

**RIDOMIL GOLD FLO 537.5 SC**

Version 2.0      Revision Date: 19.10.2022      SDS Number: S160722210      This version replaces all previous versions.

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Trade name : RIDOMIL GOLD FLO 537.5 SC  
Design code : A9652B

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

Use of the Substance/Mixture : Fungicide

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

Company : Syngenta SA (Pty) Ltd  
P.O. Box 1044, No. 4 Krokodil drift Avenue  
Brits 0250  
South Africa  
  
Telephone : +27 (0)12 2506 300  
  
Telefax : -  
  
E-mail address of person responsible for the SDS : sds.ame@syngenta.com

**1.4 Emergency telephone number**

Emergency telephone number : +27 (0) 82 446 8946 (Griffon)

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**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**


Acute toxicity, Category 4	H332: Harmful if inhaled.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Sub-category 1A	H317: May cause an allergic skin reaction.
Carcinogenicity, Category 2	H351: Suspected of causing cancer.
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

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### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

- Hazard pictograms : 
- Signal word : Warning
- Hazard statements : H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H351 Suspected of causing cancer.  
H410 Very toxic to aquatic life with long lasting effects.
- Precautionary statements : P102 Keep out of reach of children.  
P201 Obtain special instructions before use.  
P261 Avoid breathing spray.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P302 + P352 IF ON SKIN: Wash with plenty of water.  
P304 + P340 IF INHALED: Remove person to fresh air and keep 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.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P391 Collect spillage.  
P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
chlorothalonil (ISO)	1897-45-6 217-588-1 608-014-00-4 01-2120878537-37-xxxx	Acute Tox. 2; H330 Eye Dam. 1; H318 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335	>= 30 - < 50

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		(Respiratory system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410	
		M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	
metalaxyl-M (ISO)	70630-17-0 612-163-00-0	Acute Tox. 4; H302 Eye Dam. 1; H318	$\geq 1 - < 3$
poly(oxy-1,2-ethanediyl), alpha-[tris(1-phenylethyl)phenyl]-omega-hydroxy-	99734-09-5	Aquatic Chronic 3; H412	$\geq 1 - < 2,5$
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6 01-2120761540-60-xxxx	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411	$\geq 0,025 - < 0,05$
		M-Factor (Acute aquatic toxicity): 1	

For explanation of abbreviations see section 16.

**SECTION 4: First aid measures**
**4.1 Description of first aid measures**

- General advice : Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.
- If inhaled : Move the victim to fresh air.  
If breathing is irregular or stopped, administer artificial respiration.  
Keep patient warm and at rest.  
Call a physician or poison control centre immediately.
- In case of skin contact : Take off all contaminated clothing immediately.  
Wash off immediately with plenty of water.  
If skin irritation persists, call a physician.  
Wash contaminated clothing before re-use.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

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Remove contact lenses.  
Immediate medical attention is required.

If swallowed : If swallowed, seek medical advice immediately and show this container or label.  
Do NOT induce vomiting.

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

Symptoms : Nonspecific  
No symptoms known or expected.

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

Treatment : There is no specific antidote available.  
Treat symptomatically.

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**SECTION 5: Firefighting measures****5.1 Extinguishing media**

Suitable extinguishing media : Extinguishing media - small fires  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
Extinguishing media - large fires  
Alcohol-resistant foam  
or  
Water spray

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

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

Specific hazards during firefighting : As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).  
Exposure to decomposition products may be a hazard to health.

**5.3 Advice for firefighters**

Special protective equipment for firefighters : Wear full protective clothing and self-contained breathing apparatus.

Further information : Do not allow run-off from fire fighting to enter drains or water courses.  
Cool closed containers exposed to fire with water spray.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Refer to protective measures listed in sections 7 and 8.

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### 6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Do not flush into surface water or sanitary sewer system.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).  
Clean contaminated surface thoroughly.  
Clean with detergents. Avoid solvents.  
Retain and dispose of contaminated wash water.

### 6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : No special protective measures against fire required.  
Avoid contact with skin and eyes.  
When using do not eat, drink or smoke.  
For personal protection see section 8.

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

Requirements for storage areas and containers : No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

### 7.3 Specific end use(s)

Specific use(s) : For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
chlorothalonil (ISO)	1897-45-6	TWA	0,1 mg/m <sup>3</sup>	Syngenta
metalaxyl-M (ISO)	70630-17-0	TWA	5 mg/m <sup>3</sup>	Syngenta

#### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
chlorothalonil (ISO)	Workers	Dermal	Long-term systemic	0,377 mg/kg

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			effects	bw/day
	Workers	Inhalation	Long-term systemic effects	0,322 mg/m <sup>3</sup>
	Consumers	Oral	Long-term systemic effects	0,05 mg/kg bw/day
	Consumers	Dermal	Long-term systemic effects	0,135 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,057 mg/m <sup>3</sup>
propane-1,2-diol	Workers	Inhalation	Long-term systemic effects	168 mg/m <sup>3</sup>
	Consumers	Inhalation	Long-term local effects	10 mg/m <sup>3</sup>
	Consumers	Inhalation	Long-term systemic effects	30 mg/m <sup>3</sup>
	Workers	Inhalation	Long-term local effects	10 mg/m <sup>3</sup>
1,2-benzisothiazol-3(2H)-one	Workers	Inhalation	Long-term systemic effects	6,81 mg/m <sup>3</sup>
	Workers	Dermal	Long-term systemic effects	0,966 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1,2 mg/m <sup>3</sup>
	Consumers	Dermal	Long-term systemic effects	0,345 mg/kg

### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
chlorothalonil (ISO)	Fresh water	0,00014 mg/l
	Freshwater - intermittent	0,00013 mg/l
	Marine water	0,000004 mg/l
	Marine water - intermittent	0,000007 mg/l
	Sewage treatment plant	1 mg/kg
	Marine sediment	0,001 mg/kg
	Fresh water sediment	0,05 mg/kg
	Soil	1,2 mg/kg
	propane-1,2-diol	Fresh water
Marine water		26 mg/l
Intermittent use/release		183 mg/l
Sewage treatment plant		20000 mg/l
Marine sediment		57,2 mg/kg
Fresh water sediment		572 mg/kg
1,2-benzisothiazol-3(2H)-one	Soil	50 mg/kg
	Fresh water	0,00403 mg/l
	Marine water	0,000403 mg/l
	Sewage treatment plant	1,03 mg/l
	Fresh water sediment	0,0499 mg/kg
	Marine sediment	0,00499 mg/kg
	Freshwater - intermittent	0,0011 mg/l
	Marine water - intermittent	0,000110 mg/l
Soil	3 mg/kg	

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### 8.2 Exposure controls

#### Engineering measures

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure standards.  
Where necessary, seek additional occupational hygiene advice.

#### Personal protective equipment

- |                          |   |   |
|--------------------------|---|---|
| Eye/face protection      | : | Tightly fitting safety goggles<br>Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.  |
| Hand protection          |   |   |
| Material                 | : | Nitrile rubber  |
| Break through time       | : | > 480 min   |
| Glove thickness          | : | 0,5 mm  |
| Remarks                  | : | Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. 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. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. |
| Skin and body protection | : | Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.<br>Remove and wash contaminated clothing before re-use.<br>Wear as appropriate:<br>Impervious clothing   |
| Respiratory protection   | : | When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.<br>Suitable respiratory equipment:<br>Respirator with a half face mask<br>The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.  |
| Protective measures      | : | The use of technical measures should always have priority over the use of personal protective equipment.<br>When selecting personal protective equipment, seek appropriate professional advice.   |

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**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Appearance	:	liquid
Colour	:	beige to grey
Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	5 - 9 Concentration: 1 % w/v
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	Method: Pensky-Martens closed cup does not flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	1,26 g/cm <sup>3</sup> (20 °C)
Solubility(ies)		
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	485 °C
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	83,1 - 199 mPa.s (20 °C) 66,3 - 165 mPa.s (40 °C)
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive



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Oxidizing properties : The substance or mixture is not classified as oxidizing.

### 9.2 Other information

Surface tension : 40,0 mN/m, 20 °C

Particle size : No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

None reasonably foreseeable.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

### 10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

### 10.5 Incompatible materials

Materials to avoid : None known.

### 10.6 Hazardous decomposition products

Hazardous decomposition products : No hazardous decomposition products are known.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Information on likely routes of exposure : Ingestion  
Inhalation  
Skin contact  
Eye contact

#### Acute toxicity

##### Product:

Acute oral toxicity : LD50 (Rat, female): > 2.000 - < 3.000 mg/kg  
Assessment: The component/mixture is minimally toxic after single ingestion.

Acute inhalation toxicity : LC50 (Rat, male and female): > 1,20 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The component/mixture is moderately toxic after short term inhalation., The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.

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Acute dermal toxicity : LD50 (Rat, male and female): > 4.000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

**Components:****chlorothalonil (ISO):**

Acute oral toxicity : LD50 (Rat, male and female): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): 0,10 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute toxicity estimate: 0,1 mg/l  
Test atmosphere: dust/mist  
Method: Calculation method

Acute dermal toxicity : LD50 (Rat, male and female): > 5.000 mg/kg

**metalaxyl-M (ISO):**

Acute oral toxicity : LD50 (Rat, female): 375 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 2,29 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: Highest attainable concentration

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

**1,2-benzisothiazol-3(2H)-one:**

Acute oral toxicity : LD50 (Rat, male): 670 mg/kg

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation****Product:**

Species : Rabbit  
Result : Irritating to skin.

**Components:****chlorothalonil (ISO):**

Species : Rabbit  
Result : No skin irritation

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**metalaxyl-M (ISO):**

Species : Rabbit  
Result : No skin irritation

**1,2-benzisothiazol-3(2H)-one:**

Species : Rabbit  
Result : Mild skin irritation

**Serious eye damage/eye irritation****Product:**

Species : Rabbit  
Result : Eye irritation

**Components:****chlorothalonil (ISO):**

Species : Rabbit  
Result : Risk of serious damage to eyes.

**metalaxyl-M (ISO):**

Species : Rabbit  
Result : Risk of serious damage to eyes.

**1,2-benzisothiazol-3(2H)-one:**

Species : Rabbit  
Result : Risk of serious damage to eyes.

**Respiratory or skin sensitisation****Product:**

Test Type : Maximisation Test  
Species : Guinea pig  
Result : The product is a skin sensitiser, sub-category 1A.

**Components:****chlorothalonil (ISO):**

Species : Guinea pig  
Result : May cause sensitisation by skin contact.  
Remarks : In very rare cases may cause an allergic response of the respiratory system.

**metalaxyl-M (ISO):**

Species : Guinea pig  
Result : Did not cause sensitisation on laboratory animals.

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### 1,2-benzisothiazol-3(2H)-one:

Result : Probability or evidence of skin sensitisation in humans

### Germ cell mutagenicity

#### Components:

#### chlorothalonil (ISO):

Germ cell mutagenicity-Assessment : Animal testing did not show any mutagenic effects.

#### metalaxyl-M (ISO):

Germ cell mutagenicity-Assessment : Animal testing did not show any mutagenic effects.

### 1,2-benzisothiazol-3(2H)-one:

Germ cell mutagenicity-Assessment : Weight of evidence does not support classification as a germ cell mutagen.

### Carcinogenicity

#### Components:

#### chlorothalonil (ISO):

Carcinogenicity - Assessment : Chlorothalonil causes kidney tumours in rats and mice via a non-gentoxic mode of action secondary to target organ toxicity.  
,Limited evidence of carcinogenicity in animal studies

#### metalaxyl-M (ISO):

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

### Reproductive toxicity

#### Components:

#### chlorothalonil (ISO):

Reproductive toxicity - Assessment : No toxicity to reproduction

#### metalaxyl-M (ISO):

Reproductive toxicity - Assessment : No toxicity to reproduction

### STOT - single exposure

#### Components:

#### chlorothalonil (ISO):

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

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### STOT - repeated exposure

#### Components:

##### **chlorothalonil (ISO):**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

##### **metalaxyl-M (ISO):**

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,09 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,58 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 57 mg/l  
Exposure time: 72 h

EC10 (Raphidocelis subcapitata (freshwater green alga)): 12 mg/l  
End point: Growth rate  
Exposure time: 72 h

NOEC (Raphidocelis subcapitata (freshwater green alga)): 6,3 mg/l  
End point: Growth rate  
Exposure time: 72 h

#### Components:

##### **chlorothalonil (ISO):**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,039 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,07 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Navicula pelliculosa (Freshwater diatom)): 0,02 mg/l  
Exposure time: 96 h

NOEC (Navicula pelliculosa (Freshwater diatom)): 0,0035 mg/l  
End point: Growth rate  
Exposure time: 96 h

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- ErC50 (*Skeletonema costatum* (marine diatom)): 0,017 mg/l  
Exposure time: 96 h
- NOEC (*Skeletonema costatum* (marine diatom)): 0,012 mg/l  
End point: Growth rate  
Exposure time: 96 h
- M-Factor (Acute aquatic toxicity) : 10
- Toxicity to fish (Chronic toxicity) : NOEC: 0,003 mg/l  
Exposure time: 297 d  
Species: *Pimephales promelas* (fathead minnow)
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,035 mg/l  
Exposure time: 21 d  
Species: *Daphnia magna* (Water flea)
- NOEC: 0,00083 mg/l  
Exposure time: 28 d  
Species: *Americamysis*
- M-Factor (Chronic aquatic toxicity) : 10
- metalaxyl-M (ISO):**
- Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 100 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 100 mg/l  
Exposure time: 48 h
- Toxicity to algae/aquatic plants : ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 271 mg/l  
Exposure time: 96 h
- NOEC (*Raphidocelis subcapitata* (freshwater green alga)): 19,7 mg/l  
End point: Growth rate  
Exposure time: 96 h
- Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l  
Exposure time: 3 h
- Toxicity to fish (Chronic toxicity) : NOEC: 50 mg/l  
Exposure time: 28 d  
Species: *Oncorhynchus mykiss* (rainbow trout)
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 25 mg/l  
Exposure time: 21 d  
Species: *Daphnia magna* (Water flea)

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### poly(oxy-1,2-ethanediyl), alpha-[tris(1-phenylethyl)phenyl]-omega-hydroxy-:

#### Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

#### 1,2-benzisothiazol-3(2H)-one:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2,18 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,94 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 0,15 mg/l  
Exposure time: 72 h

EC10 (Raphidocelis subcapitata (freshwater green alga)): 0,04 mg/l  
End point: Growth rate  
Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC: 0,3 mg/l  
Exposure time: 28 d  
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 1,7 mg/l  
Exposure time: 21 d  
Species: Daphnia (water flea)

## 12.2 Persistence and degradability

#### Components:

##### chlorothalonil (ISO):

Stability in water : Degradation half life: < 5 d (20 °C)  
Remarks: Product is not persistent.

##### metalaxyl-M (ISO):

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 22,4 - 47,5 d  
Remarks: Product is not persistent.

##### 1,2-benzisothiazol-3(2H)-one:

Biodegradability : Result: rapidly degradable

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### 12.3 Bioaccumulative potential

#### Components:

##### **chlorothalonil (ISO):**

Bioaccumulation : Remarks: Low bioaccumulation potential.

Partition coefficient: n-octanol/water : log Pow: 2,94 (25 °C)

##### **metalaxyl-M (ISO):**

Bioaccumulation : Remarks: Low bioaccumulation potential.

Partition coefficient: n-octanol/water : log Pow: 1,71 (25 °C)

##### **1,2-benzisothiazol-3(2H)-one:**

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

### 12.4 Mobility in soil

#### Components:

##### **chlorothalonil (ISO):**

Distribution among environmental compartments : Remarks: Chlorothalonil has low to slight mobility in soil.

Stability in soil : Dissipation time: 7 d  
Percentage dissipation: 50 % (DT50)  
Remarks: Product is not persistent.

##### **metalaxyl-M (ISO):**

Distribution among environmental compartments : Remarks: Metalaxyl has a range from low to very high mobility in soil depending on soil type.

Stability in soil : Dissipation time: < 50 d  
Percentage dissipation: 50 % (DT50)  
Remarks: Product is not persistent.

### 12.5 Results of PBT and vPvB assessment

#### Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

#### Components:

##### **chlorothalonil (ISO):**

Assessment : This substance is not considered to be very persistent and very bioaccumulating (vPvB).. This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

##### **metalaxyl-M (ISO):**

Assessment : This substance is not considered to be persistent,



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bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

### 1,2-benzisothiazol-3(2H)-one:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

## 12.6 Other adverse effects

### Product:

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Do not contaminate ponds, waterways or ditches with chemical or used container.  
Do not dispose of waste into sewer.  
Where possible recycling is preferred to disposal or incineration.  
If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging : Empty remaining contents.  
Triple rinse containers.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.

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## SECTION 14: Transport information

### 14.1 UN number

UNRTDG : UN 3082  
IMDG : UN 3082  
IATA : UN 3082

### 14.2 UN proper shipping name

UNRTDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CHLOROTHALONIL)  
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

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**IATA** : N.O.S.  
(CHLOROTHALONIL)  
: Environmentally hazardous substance, liquid, n.o.s.  
(CHLOROTHALONIL)

### 14.3 Transport hazard class(es)

**UNRTDG** : 9  
**IMDG** : 9  
**IATA** : 9

### 14.4 Packing group

**UNRTDG**  
Packing group : III  
Labels : 9  
**IMDG**  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F

**IATA (Cargo)**  
Packing instruction (cargo aircraft) : 964  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous

**IATA (Passenger)**  
Packing instruction (passenger aircraft) : 964  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous

### 14.5 Environmental hazards

**IMDG**  
Marine pollutant : yes  
**IATA (Passenger)**  
Environmentally hazardous : yes  
**IATA (Cargo)**  
Environmentally hazardous : yes

### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

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### SECTION 15: Regulatory information

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

##### Other regulations:

None known.

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

### SECTION 16: Other information

#### Full text of H-Statements

H302	:	Harmful if swallowed.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H330	:	Fatal if inhaled.
H335	:	May cause respiratory irritation.
H351	:	Suspected of causing cancer.
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.
H412	:	Harmful to aquatic life with long lasting effects.

#### Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Carc.	:	Carcinogenicity
Eye Dam.	:	Serious eye damage
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT SE	:	Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -

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International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

### Further information

#### Classification of the mixture:

Acute Tox. 4	H332
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Skin Sens. 1A	H317
Carc. 2	H351
STOT SE 3	H335
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

#### Classification procedure:

Based on product data or assessment
Based on product data or assessment
Based on product data or assessment
Based on product data or assessment
Calculation method
Calculation method
Based on product data or assessment
Calculation method

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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.

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