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CVR No. DK 12 76 00 43

SAFETY DATA SHEET

Tebuconazole 250 g/l EW

Revision: Sections containing a revision or new information are marked with a ♣.

♣ SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. **Product identifier** ..... **Tebuconazole 250 g/l EW**
Contains N-methyl-2-pyrrolidone and tebuconazole

1.2. **Relevant identified uses of the substance or mixture and uses advised against** ..... Can be used as fungicide only.

1.3. **Details of the supplier of the safety data sheet**

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SDS.Ronland@fmc.com

1.4. **Emergency telephone number**

Medical emergencies:

Austria: +43 1 406 43 43
Belgium: +32 70 245 245
Bulgaria: +359 2 9154 409
Cyprus: 1401
Czech Republic: +420 224 919 293
+420 224 915 402
Denmark: +45 82 12 12 12
England and Wales: 111
Estonia: +372 7943500
Finland: +358 9 471 977
France: +33 (0) 1 45 42 59 59
Greece: 30 210 77 93 777
Hungary: +36 80 20 11 99
Ireland (Republic): +353 1 837 9964
Italy: +39 02 6610 1029
Latvia: +371 670 42 473
112
Lithuania: +370 523 62052
+370 687 53378
Luxembourg: +352 8002 5500
Malta: 112
Netherlands: +31 30 274 88 88
Norway: +47 22 591300
Poland: +48 22 619 66 54
+48 22 619 08 97
Portugal: 800 250 250 (in Portugal only)
+351 21 330 3284
Romania: +40 21318 3606
Scotland: +8454 24 24 24
Slovakia: +421 2 54 77 4 166
Slovenia: +386 41 650 500
South Africa: +27 83 123 3911 (Bateleur Emergency Response Co.)
Spain: +34 91 562 04 20
Sweden: +46 08-331231
112
Switzerland: 145
Turkey: 114
U.S.A. & Canada: +1 800 / 331 3148
All other countries: +1 651 / 632 6793 (Collect)

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For fire, leak, spill or other accident emergencies:
U.S.A.: +1 800 / 424 9300 (CHEMTREC)
All other countries: +1 703 / 741 5970 (CHEMTREC - Collect)

SECTION 2: HAZARDS IDENTIFICATION

2.1. **Classification of the substance or mixture**

Eye irritation: Category 2 (H319)
Toxic to reproduction: Category 1B (H360D)
Specific target organ toxicity – single exposure: Category 3 (H335)
Hazards to the aquatic environment, acute: Category 1 (H400)
chronic: Category 1 (H410)

WHO classification ..... Class III: Slightly hazardous

Health hazards ..... The product may harm the unborn child. It may be mildly to moderately irritating to eyes and skin. Several other harmful effects are possible in case of massive or prolonged exposure. See section 11.

Environmental hazards ..... The product is very toxic to aquatic organisms.

2.2. **Label elements**

According to EU Reg. 1272/2008 as amended

Product identifier ..... Tebuconazole 250 g/l EW
Contains N-methyl-2-pyrrolidone and tebuconazole

Hazard pictograms (GHS07, GHS08, GHS09)

Signal word ..... Danger

Hazard statements
H319 ..... Causes serious eye irritation.
H335 ..... May cause respiratory irritation.
H360D ..... May damage the unborn child.
H410 ..... Very toxic to aquatic life with long lasting effects.

Supplementary hazard statement
EUH401 ..... To avoid risks to human health and the environment, comply with the instructions of use.

Precautionary statements
P202 ..... Do not handle until all safety precautions have been read and understood.
P264 ..... Wash hands thoroughly after handling.
P280 ..... Wear protective gloves, protective clothing and eye 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.
P312 ..... Call a POISON CENTER or physician if you feel unwell.

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P501 ..... Dispose of contents and container as hazardous waste.

2.3. **Other hazards** ..... None of the ingredients in the product meets the criteria for being PBT or vPvB.

♣ SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. **Substances** ..... The product is a mixture, not a substance.

3.2. **Mixtures** ..... See section 16 for full text of hazard statements.

Active ingredient

Tebuconazole ..... Content: 26% by weight
CAS name ..... 1H-1,2,4-Triazole-1-ethanol, α-[2-(4-chlorophenyl)ethyl]-α-(1,1-dimethylethyl)-
CAS no. 107534-96-3
IUPAC name ..... (RS)-1-p-Chlorophenyl-4,4-dimethyl-3-(1H-1,2,4-triazol-1-ylmethyl)pentan-3-ol
ISO name/EU name ..... Tebuconazole
EC no. (ELINCS no.) 403-640-2
EU index no. 603-197-00-7
Molecular weight 307.82
Classification of the ingredient ..... Acute oral toxicity: Category 4 (H302)
Toxic to reproduction: Category 2 (H361d)
Hazards to the aquatic environment,
acute: Category 1 (H400), M-factor 1
chronic: Category 2 (H411), M-factor 10

Reportable ingredients	Content (% w/w)	CAS no.	EC no. (EINECS no.)	Classification
Octan-1-ol Reg. no. 01-2119486978-10	17	111-87-5	203-917-6	Eye Irrit. 2 (H319)
N-Methyl-2-pyrrolidone Reg. no. 01-2119472430-46	15	872-50-4	212-828-1	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Rep. Tox. 1B (H360D) STOT SE 3 (H335) Specific concentration limit C ≥ 10% for STOT SE 3 (H335)
Tristyrylphenyl-polyethyleneglycol-phosphoric acid	5	114535-82-9	None	Eye Irrit. 2 (H319)
Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts Reg. nr. 01-2119964467-24-0001	4	68953-96-8	273-234-6	Acute Tox. 4 (H312) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)

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Isobutanol Reg. no. 01-2119484609-23	2	78-83-1	201-148-0	Flam. Liq. 3 (H226) STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) STOT SE 3 (H336)

SECTION 4: FIRST AID MEASURES

4.1. **Description of first aid measures**

Inhalation ..... If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance.

Skin contact ..... Immediately remove contaminated clothing and footwear. Flush skin with much water. Wash with water and soap. See physician if irritation develops.

Eye contact ..... Immediately rinse eyes with much water or eyewash solution, occasionally opening eyelids, until no evidence of chemical remains. Remove contact lenses after a few minutes and rinse again. Get medical attention if irritation persists.

Ingestion ..... Let the exposed person rinse mouth and drink several glasses of water or milk, but not induce vomiting. If vomiting does occur, let him/her rinse mouth and drink several glasses of fluid again. Get medical attention immediately.

4.2. **Most important symptoms and effects, both acute and delayed**

The first symptom to appear after skin or eye contact will be irritation. When a similar product was fed to laboratory animals at high doses, the main symptoms were passivity, impaired mobility and shortness of breath.

4.3. **Indication of any immediate medical attention and special treatment needed**

Immediate medical attention is required in case of ingestion.

It may be helpful to show this safety data sheet to physician.

A specific antidote for exposure to this material is not known. Irritation of skin or eyes can be treated as usual. If swallowed, gastric lavage and/or administration of activated charcoal can be considered. After decontamination, treatment of exposure is as for a general chemical and should be directed at the control of symptoms and the clinical condition.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. **Extinguishing media** ..... Dry chemical or carbon dioxide for small fires, water spray or foam for large fires. Avoid heavy hose streams.

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5.2. **Special hazards arising from the substance or mixture**

The essential breakdown products are volatile, toxic, malodorous, irritant and inflammable compounds such as nitrogen oxides, sulphur dioxide, carbon monoxide, carbon dioxide, hydrogen chloride, phosphorus pentoxide and various chlorinated organic compounds.

5.3. **Advice for firefighters** .....

Use water spray to keep fire-exposed containers cool. Approach fire from upwind to avoid hazardous vapours and toxic decomposition products. Fight fire from protected location or maximum possible distance. Dike area to prevent water runoff. Firemen should wear self-contained breathing apparatus and protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. **Personal precautions, protective equipment and emergency procedures**

It is recommended to have a predetermined plan for the handling of spills. Empty, sealable vessels for the collection of spills should be available.

In case of large spill (involving 1 tonne of the product or more):
1. use personal protection equipment; see section 8
2. call emergency telephone no.; see section 1
3. alert authorities.

Observe all safety precautions when cleaning up spills. Use personal protection equipment. Depending on the magnitude of the spill this may mean wearing respirator, face mask or eye protection, chemical resistant clothing, gloves and boots.

Stop the source of the spill immediately if safe to do so. Spills should be removed as soon as possible. Avoid and reduce vapour and mist formation as much as possible. Remove sources of ignition. Keep unprotected persons away from the spill area.

6.2. **Environmental precautions** .....

Contain the spill to prevent any further contamination of surface, soil or water. Wash waters must be prevented from entering surface water drains. Uncontrolled discharge into water courses must be alerted to the appropriate regulatory body.

6.3. **Methods and materials for containment and cleaning up**

It is recommended to consider possibilities to prevent damaging effects of spills, such as bunding or capping. See GHS (Annex 4, Section 6).

If appropriate, surface water drains should be covered. Minor spills on the floor or other impervious surface should be absorbed onto an absorptive material such as universal binder, hydrated lime, Fuller's earth or other absorbent clays. Collect the contaminated absorbent in suitable containers. Clean area with much water and industrial detergent. Absorb wash liquid onto an absorptive material and collect in suitable containers. The used containers should be properly closed and labelled.

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Large spills which soak into the ground should be dug up and transferred to suitable containers.

Spills in water should be contained as much as possible by isolation of the contaminated water. The contaminated water must be collected and removed for treatment or disposal.

6.4. **Reference to other sections** ..... See subsection 8.2. for personal protection.
See section 13 for disposal.

SECTION 7: HANDLING AND STORAGE

7.1. **Precautions for safe handling** .... Pregnant women should not work with this product. See section 11.

In an industrial environment it is recommended to avoid all personal contact with the product, if possible by using closed systems with remote system control. The material should be handled by mechanical means as much as possible. Adequate ventilation or local exhaust ventilation is required. The exhaust gases should be filtered or treated otherwise. For personal protection in this situation, see section 8.

For its use as a pesticide, first look for precautions and personal protection measures on the officially approved label on the packaging or for other official guidance or policy in force. If these are lacking, see section 8.

Remove contaminated clothing immediately. Wash thoroughly after handling. Before removing gloves, wash them with water and soap. After work, take off all work clothes and footwear. Take a shower, using water and soap. Wear only clean clothes when leaving job. Wash protective clothing and protective equipment with water and soap after each use.

Do not discharge to the environment. Do not contaminate water when disposing of equipment wash waters. Collect all waste material and remains from cleaning equipment, etc., and dispose of as hazardous waste. See section 13 for disposal.

7.2. **Conditions for safe storage, including any incompatibilities** The product is stable under normal conditions of warehouse storage. At temperatures below -10°C crystallisation may occur.

Store in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorised persons or children. A warning sign reading “POISON” is recommended. The room should only be used for storage of chemicals. Food, drink, feed and seed should not be present. A hand wash station should be available.

7.3. **Specific end use(s)** ..... The product is a registered pesticide which may only be used for the

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applications it is registered for, in accordance with a label approved by the regulatory authorities.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. **Control parameters**

Personal exposure limits ..... To our knowledge, not established for the active ingredient in this product.

		Year	
N-Methyl-2-pyrrolidone	ACGIH (USA) TLV	2015	Not established
	OSHA (USA) PEL	2015	Not established
	EU, 2000/39/EC as amended	2017	Not established
	Germany, MAK	2014	TWA 20 ppm (82 mg/m^3), vapour Peak level 40 ppm (164 mg/m^3), vapour Skin notation; BAT
	HSE (UK) WEL	2011	8-hr TWA: 10 ppm (40 mg/m^3) Short term exposure limit: 20 ppm (80 mg/m^3) Skin notation

However, other personal exposure limits defined by local regulations may exist and must be observed.

Tebuconazole

DNEL ..... Not established
The EFSA has established an AOEL of 0.03 mg/kg bw/day

PNEC, aquatic environment ..... 1 µg/l

N-Methyl-2-pyrrolidone

DNEL, inhalation ..... 14.4 mg/m^3
DNEL, dermal ..... 4.8 mg/kg bw/day
PNEC, fresh water ..... 0.25 mg/l
PNEC, marine water ..... 0.025 mg/l

8.2. **Exposure controls** ..... When used in a closed system, personal protection equipment will not be required. The following is meant for other situations, when the use of a closed system is not possible, or when it is necessary to open the system. Consider the need to render equipment or piping systems non-hazardous before opening.

The precautions mentioned below are primarily meant for handling of the undiluted product and for preparing the spray solution, but can be recommended for spraying as well.

In cases of incidental high exposure, maximal personal protection may be necessary, such as respirator, face mask, chemical resistant coveralls.

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Respiratory protection

The product does not normally present an inhalation hazard, but in the event of a discharge of the material which produces a heavy vapour or mist, workers should put on officially approved respiratory protection equipment with a universal filter type including particle filter.

Protective gloves .....

Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber. The breakthrough times of these materials for tebuconazole are unknown, but it is expected that they will give adequate protection.

Eye protection .....

Wear safety glasses or face shield. It is recommended to have an eye wash fountain immediately available in the workplace when there is a potential for eye contact.

Other skin protection

Wear appropriate chemical resistant clothing to prevent skin contact depending on the extent of exposure. During most normal work situations where exposure to the material cannot be avoided for a limited time span, waterproof pants and apron of chemical resistant material or coveralls of polyethylene (PE) will be sufficient. Coveralls of PE must be discarded after use if contaminated. In cases of excessive or prolonged exposure, coveralls of barrier laminate may be required.

♣ SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. **Information on basic physical and chemical properties**

Physical state	Liquid
Colour	Yellowish-brownish
Odour	Cocooil-like
Melting point/freezing point	Not determined
Boiling point or initial boiling point and boiling range	Not determined
Flammability	Ignitable
Lower and upper explosive limit ..	**N-Methyl-2-pyrrolidone** : 1.3 - 9.5 vol%
Flash point	75°C (Pensky-Martens closed cup)
Auto-ignition temperature	Approx. 265°C
Decomposition temperature	Not determined
pH	Undiluted: 3.5 at 20°C 1% solution in water: 4.5 - 5.3
Kinematic viscosity	Approx. 11 mm^2/s at 20°C
Solubility	The product is dispersible in water. Solubility of **tebuconazole** in: ethyl acetate > 250 g/l n-heptane 0.69 g/l at 20°C water 32 mg/l at 20°C
Partition coefficient n-octanol/water (log value)	**Tebuconazole** : log K_{ow} = 3.7 (at 20°C; unionised) **N-Methyl-2-pyrrolidone** : log K_{ow} = -0.46
Vapour pressure	**Tebuconazole** : 1.3 x 10^{-6} Pa at 20°C 3.1 x 10^{-6} Pa at 25°C

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Density and/or relative density	Density: 0.973 g/ml
Relative vapour density	Not determined
Particle characteristics	Granules

9.2. **Other information** ..... No more relevant information is available.

SECTION 10: STABILITY AND REACTIVITY

10.1. **Reactivity** ..... To our knowledge, the product has no special reactivities.

10.2. **Chemical stability** ..... The product is stable during normal handling and storage at ambient temperatures.

10.3. **Possibility of hazardous reactions** None known.

10.4. **Conditions to avoid** ..... Heating of the product will produce harmful and irritant vapours.

10.5. **Incompatible materials** ..... None known.

10.6. **Hazardous decomposition products** See subsection 5.2.

♣ SECTION 11: TOXICOLOGICAL INFORMATION

11.1. **Information on hazard classes as defined in Regulation (EC) No 1272/2008** * = Based on available data, the classification criteria are not met.

Product

Acute toxicity		The product is not expected to be harmful by ingestion, skin contact or by inhalation. * However, it should always be treated with the usual care of handling chemicals. The acute toxicity, as measured on a similar product, is:
Route(s) of entry	- ingestion	LD_{50}, oral, rat: > 2000 mg/kg; signs of toxicity at this concentration (method OECD 425)
	- skin	LD_{50}, dermal, rat: > 4000 mg/kg (method OECD 402)
	- inhalation	LC_{50}, inhalation, rat: > 8.76 mg/l/4 h (method OECD 403)
Skin corrosion/irritation		Measured on a similar product: moderately irritating to skin (method OECD 404). *
Serious eye damage/irritation		Measured on a similar product: moderately irritating to eyes (method OECD 405).
Respiratory or skin sensitisation ...		Measured on a similar product: not sensitising (method OECD 406). *
Germ cell mutagenicity		The product contains no ingredients known to be mutagenic. *
Carcinogenicity		The product contains no ingredients known to be carcinogenic. *

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Reproductive toxicity		The following has been measured for N-methyl-2-pyrrolidone: NOAEL for fertility and systemic toxicity was 350 mg/kg bw/day. The NOAEL for developmental toxicity was 160 mg/kg bw/day in two-generation reproduction studies with rats (method OECD 416). NOAELs for maternal toxicity and developmental toxicity are somewhat uncertain, but both appear to be approx. 125 - 250 mg/kg bw/day in an oral developmental toxicity study with rats during gestation days 6 through 20 (method OECD 414). NOAEC for maternal toxicity was 30 ppm (0.123 mg/l), NOAEC for developmental toxicity was 60 ppm (0.247 mg/l), NOAEC for teratogenicity was 120 ppm (0.494 mg/l) in a developmental inhalation toxicity study with rats during gestation days 6 through 20 for 6 h/day (method OECD 414).
STOT – single exposure		To our knowledge, no specific effects have been observed after single exposure. *
STOT – repeated exposure		The following has been measured on the active ingredient tebuconazole: Several effects were found in rats at LOEL 80 mg tebuconazole/kg bw/day for 13 weeks. Liver, adrenals, spleen and eyes were affected. *
Aspiration hazard		The product does not present an aspiration hazard. *
Tebuconazole		
Toxicokinetics, metabolism and distribution		Tebuconazole is almost completely absorbed, metabolised and excreted within a few days. It is widely distributed in the body. There is no evidence of accumulation.
Acute toxicity		The substance may be harmful by ingestion. It is not considered as harmful by skin contact or by inhalation.
Route(s) of entry	- ingestion	LD_{50}, oral, rat (male): 4000 - > 5000 mg/kg (method OECD 401)
		LD_{50}, oral, rat (female): 1700 - > 5000 mg/kg
	- skin	LD_{50}, dermal, rat: > 2000 mg/kg (method OECD 402)
	- inhalation	LC_{50}, inhalation, rat: > 5.093 mg/l/4 h (method OECD 403)
Skin corrosion/irritation		Not irritating to skin (method OECD 404). *
Serious eye damage/irritation		Mildly irritating to eyes (method FIFRA 81-4). *
Respiratory or skin sensitisation ...		Not sensitising (method OECD 406). *
Octan-1-ol		
Toxicokinetics, metabolism and distribution		Octan-1-ol is rapidly absorbed and extensively metabolised. It is primarily excreted by expiration as carbon dioxide.

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Acute toxicity		The substance is not considered as harmful by inhalation, ingestion or skin contact. *
Skin corrosion/irritation		Mildly irritating to skin. *
Serious eye damage/irritation		Mildly to moderately irritating to eyes. *
Respiratory or skin sensitisation ...		To our knowledge, allergenic effects have not been reported. *

N-Methyl-2-pyrrolidone

Toxicokinetics, metabolism and distribution		After oral exposure, N-methyl-2-pyrrolidone is rapidly absorbed. It is metabolised and eliminated mainly in the urine with elimination half-lives of 1 to 2.5 hours and negligible tissue residues 5 days post dose. There is no potential for bioaccumulation.
Acute toxicity		The substance is not considered as harmful by inhalation, ingestion or skin contact. * The acute toxicity is measured as:
Route(s) of entry	- ingestion	LD_{50}, oral, rat: 4150 mg/kg (method OECD 401)
	- skin	LD_{50}, dermal, rat: > 5000 mg/kg (method OECD 402)
	- inhalation	LC_{50}, inhalation, rat: > 5.1 mg/l/4 h (method OECD 403)
Skin corrosion/irritation		Slightly irritating to skin (method OECD 404). *
Serious eye damage/irritation		Moderately irritating to eyes (method OECD 405).
Respiratory or skin sensitisation ...		To our knowledge, allergenic effects have not been reported. *

Tristyrylphenyl-polyethyleneglycol-phosphoric acid

Acute toxicity		The substance is not considered as harmful by inhalation, ingestion or skin contact. *
Skin corrosion/irritation		Not irritating to skin (method OECD 404). *
Serious eye damage/irritation		Irritating to eyes (method OECD 405).
Respiratory or skin sensitisation ...		Not determined.

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts

Toxicokinetics, metabolism and distribution		The substance is readily absorbed, rapidly metabolised and excreted within 72 hours in the bile.
Acute toxicity		The substance is harmful in contact with skin. The acute toxicity is measured as:
Route(s) of entry	- ingestion	LD_{50}, oral, rat: > 2000 mg/kg (method OECD 401) *
	- skin	LD_{50}, dermal, rat: 1000 - 1600 mg/kg (method OECD 402)
	- inhalation	LC_{50}, inhalation, rat: not available

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Skin corrosion/irritation	Irritating to skin.
Serious eye damage/irritation	Irritating to eyes with the possibility to cause permanent eye damage.
Respiratory or skin sensitisation ...	Not sensitising (method OECD 406). *
Isobutanol	
Toxicokinetcs, metabolism and distribution	Isobutanol is rapidly absorbed following oral administration or inhalation exposure. Isobutanol is metabolised to isobutyraldehyde and isobutyric acid.
Acute toxicity	Isobutanol is not considered as harmful by single exposure. *
Skin corrosion/irritation	Not irritating to rabbit skin (method OECD 404), but the classification of isobutanol is harmonised.
Serious eye damage/irritation	Severely irritating to eyes (method OECD 405).
Respiratory or skin sensitisation ...	Not sensitising to guinea pigs (method OECD 406). To our knowledge, no indications of allergenic properties have been recorded. *

11.2. **Information on other hazards** .... No more relevant information is available.

♣ SECTION 12: ECOLOGICAL INFORMATION

12.1. **Toxicity** ..... The product is toxic to aquatic plants and harmful to fish and aquatic invertebrates. It is not considered as harmful to birds, soil micro- and macroorganisms, insects and mammals.

The ecotoxicity, as measured on a similar formulation, is:

- Fish	Rainbow trout (*Oncorhynchus mykiss*)	96-h LC_{50}	17.7 mg/l
- Invertebrates	Daphnids (*Daphnia magna*)	48-h EC_{50}	21.5 mg/l
- Algae	Green algae (*Desmodesmus subspicatus*)	72-h EC_{50} 72-h NOEC	0.975 mg/l 0.0313 mg/l
- Birds	Japanese quail (*Coturnix coturnix japonica*)	14-day LD_{50}	> 2000 mg/kg
- Earthworms	*Eisenia foetida*	14-day LC_{50}	> 1000 mg/kg dry soil
- Bees	Honey bee (*Apis mellifera*)	48-h LD_{50}, oral 48-h LD_{50}, contact	> 100 µg/bee > 100 µg/bee

12.2. **Persistence and degradability** .... **Tebuconazole** is not readily biodegradable. It is slowly degraded in soil. Primary degradation half-lives vary with circumstances, usually from around 40 to 180 days in aerobic soil.

The product contains minor amounts of not readily biodegradable

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ingredients, which may not be degradable in waste water treatment plants.

12.3. **Bioaccumulative potential** ..... See section 9 for octanol-water partition coefficients.

Tebuconazole is considered to have a low bioaccumulative potential. The Bioconcentration Factor (BCF) of tebuconazole is measured to be 65 on average for whole fish (measured on several fish species).

12.4. **Mobility in soil** ..... **Tebuconazole** is of low mobility in soil.

12.5. **Results of PBT and vPvB assessment** ..... None of the ingredients meets the criteria for being PBT or vPvB.

12.6. **Endocrine disrupting properties** None of the ingredients is known to have endocrine disrupting properties.

12.7. **Other adverse effects** ..... Other relevant hazardous effects in the environment are not known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. **Waste treatment methods** ..... Remaining quantities of the material and empty but unclean packaging should be regarded as hazardous waste.

Disposal of waste and packagings must always be in accordance with all applicable local regulations.

Disposal of product ..... According to the Waste Framework Directive (2008/98/EC), possibilities for reuse or reprocessing should first be considered. If this is not possible, the material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing.

Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Disposal of packaging ..... It is recommended to consider possible ways of disposal in the following order:
1. Reuse or recycling should first be considered. Reuse is prohibited except by the authorisation holder. If offered for recycling, containers must be emptied and triply rinsed (or equivalent). Do not discharge rinsing water to sewer systems.
2. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.
3. Delivery of the packaging to a licensed service for disposal of hazardous waste.
4. Disposal in a landfill or burning in open air should only occur as a last resort. For disposal in a landfill containers should be emptied completely, rinsed and punctured to make them unusable for other purposes. If burned, stay out of smoke.

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♣ SECTION 14: TRANSPORT INFORMATION

ADR/RID/IMDG/IATA/ICAO classification

14.1. **UN number** 3082

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

14.5. **Environmental hazards** ..... Marine pollutant

14.6. **Special precautions for user** ..... Avoid any unnecessary contact with the product. Misuse can result in damage to health. Do not discharge to the environment.

14.7. **Maritime transport in bulk according to IMO instruments** .. The product is not transported in bulk by ship.

SECTION 15: REGULATORY INFORMATION

15.1. **Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso category in Annex I to Dir. 2012/18/EU: toxic
Second Seveso category: dangerous for the environment

Dir. 92/85/EEC: The employer shall assess the degree and duration of exposure at the workplace and any possible effect on pregnant women working with this product and decide which measures should be taken.

Young people under the age of 18 are not allowed to work with the substance.

All ingredients are covered by EU chemical legislation.

15.2. **Chemical safety assessment** ..... A chemical safety assessment is not required to be included for this product.

♣ SECTION 16: OTHER INFORMATION

Relevant changes in the safety data sheet ..... Minor corrections only.

List of abbreviations .....

ACGIH	American Conference of Governmental Industrial Hygienists
BAT	Biologischer Arbeitsstoff-Toleranzwert
CAS	Chemical Abstracts Service
CFR	Code of Federal Regulations
Dir.	Directive
DNEL	Derived No Effect Level

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EC	European Community
EC_{50}	50% Effect Concentration
EINECS	European INventory of Existing Commercial Chemical Substances
ELINCS	European LIst of Notified Chemical Substances
EPA OTS	Environmental Protection Agency (USA) Office of Toxic Substances
EW	Emulsion, oil in water
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
GHS	Globally Harmonized classification and labelling System of chemicals, Seventh revised edition 2017
HSE	Health and Safety Executive
IMO	International Maritime Organisation
ISO	International Organisation for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC_{50}	50% Lethal Concentration
LD_{50}	50% Lethal Dose
LOEL	Lowest Observed Effect Level
MAK	Maximale Arbeitsplatz-Konzentration
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
n.o.s.	Not otherwise specified
OECD	Organisation for Economic Cooperation and Development
OSHA	Occupational Safety and Health Administration
PBT	Persistent, Bioaccumulative, Toxic
PEL	Permissible Exposure Limit
PNEC	Predicted No Effect Concentration
Reg.	Registration, or Regulation
STOT	Specific Target Organ Toxicity
TLV	Threshold Limit Value
TWA	Time Weighted Average
vPvB	very Persistent, very Bioaccumulative
WEL	Workplace Exposure Limit
WHO	World Health Organisation

References ..... Data measured on a similar product are unpublished company data. Data on ingredients are available from published literature and can be found several places.

Method for classification ..... Eye irritation: read-across
Toxic to reproduction: calculation method
Specific target organ toxicity – single exposure: calculation method
Hazards to the aquatic environment: read-across

Used hazard statements .....

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.

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H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360D	May damage the unborn child.
H361d	Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH401	To avoid risks to human health and the environment, comply with the instructions of use.

Advice on training ..... This material should only be used by persons who are made aware of its hazardous properties and have been instructed in the required safety precautions.

The information provided in this safety data sheet is believed to be accurate and reliable, but uses of the product vary and situations unforeseen by FMC Corporation may exist. The user has to check the validity of the information under local circumstances.

Prepared by: FMC Agricultural Solutions A/S / GHB