SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
1.1 Product identifier
Trade name FOLICUR 250 EW
Product code (UVP) 04407040, 81711690

1.2 Relevant identified uses of the substance or mixture and uses advised against
Use Fungicide

1.3 Details of the supplier of the safety data sheet
Supplier Bayer (Pty) Ltd.
27 Wrench Road, P.O. Box 143
1600 Isando
South Africa
Telephone +27 (011) 921 5911
Telefax +27 (011) 921 5766
Responsible Department QHSE - Nigel, South Africa
+27 (011) 365 8675 (during business hours only)

1.4 Emergency telephone no.
Emergency telephone no. +27 (0861) 555 777 (Western Cape Poisons Helpline)
Global Incident Response Hotline (24h) +1 (760) 476 3964 (Company 3E for Bayer AG, Crop Science Division)

SECTION 2: HAZARDS IDENTIFICATION
2.1 Classification of the substance or mixture
Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.
Reproductive toxicity: Category 2
H361d Suspected of damaging the unborn child.

Acute toxicity: Category 4
H302 Harmful if swallowed.
H332 Harmful if inhaled.

Serious eye damage: Category 1
H318 Causes serious eye damage.

Specific target organ toxicity - single exposure: Category 3
H335 May cause respiratory irritation.

Acute aquatic toxicity: Category 1
H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1
H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements
Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.
Hazard label for supply/use required.
Hazardous components which must be listed on the label:

- Tebuconazole
- N,N-Dimethyl decanamide

**Signal word:** Danger

**Hazard statements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302 + H332</td>
<td>Harmful if swallowed or if inhaled</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>H361d</td>
<td>Suspected of damaging the unborn child.</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>EUH401</td>
<td>To avoid risks to human health and the environment, comply with the instructions for use.</td>
</tr>
</tbody>
</table>

**Precautionary statements**

- **P280** Wear protective gloves/ protective clothing/ eye protection/ face protection.
- **P305 + P351 + P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- **P310** Immediately call a POISON CENTER/doctor/ physician.
- **P501** Dispose of contents/container in accordance with local regulation.

**2.3 Other hazards**

No other hazards known.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2 Mixtures**

**Chemical nature**

Emulsion, oil in water (EW)
Tebuconazole 250 g/l

**Hazardous components**

Hazard statements according to Regulation (EC) No. 1272/2008

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS-No. / EC-No. / REACH Reg. No.</th>
<th>Classification REGULATION (EC) No 1272/2008</th>
<th>Conc. [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tebuconazole</td>
<td>107534-96-3</td>
<td>Acute Tox. 4, H302 Repr. 2, H361d Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
<td>25,8</td>
</tr>
<tr>
<td>N,N-Dimethyl decanamide</td>
<td>14433-76-2</td>
<td>Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 3, H412</td>
<td>&gt; 25</td>
</tr>
</tbody>
</table>

**Further information**

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS-No.</th>
<th>M-Factor: 1 (acute), 10 (chronic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tebuconazole</td>
<td>107534-96-3</td>
<td></td>
</tr>
</tbody>
</table>
SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.

Inhalation
Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.

Skin contact
Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water.

Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Ingestion
Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms
No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment
Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable
Water spray, Carbon dioxide (CO2), Foam, Sand

5.2 Special hazards arising from the substance or mixture

In the event of fire the following may be released:; Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Nitrogen oxides (NOx)

5.3 Advice for firefighters

Special protective equipment for firefighters
In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

Further information
Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions
Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.
6.2 Environmental precautions
Do not allow to get into surface water, drains and ground water.

6.3 Methods and materials for containment and cleaning up
Methods for cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE
7.1 Precautions for safe handling
Advice on safe handling
Use only in area provided with appropriate exhaust ventilation.

Hygiene measures
Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities
Requirements for storage areas and containers
Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep away from direct sunlight.

Advice on common storage
Keep away from food, drink and animal feedingstuffs.

Suitable materials
HDPE (high density polyethylene)

7.3 Specific end use(s)
Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1 Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tebuconazole</td>
<td>107534-96-3</td>
<td>0.2 mg/m³ (SK-ABS)</td>
<td>OES BCS*</td>
<td></td>
</tr>
</tbody>
</table>

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

8.2 Exposure controls

Respiratory protection
Respiratory protection is not required under anticipated circumstances of exposure.
Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer’s instructions regarding wearing and maintenance.

Hand protection
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.
Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

Material: Nitrile rubber
Rate of permeability: > 480 min
Glove thickness: > 0,4 mm
Protective index: Class 6

Eye protection
Wear goggles (conforming to EN166, Field of Use = 5 or equivalent) and faceshield (conforming to EN166, Field of Use = 3 or equivalent).

Skin and body protection
Wear standard coveralls and Category 3 Type 6 suit.
Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.
If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form</strong></td>
<td>Liquid, clear to slightly turbid</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>light yellow</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>aromatic</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>5,0 - 8,0 at 1 % (23 °C) (deionized water)</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>&gt; 172 °C</td>
</tr>
<tr>
<td><strong>Ignition temperature</strong></td>
<td>345 °C</td>
</tr>
<tr>
<td><strong>Density</strong></td>
<td>ca. 0,97 g/cm³ at 20 °C</td>
</tr>
<tr>
<td><strong>Water solubility</strong></td>
<td>emulsifiable</td>
</tr>
<tr>
<td><strong>Partition coefficient:</strong></td>
<td></td>
</tr>
<tr>
<td>n-octanol/water</td>
<td>Tebuconazole: log Pow: 3,7</td>
</tr>
<tr>
<td></td>
<td>N,N-Dimethyldecanamide: log Pow: 2,46</td>
</tr>
<tr>
<td><strong>Viscosity, kinematic</strong></td>
<td>ca. 34,1 mm²/s at 20 °C</td>
</tr>
<tr>
<td><strong>Surface tension</strong></td>
<td>28,6 mN/m at 20 °C</td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong></td>
<td>No oxidizing properties</td>
</tr>
<tr>
<td><strong>Explosivity</strong></td>
<td>Not explosive</td>
</tr>
<tr>
<td></td>
<td>92/69/EEC, A.14 / OECD 113</td>
</tr>
</tbody>
</table>

9.2 Other information
Further safety related physical-chemical data are not known.
SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
Thermal decomposition
350 °C, Heating rate: 3 K/min
Stable under normal conditions.
Exothermic decomposition.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid
Extremes of temperature and direct sunlight.

10.5 Incompatible materials
Store only in the original container.

10.6 Hazardous decomposition products
No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute oral toxicity
LD50 (Rat) > 200 - < 2,000 mg/kg

Acute inhalation toxicity
LC50 (Rat) ca. 5 mg/l
Exposure time: 4 h
Determined in the form of a respirable aerosol.

Acute dermal toxicity
LD50 (Rat) > 4,000 mg/kg

Skin irritation
No skin irritation (Rabbit)

Eye irritation
Risk of serious damage to eyes. (Rabbit)

Sensitisation
Non-sensitizing. (Guinea pig)
OECD Test Guideline 406, Buehler test
Non-sensitizing. (Guinea pig)
OECD Test Guideline 406, Magnusson & Kligman test

Assessment STOT Specific target organ toxicity – single exposure
Tebuconazole: Based on available data, the classification criteria are not met.
N,N-Dimethyldecan-1-amide: May cause respiratory irritation.

Assessment STOT Specific target organ toxicity – repeated exposure
Tebuconazole did not cause specific target organ toxicity in experimental animal studies.
N,N-Dimethyldecanamide did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity
Tebuconazole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
N,N-Dimethyldecanamide was not genotoxic in a battery of in vitro tests.

Assessment carcinogenicity
Tebuconazole caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Liver. The mechanism of tumour formation is not considered to be relevant to man.
N,N-Dimethyldecanamide is not considered carcinogenic.

**Assessment toxicity to reproduction**

Tebuconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Tebuconazole is related to parental toxicity. N,N-Dimethyldecanamide is not considered a reproductive toxicant at non-maternally toxic dose levels.

**Assessment developmental toxicity**

Tebuconazole caused developmental toxicity only at dose levels toxic to the dams. Tebuconazole caused an increased incidence of post implantation losses, an increased incidence of non-specific malformations. N,N-Dimethyldecanamide did not cause developmental toxicity in rats and rabbits.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Further information**

Irritating to respiratory system.

### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1 Toxicity

**Toxicity to fish**

| LC50 (Oncorhynchus mykiss (rainbow trout)) | 9.28 mg/l |
| Exposure time: 96 h |

**Toxicity to aquatic invertebrates**

| EC50 (Daphnia magna (Water flea)) | 7.3 mg/l |
| Exposure time: 48 h |

**Chronic toxicity to aquatic invertebrates**

| NOEC (Daphnia (water flea)) | 0.010 mg/l |
| Exposure time: 21 d |
| The value mentioned relates to the active ingredient tebuconazole. |

**Toxicity to aquatic plants**

| EC50 (Raphidocelis subcapitata (freshwater green alga)) | 3.51 mg/l |
| Growth rate; Exposure time: 72 h |
| (Lemna gibba (gibbous duckweed)) | 0.237 mg/l |
| Growth rate; Exposure time: 7 d |
| The value mentioned relates to the active ingredient tebuconazole. |

#### 12.2 Persistence and degradability

**Biodegradability**

| Tebuconazole: Not rapidly biodegradable |
| N,N-Dimethyldecanamide: rapidly biodegradable |

| Koc |
| Tebuconazole: Koc: 769 |

#### 12.3 Bioaccumulative potential

**Bioaccumulation**

| Tebuconazole: Bioconcentration factor (BCF) 35 - 59 |
| Does not bioaccumulate. |
| N,N-Dimethyldecanamide: Does not bioaccumulate. |

#### 12.4 Mobility in soil

**Mobility in soil**

| Tebuconazole: Slightly mobile in soils |
| N,N-Dimethyldecanamide: Slightly mobile in soils |
12.5 Results of PBT and vPvB assessment

**PBT and vPvB assessment**
- Tebuconazole: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
- N,N-Dimethyldecanamide: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects

**Additional ecological information**
No other effects to be mentioned.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

13.1 Waste treatment methods

**Product**
In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

**Contaminated packaging**
Not completely emptied packagings should be disposed of as hazardous waste.

---

**SECTION 14: TRANSPORT INFORMATION**

**SANS 10231**

14.1 UN number 3082
14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE SOLUTION)
14.3 Transport hazard class(es) 9
14.4 Packing group III
14.5 Environm. Hazardous Mark YES

**IMDG**

14.1 UN number 3082
14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE SOLUTION)
14.3 Transport hazard class(es) 9
14.4 Packing group III
14.5 Marine pollutant YES

**IATA**

14.1 UN number 3082
14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE SOLUTION)
14.3 Transport hazard class(es) 9
14.4 Packing group III
14.5 Environm. Hazardous Mark YES

14.6 Special precautions for user
See sections 6 to 8 of this Safety Data Sheet.
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Further information

WHO-classification: II (Moderately hazardous)

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H361d Suspected of damaging 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.

Abbreviations and acronyms

ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE Acute toxicity estimate
CAS-Nr. Chemical Abstracts Service number
Conc. Concentration
EC-No. European community number
ECx Effective concentration to x %
EINECS European inventory of existing commercial substances
ELINCS European list of notified chemical substances
EN European Standard
EU European Union
IATA International Air Transport Association
IBC International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx Inhibition concentration to x %
IMDG International Maritime Dangerous Goods
LCx Lethal concentration to x %
LDx Lethal dose to x %
LOEC/LOEL Lowest observed effect concentration/level
MARPOL MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S. Not otherwise specified
NOEC/NOEL No observed effect concentration/level
OECD Organization for Economic Co-operation and Development
RID Regulations concerning the International Carriage of Dangerous Goods by Rail
TWA Time weighted average
UN United Nations
WHO World health organisation
The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2015/830 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.