

# MATERIAL SAFETY DATA SHEET

compliant with requirements of the Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning REACH (OJ of the EU L 396), with later amendments



## Tebuconazole SA

Compiled: 14.03.2015

Revised: 10.03.2020

Version: 1.1

### Section 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

#### 1.1. Product identifier

##### Tebuconazole SA

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Active substance of a fungicide. Is not to be used otherwise than as an active substance in plant protection products.

#### 1.3. Details of the supplier of the Safety Data Sheet

**Manufacturer:** PUH CHEMIROL Sp. z o.o.

address: 3 Przemysłowa St., 88-300 Mogilno, Poland

VAT Reg. No.: PL 557-15-89-655

phone: +48 52 318 87 83/84

e-mail: RD@chemirol.com.pl

Person responsible for the Safety Data Sheet: RD@chemirol.com.pl

#### 1.4. Emergency telephone number in Poland

Toxicological centers:

|  |  |   |
|--|--|---|
| Gdańsk (58) 682 04 04<br>Kraków (12) 411 99 99<br>Lublin (81) 740 89 83<br>Łódź (42) 657 99 00 | Poznań (61) 847 69 46<br>Rzeszów (17) 866 40 25<br>Sosnowiec (32) 266 11 45<br>Tarnów (14) 631 54 09 | Warszawa (22) 619 66 54<br>Wrocław (71) 343 30 08 |
|--|--|---|

### Section 2. HAZARDS IDENTIFICATION

The product is classified as dangerous in accordance with applicable regulations.

#### 2.1. Classification of the substance

According to Directive 1272/2008 (CLP):

Acute Tox.4, H302

Repr.2; H361d

Aquatic Acute 1, H400

Aquatic Chronic 1; H410

#### 2.2. Label elements

According to Directive 1272/2008 (CLP):



Warning

*Risk phrases (H-phrases):*

**H302** – Harmful if swallowed.

**H361d** – Suspected of damaging fertility or the unborn child.

**H410** – Very toxic to aquatic life with long lasting effects.

*Safety phrases (P-phrases):*

**P273** – Avoid release to the environment.

**P501** – Content disposed of as hazardous waste.

**P391** – Collect spillage.

**P280** – Wear protective gloves/protective clothing/eye protection/face protection.

**P301+P310** – IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

**P308+P313** – IF exposed or concerned: Get medical advice/attention.

**2.3. Other hazards**

Other hazards are not identified.

**Section 3. COMPOSITION / INFORMATION ON INGREDIENTS****3.1. Substance**

Ingredients hazardous to human health or the environment:

| Chemical name | Index No.    | CAS No.     | EC No.    | Content [% w/w] | CLP Classification  |
|---------------|--------------|-------------|-----------|-----------------|---|
| Tebuconazole  | 603-197-00-7 | 107534-96-3 | 403-640-2 | ≥99 %           | Acute Tox. 4, H302, Repr.2, H361d<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |

Symbol explanation and full phrasing of H-phrases is included in Section 16.

**Section 4. FIRST AID MEASURES****4.1. Description of first aid measures**General recommendations:

Avoid contamination of skin, eyes and clothing. In case of exposure immediately remove all contaminated clothing. If it is danger of loss of consciousness, place and transport in stable lateral position. In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

Procedure in case of:

- inhalation: move the victim to fresh air. If necessary administer oxygen or apply artificial respiration. In the case of a stronger poisoning seek medical advice.
- skin contact: Wash skin with water, then with soap and water. If skin irritation occurs: Get medical advice/attention.
- eye contact: wash immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.
- ingestion: do not induce vomiting unless specifically advised by a doctor. Wash mouth with water. Do not administer anything orally if the victim is unconscious.

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

No data.

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

Antidote: none.

Treat symptomatically. If swallowed, gastric lavage and administer activated charcoal.

The decision on how to proceed made by a doctor after examination of the injured.

**Section 5. FIREFIGHTING MEASURES**General recommendations:

Remove from the area all unauthorized personnel and persons not participating in elimination of the fire. Eliminate sources of ignition, do not smoke. If necessary call the Fire Service.

**5.1. Extinguishing media**Appropriate media:

Foam, dry chemicals, carbon dioxide; if necessary use water spray.

Unsuitable media:

High-volume water jet.

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

During fire dangerous gases may be evolved: nitrogen oxides, hydrogen chloride, carbon monoxide, sulfur oxides. Exposure to products of combustion may be a health hazard. Do not breathe fumes, gases or vapor.

**5.3. Advice for firefighters**

Use full protective clothing and a self-contained breathing apparatus. Isolate the exposed area. Isolate the water used for elimination of fire, do not allow it to enter sewers. Containers exposed to fire with water spray. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

**Section 6. ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

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## Section 6. ACCIDENTAL RELEASE MEASURES

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Use personal protective measures – protective clothing, protective gloves, face shield. Avoid contact with skin, eyes and clothing. Avoid contact with spilled or released material. Restrict access to the area of bystanders failure until completion of the appropriate cleaners.

### 6.2. Environmental precautions

Do not empty into drains. Do not allow the product to enter sewers, ditches or waterways. Use appropriate containment to avoid environmental contamination. In the case of environmental contamination notify the relevant services.

### 6.3. Methods and material for containment and cleaning up

Collect damaged containers and place in an airtight container replacement.

#### Small spillage:

Collect immediately by vacuum and place in appropriate waste container.

#### Large spillage:

Avoid formation of dust. Isolate the spillage area. Collect with an electrically secured vacuum or wet sweep and place in appropriate waste container. For proper cleanup wash the spillage area with plenty of water.

### 6.4. Reference to other sections

Dispose of in accordance with recommendations listed in Section 13 of the Safety Data Sheet. During cleanup use personal protective measures as indicated in Section 8.

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## Section 7. HANDLING AND STORAGE

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### 7.1. Precautions for safe handling

Follow the Occupational Safety and Health rules and regulations on handling chemicals. Use personal protective measures listed in Section 8. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wash hands thoroughly after handling. Take off contaminated clothing and wash before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

Store only in original containers, tightly closed in a dry, well-ventilated place at temperature not lower than 0 °C and not exceeding 30 °C. Store in a place inaccessible to unauthorized personnel. Keep away from children and animals. Do not store with food, drink or animal foodstuffs. Store away from heat and hot surfaces.

### 7.3. Specific end use(s)

Strictly follow the label-instruction of use of the plant protection product.

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## Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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### 8.1. Control parameters

#### Occupational Exposure Limits of mixture ingredients:

[Regulation of the Minister of Labor and Social Policy of 29 November 2002 concerning highest allowable concentrations and intensities of harmful agents in the work environment (J. of L. 2002 No. 217, item 1833) with later changes]

no recommendations

#### Occupational Exposure Limits of mixture ingredients recommended by the manufacturer:

no recommendations

### 8.2. Exposure controls

#### Personal protective measures

The need for and selection of appropriate security measures should take into account the type of threat posed by the product, workplace conditions and the treatment of the product. Wear protective reputable manufacturers.

- Eye / face protection: Tight-fitting goggles and face shield (type goggles, e.g. EN 166)
- Hands protection: when using the product in a professional activity, assuming frequent or prolonged exposure to hand protection must be used according to the selected operating conditions. Protective gloves recommended for handling chemicals (EN 374 e.g. nitrile rubber (0.4 mm), chloroprene rubber (0, 5 mm), butyl rubber (0.7 mm).
- Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, gas-tight and resistant to chemical-protection suit (according to EN 14605)
- Respiratory protection: avoid breathing vapor of the product or the prepared spray mixture; in case of insufficient ventilation wear breathing masks with appropriate filters or a self-contained breathing apparatus (filter with medium efficiency for solid and liquid particles e.g. EN 143 or 149, Type P2 I FFP2), filtering respirators to protect the respiratory tract, Type A filter material according to EN 136, 140 and 405).
- Thermal hazards: not present

Wash hands before every break and after work.

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**Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**


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Work only in well-ventilated rooms.  
Avoid contact with skin and eyes.

Environmental exposure controls

Do not empty into drains. Use containers to prevent the uncontrolled release into the environment of concentrate.

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**Section 9. PHYSICAL AND CHEMICAL PROPERTIES**


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

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|---|---|
| Appearance:                                   | Pure material: colourless crystals (99.5%)<br>Technical material: yellowish crystalline powder (purity not specified)   |
| Odor:   | characteristic  |
| Odor threshold:                               | Not determined  |
| pH of 1% aqueous solution:                    | Not determined  |
| Melting/Freezing point:                       | 105 °C (99.9%)  |
| Initial boiling point and boiling range:      | Thermal decomposition is reached before boiling point.  |
| Flash point:                                  | Not determined  |
| Evaporation rate:                             | Not determined  |
| Flammability:                                 | Not highly flammable  |
| Upper/lower flammability or explosive limits: | not applicable  |
| Vapor pressure:                               | Purity: 99.1%<br>1.3 × 10 <sup>-6</sup> Pa at 20 °C (extrapolated)<br>3.1 × 10 <sup>-6</sup> Pa at 25 °C (extrapolated) |
| Vapor density:                                | Not determined  |
| Relative density:                             | Not determined  |
| Solubility in water:                          | Temperature: 20 °C. Purity: 99.5%<br>38 mg/L at pH 5.3<br>36 mg/L at pH 7.2<br>36 mg/L at pH 9.4                        |
| Partition coefficient: n-octanol/water:       | log POW = 3.7 at 20 °C, pH 7 (purity 99.1 %)  |
| Auto-ignition temperature:                    | Not determined  |
| Decomposition temperature:                    | Not determined  |
| Viscosity:                                    | Not determined  |
| Explosive properties:                         | Not explosive   |
| Oxidizing properties:                         | No oxidizing properties   |

**9.2. Other information**

Surface tension = 64.26 mN/m at 20 °C and 28.8 mg/L (technical)

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**Section 10. STABILITY AND REACTIVITY**


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**10.1. Reactivity**

No reactivity under normal handling and storage conditions.

**10.2. Chemical stability**

Stable under normal handling and storage conditions.

**10.3. Possibility of hazardous reactions**

Hazardous reactions, including hazardous polymerization, do not take place.

**10.4. Conditions to avoid**

Avoid temperatures beyond the recommended storage range. Protect from direct sunlight.

**10.5. Incompatible materials**

To be used only in accordance with the label-instruction of use. Use in mixtures with products other than recommended is prohibited.

**10.6. Hazardous decomposition products**

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## Section 10. STABILITY AND REACTIVITY

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Not determined. Hazardous products of thermal decomposition are described in Section 5.

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## Section 11. TOXICOLOGICAL INFORMATION

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### 11.1. Information on toxicological effects

Data concerning the substance:

Acute toxicity:

- oral (rat): LD50 = 1700 mg/kg bw
- dermal (rabbit): LD50 > 2000 mg/kg bw

Irritation:

- eyes (rabbit): Non-irritant to eyes
- skin (rabbit): Non-irritant to skin

Corrosion:

- skin *in vitro* (rat): non-corrosive to skin

Sensitization:

- skin (guinea pig): Non-sensitizer (Magnusson & Kligman)

**Caustic effect:** not applicable.

**Sensitization:** the product is not sensitizing.

**Carcinogenicity:** the product is not carcinogenicity.

**Mutagenicity:** the product is not mutagenic

**Reproductive toxicity:** tebuconazole - identified component causing harmful to reproduction in category 2.

**Operation target organ toxicity - single exposure:**

It is unlikely that the product under normal conditions of use and handling of him, causing harmful effects.

**Operation target organ toxicity - repeated exposure:**

It is unlikely that the product under normal conditions of use and handling of him, causing harmful effects.

**Information on likely routes of exposure - WARNING! The product is not fully explored!**

**Skin contact :** may cause irritation, skin sensitization

**Skin absorption:** may be harmful if absorbed through the skin

**Eye contact:** may cause irritation of the eyes

**Inhalation:** may be irritating to mucous membranes and upper respiratory tract

**Ingestion:** harmful if swallowed

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## Section 12. ECOLOGICAL INFORMATION

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### 12.1. Toxicity

Data concerning the substance:

Toxicity for water organisms:

- fish (*Oncorhynchus mykiss*): LC50 = 4.4 mg a.s./L
- daphnia (*Daphnia magna* Straus): EC50 = 2.79 mg a.s./L
- algae (*Pseudokircheriella subcapitata*): EbC50 = 2.83 mg a.s./L  
ErC50 = 3.80 mg a.s./L

### 12.2. Persistence and degradability

Tebuconazole: DT50 soil = 34,8 d

DT50 water = 365 d

### 12.3. Bioaccumulative potential

Tebuconazole: BCF = 78

### 12.4. Mobility in soil

Tebuconazole: Koc = 769 ml/g

### 12.5. Results of PBT and vPvB assessment

None of the mixture ingredients is included in the ECHA candidate list of PBT or vPvB substances.

### 12.6. Other adverse effects

Information pointing to other adverse effects of use of the mixture is not available.

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## Section 13. DISPOSAL CONSIDERATIONS

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### 13.1. Waste treatment methods

#### Disposal of product waste:

Do not empty into drains. Do not contaminate surface waters (ponds, water ways, ditches). Dispose of as hazardous material.

European Waste Code: 02 01 08 Agrochemical waste containing dangerous substances, including plant protection products of I and II toxicity class (very toxic and toxic).

#### Disposal of containers:

Triple rinse empty product containers and place the rinsate in the spray tank. Do not re-use empty containers for any purpose, including recycling. Return empty product containers to the product supplier. Dispose of as hazardous material.

It is forbidden to burn packages of the plant protection product on its own.

**DO NOT USE EMPTIED PACKAGING PLANT PROTECTION PRODUCTS FOR OTHER PURPOSES, INCLUDING THEIR TREATMENT AS A RECYCLING**

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## Section 14. TRANSPORT INFORMATION

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#### Land transport ADR/RID:

**14.1. UN number:** no data

**14.2. UN proper shipping name:** no data

**14.3. Transport hazard class(es):** no data

**14.4. Packaging group:** no data

**14.5. Environmental hazards:** no data

**14.6. Special precautions for user:** no data

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable.

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## Section 15. REGULATORY INFORMATION

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

#### Legislation:

- REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ of the EU L 396), with later changes
- REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ of the EU L 353), with later changes
- DIRECTIVE 1999/45/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labeling of dangerous preparations (OJ of the EU L 200), with later changes
- BILL on chemical substances and mixtures (J. of L. 2011 No. 63, item 322), with later changes
- The European AGREEMENT concerning the International Carriage of Dangerous Goods by Road (ADR), version in force since 01.01.2011
- ORDINANCE of the Minister of Economy, Labor and Social Policy No. 1 of 12.02.2003 regarding ADR; ORDINANCE of the Minister of Economy and Labor No. 8 of 21.07.2004 regarding RID
- REGULATION of the Minister of Labor and Social Policy of 29 November 2002 concerning highest allowable concentrations and intensities of harmful agents in the work environment (J. of L. 2002 No. 217, item 1833) with later changes
- BILL of 11 May 2001 on packaging and packaging waste (J. of L. 2001 No. 63, item 638), with later changes
- REGULATION of the Minister of Environment of 27 September 2001 concerning waste catalogue (J. of L. 2001 No. 112, item 1206), with later changes
- REGULATION of the Minister of Labor and Social Policy of 31 May 2003 concerning basic requirements for personal protective equipment (J. of L. 2003 No. 80, item 725), with later changes
- REGULATION of the Minister of Labor and Social Policy of 26 September 1997 concerning general regulations on occupational safety and health (J. of L. 1997 No. 129, item 844), with later changes
- REGULATION (EC) No 1107/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC
- Act of 18 December 2003 r. on the plant protection (J. of L. 2004 No. 11, item. 94 with later changes)

### 15.2. Chemical safety assessment

It is not required.

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## Section 16. OTHER INFORMATION

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Changes introduced at revision of the Safety Data Sheet:

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Sources of data for preparation of the Safety Data Sheet:

This document is prepared according to results of manufacturer's own studies, as well as based on information supplied by manufacturers of ingredients of the formulation and data on ingredients of the formulation available at EU level.

Symbols and H-phrases used in Section 3 and not included in Section 2:

Aquatic Chronic – chronic risk to aquatic environment

Aquatic Acute – acute risk to aquatic environment

Acute Tox. – acute toxicity

Eye Irrit. – irritation to eye

Skin Irrit. – irritation to skin

Other abbreviations and acronyms:

DT50 - period required for 50 percent disappearance (define method of estimation)

ER50 - emergence rate/effective rate, median

ErC50 - effective concentration (growth rate)

EC50 - effective concentration

CAS - Chemical Abstract Service

BCF - bioconcentration factor

AOEL - acceptable operator exposure level

a.s. - active substance

bw - body weight

LC50 - lethal concentration, median

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Data included in this Safety Data Sheet is based on current knowledge and applies to the product in its formulation of use. This information is intended exclusively as guidance on safe handling, transport, use, storage and waste disposal and is not to be identified with a warranty or a quality certificate. The user is responsible for consequences resulting from inadequate use of information presented in this Safety Data Sheet or from inappropriate use of this product.