAL INFORMATION

This pesticide is toxic to fish, shrimp, mammals, and aquatic invertebrates.

**The following information is for the active ingredient, Difenoconazole:**

### AQUATIC TOXICITY

Fish (Rainbow Trout) (96-hour LC<sub>50</sub>): 1.1 mg/l  
Invertebrate (Water Flea) *Daphnia Magna* (48-hour EC<sub>50</sub>): 0.77 mg/l  
Green Algae (72-hour EC<sub>50</sub>): 0.032 mg/l

**The following information is for the active ingredient, Fluazinam:**

### AQUATIC TOXICITY

Rainbow trout (LC<sub>50</sub>): 36 µg/L  
Bluegill sunfish (LC<sub>50</sub>): 52.7 µg/L  
Fathead minnow (NOAEC): 0.69 µg/L  
*Daphnia magna* (EC<sub>50</sub>): 180 µg/L  
*Daphnia magna* (NOAEC): 68 µg/L  
Marine diatom (EC<sub>50</sub>): 0.49 µg/L  
Marine diatom (NOAEL): 1.10 µg/L

### AVIAN TOXICITY

Bobwhite quail (14-d LD<sub>50</sub>): 1782 mg/kg (slightly toxic)  
Mallard duck (14-d LD<sub>50</sub>): > 4190 mg/kg  
Bobwhite quail (NOAEC): 200 mg/kg

### OTHER TOXICITY

Honeybee (contact/oral LD<sub>50</sub>): > 100 µg/bee

## 13. DISPOSAL CONSIDERATIONS

**PESTICIDE DISPOSAL:** Pesticide spray mixture or rinsate that cannot be used must be disposed of in a landfill approved for pesticides. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by the use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. Refer to the product label for specific container disposal instructions.

## 14. TRANSPORT INFORMATION

### US-DOT:

Not regulated

### IMDG:

**Containers ≤ 1.3 gal. (5 L) in strong outer packaging:**

Not regulated

**Containers > 1.3 gal. (5 L):**

Shipped internationally by vessel: UN3082, Environmentally hazardous substance, liquid, N.O.S. (Fluazinam, Difenoconazole), 9, PG III, Marine Pollutant

### IATA:

**Containers ≤ 1.3 gal. (5 L) in strong outer packaging:**

Not regulated

**Containers > 1.3 gal. (5 L):**

Shipped internationally by air: UN3082, Environmentally hazardous substance, liquid, N.O.S. (Fluazinam, Difenoconazole), 9, PG III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

## 15. REGULATORY INFORMATION

### FIFRA –

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. The following is the hazard information as required on the pesticide label:

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER/PELIGRO.** Corrosive. Causes irreversible eye damage. DO NOT get in eyes or on clothing. Wear protective eyewear. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Harmful if inhaled. Avoid breathing vapor or spray mist. Harmful if swallowed. 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.

### ENVIRONMENTAL HAZARDS

This product is toxic to fish, mammals and aquatic invertebrates. 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 cleaning equipment or disposing of equipment wash waters or rinsate. DO NOT apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas.

DO NOT discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. DO NOT discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or regional office of the EPA.

**Surface water advisory:** DO NOT cultivate within 25 feet of permanent water bodies (lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, and estuaries) so as to allow growth of a vegetative filter strip. DO NOT apply aerially within 150 ft. of marine/estuarine areas.

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product may contaminate water through drift or spray in wind. This product has a potential for runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential for contamination of water from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is expected to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff.

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

## 15. REGULATORY INFORMATION (CONT.)

### SARA Title III – Section 302 Extremely Hazardous Substances

Not listed

### SARA Title III – Section 311/312 Hazard Categories

Immediate (acute)

### SARA Title III – Section 312 Threshold Planning Quantity

The threshold planning quantity (TPQ) for this product treated as a mixture is 10,000 lbs. This product contains no ingredients with a TPQ of less than 10,000 lbs.

### SARA Title III – Section 313 Reportable Ingredients

Not listed

### CERCLA Reportable Quantity (RQ) –

Not listed

### CALIFORNIA PROP 65 STATUS –

This product does not contain any chemical known to the State of California to cause cancer or other reproductive harm.

### CANADA –

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

## 16. OTHER INFORMATION

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

To the extent consistent with applicable law, neither Atticus, LLC nor Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ATTICUS, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ATTICUS, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

SDS Version: 1.0

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