



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **Orius 250 EW**
Product Use: Fungicide
Restriction of Use: Refer to Section 15

New Zealand Supplier: ADAMA New Zealand Ltd
Address: Level 1/93 Bolt Road
Tahunanui, Nelson
Telephone: +64 3 543 8275
Fax Number: +64 3 543 8274

Emergency Telephone: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 10 September 2020

Section 2. Hazards Identification

This substance is hazardous according to the Hazardous Substances (Classification) Notice 2017

EPA Approval No: HSR000751

Pictograms



Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1E (oral)	H303	May be harmful if swallowed.	Acute Tox. 5
6.1E (dermal)	H313	May be harmful in contact with skin.	Acute Tox. 5
6.1E (inh)	H333	May be harmful if inhaled.	Acute Tox. 5
6.4A	H319	Causes serious eye irritation.	Eye Irrit. 2A
6.9B	H373	May cause damage to organs through prolonged or repeated exposure.	STOT RE 2
9.1A	H400	Very toxic to aquatic life	Aquatic Acute 1

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe fumes, vapours or spray.
P264	Wash hands thoroughly after handling.

P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P391	Collect spillage.
P304 + P312	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage Code	
None allocated	

Disposal Code	Disposal Statement
P501	Refer to Section 13

Section 3. Composition / Information on Ingredients

Ingredients	Wt	CAS NUMBER.
Tebuconazole	250g/L	107534-96-3
N,N-dimethyl fatty acid amide	610g/l	-

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If on Skin	Wash skin with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
If Swallowed	Do NOT induce vomiting. Wash out mouth with plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion:	May be harmful if swallowed.
Inhalation:	May be harmful if inhaled.
Skin:	May be harmful if in contact with skin.
Eye:	Causes serious eye irritation.
Chronic:	May cause damage to organs through repeated or prolonged exposure.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable.
Hazards from products	Thermal decomposition generates: carbon monoxide, carbon dioxide, nitrogen oxides, chlorides, oxidizing agents.
Suitable Extinguishing media	Water spray, water fog, foam.

Precautions for firefighters and special protective clothing	Wear proper protective equipment. Self-contained breathing apparatus. Fight fires from protected location. Dike fire control water for later disposal.
HAZCHEM CODE	3Z

Section 6. Accidental Release Measures

Wear full protective clothing as specified in SECTION 8. Clear area of unprotected personnel.

Dispose of this material and its container at hazardous or special waste collection point, in accordance with national and regional regulations. If the product has contaminated surface water, inform the appropriate authorities. Contaminated soil layers have to be dug out.

In the event of minor spillage. Absorb remainder in sand or other inert material. Use appropriate container to avoid environmental contamination.

In the event of major spillage: Collect and contain as much free liquid as possible. Dike spills using absorbent or impervious materials such as sand or clay for later disposal. Dispose of in an authorised waste collecting point.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Do not breathe fumes, vapours or spray.
- Avoid contact with skin and eyes.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke while using.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep out of reach of children.
- Store in original, unopened container in cool, dry place, well ventilated place, out of direct sunlight and away from stockfeed or foodstuffs.
- Avoid temperatures above 50°C.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2019 11TH EDITION.

Engineering Controls

Use in well ventilated areas.

Personal Protection Equipment



Eyes	Safety goggles or Chemical goggles.
Hands and Skin	Wear suitable protective clothing. Chemical resistant boots. Chemical resistant gloves.
Respiratory	During spraying wear suitable respiratory equipment.
General	When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.

Section 9 Physical and Chemical Properties

Appearance	Clear yellow liquid
Odour	Odourless
Odour Threshold	Not applicable
pH	4-5
Boiling Point	Not applicable
Melting Point	Not applicable
Flash Point	Not applicable
Flammability	Not flammable
Upper and Lower Exposure Limits	Not applicable
Vapour Pressure	Not applicable
Density	1.060 – 1.086
Specific Gravity	1.08 g/cm ³ @ 20°C
Solubility in water	Emulsifiable
Partition Coefficient:	Not applicable
Auto-ignition Temperature	Not applicable
Viscosity	161.188 cts
Molecular Weight	Tebuconazole: 307.8
Log P Octanol	Tebuconazole: 3.22

Section 10. Stability and Reactivity

Stability of Substance	Stable under normal storage conditions.
Conditions to Avoid	Protect from (sun) light, open flame and sources of heat. Decomposes upon heating.
Incompatible Materials	Oxidizing agents, acids and alkali. Avoid contact with: strong bases and strong acids.
Hazardous Decomposition Products	Thermal decomposition generates: carbon monoxide, carbon dioxide, Chlorides, nitrogen oxides oxidizing agents.

Section 11 Toxicological Information

Acute Effects:

Swallowed	May be harmful if swallowed. LD50 (rat) >2,000 mg/kg
Dermal	May be harmful if in contact with skin. LD50 (rat) >2,000 mg/kg
Inhalation	May be harmful if inhaled. LC50 (rat) 4.95 mg/L/4h
Eye	Causes serious eye irritation.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.

STOT/SE	Not applicable.
STOT/RE	May cause damage to organs through repeated or prolonged exposure.

Section 12. Ecotoxicological Information

HSNO Classes: 9.1A= Very toxic to aquatic life.

Persistence and degradability	No data available.
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available

Acute Toxicity:

96 H-LC50 – Rainbow trout [mg/l]:	4.68
48 H-EC50 – Daphnia magna [mg/l]:	16
72 H-EC50 Algae [mg/l]:	9.13

Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method:

Container Disposal - Triple rinse empty container and add rinsate to spray tank. Burn in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitable landfill, or if appropriate, recycle.

Product Disposal - Dispose of this product only by using according to the label, or through the Agrecovery® Chemical Recovery service or other approved facility.

Disposal methods to avoid: Avoid contamination of any water supply with product or empty container.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2012



Road, Rail, Sea and Air Transport

UN No	3082
Class - Primary	9
Packing Group	III
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S (tebuconazole)
Marine Pollutant	Yes
Special Provisions	If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15 Regulatory Information

This substance is hazardous according to the Hazardous Substances (Classification) Notice 2017

EPA Approval Code: HSR000751

Refer to EPA website www.epa.govt.nz for controls document - HSR000751

HSW (HS) Regulations 2017		Trigger Quantity/Regulation
Certified Handlers		Not required
Location Certificate		Not required
Signage Trigger Quantities (Schedule 3)		100L (9.1A)
Emergency Response Plan (Schedule 5)		100L (9.1A)
Secondary Containment (Schedule 5)		100L (9.1A)
Tracking (Schedule 26)		Not required
HSNO Additional Controls (Restrictions of use)		
77A		The substance must not be applied onto or into water.
Hazardous Property Controls Notice 2017		
HPC Notice Part 4 Clause 47		Equipment for class 9 substances must be appropriate
HPC Notice Part 4 Clause 48		Records of application of class 9 pesticides and plant growth regulators
HPC Notice Part 3		Hazardous substances in a place other than a workplace.
HPC Notice Part 4 Subpart A		Site and storage controls for class 9 substances
HPC Notice Part 4 Subpart C		Qualifications required for application of class 9 pesticides.
ACVM Act and Regulations		
See www.foodsafety.govt.nz for registration Conditions		P7274

Section 16	Other Information
-------------------	--------------------------

Glossary

EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in text.

As far as lawfully possible, Adama New Zealand Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

Issue Date: 10 September 2020

Review Date: 10 September 2025