



SAFETY DATA SHEET

The Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Orius 250 EW

Revision date 07-Feb-2023

Version 4 Supersedes Date: 11-Nov-2020

Product Code(s)

FNG56796-27

Print Date 07-Feb-2023

ADM.03750.F.1.A 9500032

1. Identification

Product identifier

Orius 250 EW

Other means of identification

| | |
|------------------------|---------------------|
| Synonyms | Tebuconazole 250 EW |
| Formulation type | EW |
| Registration Number(s) | L6832 |
| Pure substance/mixture | Mixture |

Recommended use of the chemical and restrictions on use

| | |
|----------------------|----------------------------|
| Recommended use | Fungicide Professional use |
| Uses advised against | No information available |

Detailed information about the manufacturer, supplier, and/or importer

Supplier

ADAMA SOUTH AFRICA (PTY) LTD
Ground Floor, Simeka House
The Vineyards Office Estate
99 Jip de Jager Drive
Bellville 7530

Emergency telephone number

| | |
|---------------------|--|
| Emergency Telephone | +27 82 446 8946 (Griffon Poison Centre) +27 86 155 5777 (Tygerberg Poison Information Centre) +27 86 100 6366 and +27 83 253 6618 (SPILL TECH) |
|---------------------|--|

| | |
|----------------|---------------|
| E-mail address | SDS@ADAMA.COM |
|----------------|---------------|

2. Hazard(s) identification

Classification of the substance or mixture

| | |
|--|---------------------|
| Serious eye damage/eye irritation | Category 2 - (H319) |
| Reproductive toxicity | Category 2 - (H361) |
| Specific target organ toxicity (single exposure) | Category 3 - (H335) |
| Chronic aquatic toxicity | Category 1 - (H410) |

Label elements**Signal word**

Warning

Hazard pictograms**Hazard statements**

H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H361 - Suspected of damaging fertility or the unborn child
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements

P101 - If medical advice is needed, have product container or label at hand
P102 - Keep out of reach of children
P103 - Read label before use
P203 - Obtain, read and follow all safety instructions before use
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 + P265 - Wash face, hands and any exposed skin thoroughly after handling. Do not touch eyes
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P318 - If exposed or concerned get medical advice.
P319 - Get medical help if you feel unwell
P337 + P317 - If eye irritation persists: Get medical help
P391 - Collect spillage
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/ container to an approved waste disposal plant

Additional information

This product is classified as hazardous according to the criteria in South Africa - GHS classification and labelling of chemicals – SANS10234 and the Regulations for Hazardous Chemical Agents - 2021.

Other hazards

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

3. Composition/information on ingredients**Substance**

Not applicable

Mixture**Synonyms**

Tebuconazole 250 EW

| Chemical name | CAS No | Weight-% | EC No | INTERNATIONAL GHS CLASSIFICATION | M-Factor |
|---------------------------|-------------|----------|-----------|---|-------------|
| N,N-Dimethyldecan-1-amide | 14433-76-2 | 61-68 | 238-405-1 | Skin Irrit. 2 (H315)Eye Irrit. 2 (H319)STOT SE 3 (H335)Aquatic Chronic 3 (H412) | |
| Tebuconazole | 107534-96-3 | 25-28 | 403-640-2 | Acute Tox. 4 (H302) Repr. 2 (H361) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) | M=1 M=10 |

Full text of H- and EUH-phrases: see section 16

Additional information

Note: The other ingredients do not cause or contribute towards the correct GHS classification of Orius 250 EW and are therefore, in terms of the South African Regulations for Hazardous Chemical Agents - 2021. Regulation 14(b), not listed in the table above.

4. First-aid measures

Description of necessary first aid measures

| | |
|-----------------------|---|
| General advice | In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). First aider: Pay attention to self-protection. |
| Inhalation | Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician. |
| Skin contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary. |
| Eye contact | Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Get medical attention immediately if symptoms occur. |
| Ingestion | Rinse mouth. Drink plenty of water. Get medical attention immediately if symptoms occur. |

For emergency responders

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms/effects, acute and delayed

Symptoms None known.

Indication of immediate medical attention and special treatment needed, if necessary

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

Specific hazards arising from the No information available.

chemical

Flammable properties Combustible material

Specific/special fire-fighting measures

Specific/special fire-fighting measures No information available.

Special protective equipment and precautions for fire-fighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Personal precautions Remove all sources of ignition. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

Other information Refer to protective measures listed in Sections 7 and 8.

7. Handling and storage**Preventive measures for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Ensure adequate ventilation. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Precautions for safe handling

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store locked up. Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Control parameters

Exposure guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection Wear suitable gloves.

Eye/face protection If splashes are likely to occur, wear safety glasses with side-shields.

Skin and body protection Wear suitable protective clothing.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

Environmental exposure controls Local authorities should be advised if significant spillages cannot be contained.

9. Physical and chemical properties

Information on basic physical and chemical properties

| <u>Property</u> | <u>Values</u> | <u>Method</u> | <u>Remarks</u> |
|---|---------------------|----------------|--|
| Appearance | | | |
| Physical state | : Liquid | | |
| Color | : pale yellow | | |
| Odor | : characteristic | | |
| Odor threshold | : No data available | | |
| pH | : 7 - 8 | CIPAC MT 75.3 | |
| Melting point / freezing point °C | : No data available | | |
| Boiling point / boiling range °C | : No data available | | |
| Flash point °C | : > 79 | CIPAC MT 12.2 | |
| Evaporation rate | : No data available | | |
| Flammability (solid, gas) | : Not applicable | | |
| Upper/lower flammability or explosive limits | : No data available | | |
| Vapor pressure kPa | : No data available | | |
| Vapor density | : No data available | | |
| Relative density | : 0.9 - 1.0 | CIPAC MT 3.2.1 | 20 °C |
| Solubility(ies) mg/l | : No data available | | |
| Partition coefficient Log Pow | : | | See Section 12 for additional Ecological Information |
| Autoignition temperature °C | : 357 | EEC A.15 | |
| Decomposition temperature °C | : No data available | | |
| Kinematic viscosity mm ² /s 40 °C | : 13.26 | ASTM D445-53T | |
| Explosive properties | : Not an explosive | | |
| Oxidizing properties | : Not oxidizing | | |
| Surface tension | : 32 | | 25°C |

Particle Size : Not applicable

Other information

Bulk density g/ml : Not applicable

10. Stability and reactivity

Reactivity

Reactivity No information available.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

Conditions to avoid None known based on information supplied.

Incompatible materials

Incompatible materials None known based on information supplied.

Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on toxicological effects

Acute toxicity

| | <u>Values</u> | <u>Species</u> | <u>Method</u> | <u>Remarks</u> |
|--|------------------------------|----------------|---------------|----------------------------------|
| Oral LD50 mg/kg | : > 2000 | Rat | OECD 401 | |
| Dermal LD50 mg/kg | : > 2000 | Rat | OECD 402 | |
| Inhalation LC50 LC50 | : > 4.95 | Rat | OECD 403 | Maximum attainable concentration |
| Skin corrosion/irritation | : Non-irritating to the skin | Rabbit | OECD 404 | |
| Serious eye damage/eye irritation | : Irritating to eyes | Rabbit | OECD 405 | |
| Sensitization | : Not a skin sensitizer | Guinea pig | OECD 406 | |

Chronic toxicity

Germ cell mutagenicity

Chemical name

Tebuconazole : Not classified

Carcinogenicity

Chemical name

Tebuconazole : Not Carcinogenic

Reproductive toxicity**Chemical name**

Tebuconazole : H361 - Suspected of damaging fertility or the unborn child

STOT - Single Exposure**Chemical name**

Tebuconazole : Not classified

STOT - Repeated Exposure**Chemical name**

Tebuconazole : Not classified

Aspiration hazard**Chemical name**

Tebuconazole : Not classified

12. Ecological information

Ecotoxicity**Aquatic toxicity****Acute toxicity**

| | <u>Values</u> | <u>Species</u> | <u>Method</u> | <u>Remarks</u> |
|-----------------------------|---------------|---------------------|---------------|-------------------|
| Fish 96-hour LC50 mg/l | : 4.68 | Oncorhynchus mykiss | OECD 203 | |
| Crustacea 48-hour EC50 mg/l | : 16 | Daphnia magna | OECD 202 | |
| Algae 72-hour EC50 mg/l | : 15.0 | D. Subspicatus | OECD 201 | |
| Other plants EC50 mg/l | : ---- | | | No data available |

Chronic aquatic toxicity**Fish NOEC mg/l****Crustacea NOEC mg/l****Algae NOEC mg/l****Other plants NOEC mg/l**

| | <u>Values</u> | <u>Species</u> | <u>Method</u> | <u>Remarks</u> |
|------------------------|---------------------|----------------|---------------|----------------|
| Fish NOEC mg/l | : 0.056 | Rainbow trout | OECD 210 | 21 days |
| Crustacea NOEC mg/l | : 0.06 | Daphnia magna | OECD 211 | 21d |
| Algae NOEC mg/l | : 6.25 | D. Subspicatus | OECD 201 | |
| Other plants NOEC mg/l | : No data available | | | |

Terrestrial Toxicity**Birds Oral LD50 mg/kg****Chemical name**

Tebuconazole : 1988 Bobwhite quail

Bees Oral LD50 µg/bee**Chemical name**

Tebuconazole : 83.05 Oral

Abiotic Degradation**Water DT50 days****Chemical name**

Tebuconazole : 365

Soil DT50 days**Chemical name**

Tebuconazole : 34.8

Biodegradation**Chemical name**

Tebuconazole : Not readily biodegradable OECD 301B

Log Pow**Chemical name**

| | <u>Values</u> | <u>Method</u> | <u>Remarks</u> |
|---------------|---------------|---------------|----------------|
| Chemical name | | | |

Tebuconazole : 3.7

Bioconcentration factor (BCF)**Chemical name**

Tebuconazole : 78

Adsorption/Desorption**Chemical name**

Tebuconazole : 769

Method**Remarks**

KOC

13. Disposal considerations

Disposal methods**Waste from residues/unused products**

Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging

Improper disposal or reuse of this container may be dangerous and illegal.

14. Transport information

ADR

14.1 UN number UN3082
14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole)
14.3 Transport hazard class(es) 9
Labels 9
14.4 Packing group III
Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole), 9, III, (-)
14.5 Environmental hazard Yes
14.6 Special Precautions for Users
Special Provisions 274, 335, 601, 375
Classification code M6
Tunnel restriction code (-)

RID

14.1 UN number UN3082
14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole)
14.3 Transport hazard class(es) 9
Labels 9
14.4 Packing group III
Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole), 9, III
14.5 Environmental hazard Yes
14.6 Special Precautions for Users
Special Provisions 274, 335, 375, 601
Classification code M6

IMDG

14.1 UN number UN3082
14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole)
14.3 Hazard Class 9
14.4 Packing group III
Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole), 9, III, Marine pollutant
14.5 Marine pollutant P
Environmental hazard Yes

14.6 Special Precautions for Users**Special Provisions** 274, 335, 969**EmS-No** F-A, S-F**IMDG Stowage and segregation** Category A**14.7. Transport in bulk according to** No information available**Annex II of MARPOL and the IBC****Code****IATA****14.1 UN number** UN3082**14.2 UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole)**14.3 Transport hazard class(es)** 9**14.4 Packing group** III**Description** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole), 9, III**14.5 Environmental hazard** Yes**14.6 Special Precautions for Users****Special Provisions** A97, A158, A197**ERG Code** 9L

* Note: UN3077 & UN3082 – These products may be transported as non-dangerous goods under the special provisions of IMDG Code 2.10.2.7; ADR SP375 and ICAO/IATA A197 when packed in single or inner packaging of up to 5L for liquids or 5 kg or less for solids

15. Regulatory information**Safety, health and environmental regulations specific for the product in question**

Registration Requirements: Fertilizer, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act 36 of 1947). Pesticide Handling, Storage and Disposal Safety: SANS10206: 2020. Safety Data Sheet and Occupational Exposure Limit Requirements: Regulations for Hazardous Chemical Agents – 2021 – SA Occupational Health and Safety Act. SANS11014:2010. Control of and handling of poisonous/hazardous and non-poisonous/non-hazardous substances/chemicals in workplaces: Hazardous Substances Act, 1973 (Act No.15 of 1973). Occupational Health and Safety Act No. 85 of 1993.

16. Other information**Full text of H-Statements referred to under section 3**

H302 - Harmful if swallowed

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H361 - Suspected of damaging fertility or the unborn child

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

H412 - Harmful to aquatic life with long lasting effects

Date of preparation of the SDS No data available**Revision date** 07-Feb-2023

Revision Note Changes made to the last version are labeled with this sign ***.

Key or legend to abbreviations and acronyms used in the safety data sheet

IMDG International Maritime Dangerous Goods (IMDG)
 IATA International Air Transport Association (IATA)
 ADR European Agreement concerning the International Carriage of Dangerous Goods by Road

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |

Abbreviations and acronyms

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
 ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 CAS Number - Chemical Abstracts Service number
 EC Number - EINECS and ELINCS Number
 EINECS - European Inventory of Existing Commercial Substances
 ELINCS - European List of notified Chemical Substances
 IATA - International Air Transport Association
 ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
 IMDG - International Maritime Dangerous Goods
 LC50 - Lethal Concentration to 50 % of a test population
 LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
 OECD - Organization for Economic Co-operation and Development
 PBT - Persistent, Bioaccumulative and Toxic substance
 RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
 STOT - Specific Target Organ Toxicity
 vPvB - Very Persistent and Very Bioaccumulative

The Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Classification of the mixture

H319 - Causes serious eye irritation
 H335 - May cause respiratory irritation
 H361 - Suspected of damaging fertility or the unborn child
 H410 - Very toxic to aquatic life with long lasting effects

Classification procedure

Classification based on test data
 Classification based on Calculation method
 Classification based on Calculation method
 Classification based on Calculation method

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be 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 the text

End of Safety Data Sheet