



SAFETY DATA SHEET

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

1. IDENTIFICATION

PRODUCT NAME: Radius ESQ
DESCRIPTION: Liquid fungicide
EPA Reg. No.: 91234-141
COMPANY IDENTIFICATION: Atticus, LLC
5000 CentreGreen Way, Suite 100
Cary, NC 27513

2. HAZARD IDENTIFICATION

WARNING

Harmful if swallowed (H302)
May cause drowsiness or dizziness (H336)
May cause respiratory irritation (H335)
May cause damage to organs through prolonged or repeated exposure (H373)
Very toxic to aquatic life with long lasting effects (H400+H410)



HAZARD CLASSIFICATION

Health Hazards	Category	Physical Hazards	Category
Acute toxicity, oral	4	None	--
Specific Target Organ Toxicity, Single Exposure	3	Environmental Hazards	Category
Specific Target Organ Toxicity, Repeated Exposure	2	Hazardous to the Aquatic Environment, short-term	1
		Hazardous to the Aquatic Environment, long-term	1

HAZARDS NOT REQUIRING CLASSIFICATION

Do not mix or allow to come into contact with oxidizing agents. Hazardous chemical reaction may occur.

PRECAUTIONARY STATEMENTS

Do not breathe mist/vapors/spray. Use only outdoors or in a well-ventilated area. (P260+P271)
Wash hands and exposed skin thoroughly after handling. (P264)
Do not eat, drink or smoke when using this product. (P270)
IF SWALLOWED: Call a POISON CENTER / doctor if you feel unwell. Rinse mouth. (P301+P312+P330)
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER / doctor if you feel unwell. (P304+P340+P312)
Get medical advice / attention if you feel unwell. (P314)
Avoid release to the environment not in accordance with the product label. Collect spillage. (P273+P391)
Store locked up. (P405)
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
Azoxystrobin	Methyl (E)-2-[2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl]-3-methoxyacrylate	131860-33-8	19.8%
Difenoconazole	1-[2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-methyl-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole	119446-68-3	19.8%
Propylene Glycol	1,2-Propanediol	57-55-6	<5%

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. You may also contact SafetyCall at 1-844-685-9173 for emergency medical treatment information.

IF SWALLOWED: Call a 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 the poison control center 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 mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

5. FIREFIGHTING MEASURES

Flash Point: >214°F

Extinguishing Medium: Foam, dry chemical, or carbon dioxide (CO₂). Avoid high volume water jet (contamination risk) or dike and collect runoff.

Fire Fighting Equipment: Firefighters should be equipped with self-contained positive pressure breathing apparatus and full bunker gear.

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. Use foam or dry chemical fire extinguishing systems to prevent environmental damage from excessive water runoff.

Hazardous Combustion Products: Thermal decomposition or combustion may produce irritating and possible toxic gases.

NFPA Ratings: Health – 2 / Flammability – 1 / Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

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

Environmental Precautions: Prevent material from entering any waterways or low areas. Do not flush to drain or soil. Contain contaminated water. 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.

Spill Cleanup: Clean up spill immediately, observing precautions in Section 8. Control the spill at its source if safe to do so. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposal.

7. HANDLING AND STORAGE

Handling: 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. Ensure adequate ventilation.

Protective Clothing: Handlers must wear long-sleeved shirt and long pants; waterproof gloves; and shoes plus socks.

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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. DO NOT reuse them.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Off-white liquid

Odor: Aromatic

Melting / Freezing point: no data available

Boiling Point / Boiling Range: no data available

Flammability: no data available

Flammability Limits (upper/lower): no data available

Flash Point: >214°F

Auto-ignition Temperature: 977°F

Decomposition Temperature: no data available

pH: 6-7 @ 1% dispersion

Kinematic Viscosity: no data available

Solubility (Azoxystrobin): 6.0 mg/L (in water)

Solubility (Difenoconazole): 15 mg/L (in water)

Partition coefficient: no data available

Vapor Pressure: no data available

Relative Density: 1.137 g/cm³ @ 68°F

Vapor Density: no data available

Particle Characteristics: no data available

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: None known.

CHEMICAL STABILITY: Stable at normal temperatures and storage conditions.

INCOMPATIBILITY WITH OTHER MATERIALS: None known.

HAZARDOUS DECOMPOSITION PRODUCTS: None known.

HAZARDOUS POLYMERIZATION: Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Information presented below is from testing done on an identical or substantially similar product:

ORAL TOXICITY (rat LD₅₀): 310 mg/kg

DERMAL TOXICITY (rat LD₅₀): > 5,000 mg/kg

INHALATION TOXICITY (rat LC₅₀): > 2.56 mg/L (4-hour)

EYE IRRITATION: Practically Non-Irritating

SKIN IRRITATION: Slightly irritating

SKIN SENSITIZATION: Not a sensitizer

CARCINOGENICITY:

NTP: Not listed

IARC: Not listed

EPA: Not listed

MUTAGENIC TOXICITY: Animal Testing did not show any mutagenic effects for the active ingredients.

REPRODUCTIVE TOXICITY/TERATOGENICITY: No evidence of fertility or reproductive effects for the active ingredients.

OTHER TOXICITY: Difenoconazole may cause damage to organs (liver and kidneys) at high doses. Product may cause drowsiness or dizziness or respiratory irritation. Target organs of difenoconazole are brain, liver, kidney, and gastrointestinal tract. Target organ for azoxystrobin is liver and for propylene glycol is the central nervous system, kidney and liver.

12. ECOLOGICAL INFORMATION

Difenoconazole is toxic to fish, mammals and aquatic invertebrates. Azoxystrobin is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Azoxystrobin can be persistent for several months or longer. Azoxystrobin and a degradate of azoxystrobin are known to leach through soil into groundwater under certain conditions as a result of label use. This product may impact surface water quality due to runoff of rain water.

This product may adversely impact the forage and habitat of local pollinators, including the monarch butterfly (and its larvae), birds, or bats if reaches non-target areas. Protect pollinators by following label directions to minimize spray drift.

The following information is for the active ingredient, azoxystrobin:

AQUATIC TOXICITY

Rainbow Trout (96-hour LC₅₀): 0.47 mg/L

Daphnia (48-hour EC₅₀): 0.259 mg/L

Algae (EC₅₀): 0.106 mg/L

AVIAN TOXICITY

Mallard Duck (oral LD₅₀): > 250 mg/kg

The following information is for the active ingredient, difenoconazole:

AQUATIC TOXICITY

Rainbow trout (96-hour LC₅₀): 1.1 mg/L

Daphnia magna (48h EC₅₀): 0.77 mg/L

Green Algae (72h EC₅₀): 0.032 mg/L

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide spray mixture or rinsate that cannot be used should 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. See container labeling for complete disposal instructions.

14. TRANSPORT INFORMATION

UN Number:	UN3082
Proper Shipping Name:	Environmentally hazardous substance, liquid, N.O.S. (contains azoxystrobin and difenoconazole)
Transport Hazard Class:	9
Packing Group:	III
Hazard Zone:	None
Marine Pollutant:	Yes ¹
Hazardous Substance RQ:	None
Labels / Placards:	US-DOT: Class 9 Environmentally Hazardous Substance ² IMDG, IATA: Class 9 Environmentally Hazardous Substance ³
Emergency Guide:	171 (NAERG – North American Emergency Response Guide)
¹ Marine Pollutant Note:	Ground-only shipments are excluded from Marine Pollutant labeling requirements as per 49CFR§172.101 Appendix B(4). For any shipments involving all or part of the transport by vessel, the shipment must be classified as a Marine Pollutant unless a limited quantity exemption applies (see note 3 below).
² US-DOT Note:	Not regulated for “ground only” shipments.
³ IMDG / IATA Note:	Not regulated when shipped in single or inner packaging ≤ 1.3 gal (5 L) in strong outer packaging.

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

WARNING/AVISO. May be fatal if swallowed.

See inside label booklet for additional precautionary statements.

ENVIRONMENTAL HAZARDS

Difenoconazole is toxic to fish, mammals and aquatic invertebrates. Drift and runoff may be hazardous to estuarine/marine organisms in water adjacent to treated area.

Azoxystrobin is toxic to freshwater and estuarine/marine fish and aquatic invertebrates. Azoxystrobin can be persistent for several months or longer.

Groundwater Advisory

Azoxystrobin and a degradate of azoxystrobin are known to leach through soil into groundwater under certain conditions as a result of label use.

Surface Water Advisory

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 is classified as having a high potential for reaching surface water via runoff for several months or more after application.

PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow to come into contact with oxidizing agents. Hazardous chemical reaction may occur.

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.

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
None

CERCLA Reportable Quantity (RQ) –
Not listed

CALIFORNIA PROP 65 STATUS –

This product does not contain any chemicals known to the state of California to cause cancer or 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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