



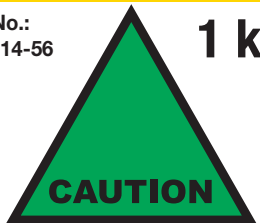
# Ridomil Gold<sup>®</sup>

## MZ 68 WG

syngenta<sup>®</sup>

Reg No.:  
05-B-14-56

1 kg



HARMFUL IF SWALLOWED

**Composition:** ..... m/m  
 Metalaxyl-M: ..... 4%  
 Mancozeb ..... 64%  
 Inert ingredients ..... 32%

**Chemical groups:**

Metalaxyl: phenylamide  
 Mancozeb: dithiocarbamate

**Manufacturer:**

Syngenta Crop Protection AG,  
 Basel, Switzerland

Ridomil Gold<sup>®</sup> MZ 68 WG is a systemic and contact fungicide for the control of late blight (*Phytophthora infestans*) on potatoes and tomatoes and downy mildew on vegetables and roses.

**Registered by:**

**Syngenta Agro SA**  
 32 Sandringham Drive,  
 Alexandra Park, Harare.  
 Tel.: 08677005432 /  
 08677005434

1 kg

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**RIDOMIL GOLD MZ WG**

Version 4 - This version replaces all previous versions.

Revision Date 11.04.2012

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**SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier**Product name : **RIDOMIL GOLD MZ WG**

Design code : A9651E

**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**Company : Syngenta Crop Protection AG  
Postfach  
CH-4002 Basel  
Switzerland

Telephone : +41 61 323 11 11

Telefax : +41 61 323 12 12

E-mail address : sds.ch@syngenta.com

**1.4 Emergency telephone number****Emergency tele-  
phone number** : +44 1484 538444**SECTION 2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

Classification according to Regulation (EU) 1272/2008

Reproductive toxicity	Category 2	H361d
Skin sensitization	Sub-category 1B	H317
Specific target organ toxicity - single exposure	Category 3	H335
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 1	H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

N, Dangerous for the environment

Xn, Harmful

R43: May cause sensitization by skin contact.

R37: Irritating to respiratory system.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R63: Possible risk of harm to the unborn child.

## RIDOMIL GOLD MZ WG

Version 4 - This version replaces all previous versions.

Revision Date 11.04.2012

Print Date 11.04.2012

### 2.2 Label elements

Labelling: Regulation (EC) No. 1272/2008

#### Hazard pictograms



Signal word	:	Warning	
Hazard statements	:	H317 H335 H361d H410	May cause an allergic skin reaction. May cause respiratory irritation. Suspected of damaging the unborn child. Very toxic to aquatic life with long lasting effects.
Precautionary statements	:	P102 P261 P270 P280 P302 + P352 P304 + P340  P308 + P313  P391 P501	Keep out of reach of children. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Do not eat, drink or smoke when using this product. Wear protective gloves/ protective clothing. IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF exposed or concerned: Get medical advice/ attention. Collect spillage. Dispose of contents/ container to an approved waste disposal plant.
Supplemental information	:	EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

Hazardous components which must be listed on the label:

- mancozeb

Labelling: EU Directives 67/548/EEC or 1999/45/EC

#### Symbol(s)



**Dangerous  
for the envi-  
ronment**



**Harmful**

R-phrases(s)	:	R43 R37 R50/53  R63	May cause sensitization by skin contact. Irritating to respiratory system. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of harm to the unborn child.
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## RIDOMIL GOLD MZ WG

Version 4 - This version replaces all previous versions.

Revision Date 11.04.2012

Print Date 11.04.2012

S-phrase(s) : S 2 Keep out of the reach of children.  
 S13 Keep away from food, drink and animal feedingstuffs.  
 S20/21 When using do not eat, drink or smoke.  
 S35 This material and its container must be disposed of in a safe way.  
 S36/37 Wear suitable protective clothing and gloves.  
 S57 Use appropriate container to avoid environmental contamination.

**Additional Labelling** : To avoid risks to man and the environment, comply with the instructions for use.

Hazardous components which must be listed on the label:

- mancozeb

### 2.3 Other hazards

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

#### Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration
mancozeb	8018-01-7	N, Xn R43 R50 R63	Repr.2; H361d Skin Sens.1; H317 Aquatic Acute1; H400	64 % W/W
metalaxyl-M	70630-17-0	Xn R22 R41	Acute Tox.4; H302 Eye Dam.1; H318	4 % W/W

Substances for which there are Community workplace exposure limits.

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

**RIDOMIL GOLD MZ WG**

Version 4 - This version replaces all previous versions.

Revision Date 11.04.2012

Print Date 11.04.2012

**SECTION 4. FIRST AID MEASURES****4.1 Description of first aid measures**

- General advice : Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control center or physician, or going for treatment.
- Inhalation : 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.
- 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.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Remove contact lenses.  
Immediate medical attention is required.
- Ingestion : 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 : No information available.

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

- Medical advice : There is no specific antidote available.  
Treat symptomatically.

**SECTION 5. FIREFIGHTING MEASURES****5.1 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

Do not use a solid water stream as it may scatter and spread fire.

**RIDOMIL GOLD MZ WG**

Version 4 - This version replaces all previous versions.

Revision Date 11.04.2012

Print Date 11.04.2012

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

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**

Wear full protective clothing and self-contained breathing apparatus.

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**

Refer to protective measures listed in sections 7 and 8.  
Avoid dust formation.

**6.2 Environmental precautions**

Do not flush into surface water or sanitary sewer system.

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

Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

Do not create a powder cloud by using a brush or compressed air.  
Clean contaminated surface thoroughly.

If the product contaminates rivers and lakes or drains inform respective authorities.

**6.4 Reference to other sections**

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

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## RIDOMIL GOLD MZ WG

Version 4 - This version replaces all previous versions.

Revision Date 11.04.2012

Print Date 11.04.2012

### SECTION 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Potential for spontaneous combustion.  
To avoid thermal decomposition, do not overheat.  
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

This material can be thermally unstable at elevated temperatures. The material is thermally stable at normal ambient temperatures as packaged. Store the material away from sources of heat such as steam pipes, radiators or heaters. Maintain an air gap between individual packages. Do not repack into larger volume packages. Do not bulk-up in silos, storage bins or hoppers without considering the potential product degradation/decomposition problem. Further advice is available from Syngenta. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

Storage temperature : &lt; 35 °C

#### 7.3 Specific end uses

Registered Crop Protection products: 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

Components	Exposure limit(s)	Type of exposure limit	Source
mancozeb	1 mg/m <sup>3</sup>	8 h TWA	SUPPLIER
metalaxyl-M	10 mg/m <sup>3</sup>	8 h TWA	SYNGENTA

The following recommendations for exposure controls/personal protection are intended for the manufacture, formulation and packaging of the product.

## RIDOMIL GOLD MZ WG

Version 4 - This version replaces all previous versions.

Revision Date 11.04.2012

Print Date 11.04.2012

### 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.  
If airborne dust is generated, use local exhaust ventilation controls.  
Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit.  
Where necessary, seek additional occupational hygiene advice.
- Protective measures : The use of technical measures should always have priority over the use of personal protective equipment.  
When selecting personal protective equipment, seek appropriate professional advice.  
Personal protective equipment should be certified to appropriate standards.
- Respiratory protection : No personal respiratory protective equipment normally required.  
A particulate filter respirator may be necessary until effective technical measures are installed.
- Hand protection : Chemical resistant gloves should be used.  
Gloves should be certified to an appropriate standard.  
Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure.  
The breakthrough time of gloves varies according to the thickness, material and manufacturer.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.  
Suitable material  
Nitrile rubber
- Eye protection : Eye protection is not usually required.  
Follow any site specific eye protection policies.
- Skin and body protection : Assess the exposure and select chemical resistant clothing based on the potential for contact and the permeation / penetration characteristics of the clothing material.  
Wash with soap and water after removing protective clothing.  
Decontaminate clothing before re-use, or use disposable equipment (suits, aprons, sleeves, boots, etc.)  
Wear as appropriate:  
Dust impervious protective suit

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- Physical state : solid  
Form : granules  
Colour : light yellow to light brown  
Odour : weak  
Odour Threshold : no data available



**RIDOMIL GOLD MZ WG**

Version 4 - This version replaces all previous versions.

Revision Date 11.04.2012

Print Date 11.04.2012

pH	: 5 - 9 at 1 % w/v
Melting point/range	: no data available
Boiling point/boiling range	: no data available
Flash point	: no data available
Evaporation rate	: no data available
Flammability (solid, gas)	: not highly flammable
Lower explosion limit	: no data available
Upper explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Density	: no data available
Solubility in other solvents	: not soluble

Partition coefficient: n-octanol/water	: no data available
Autoignition temperature	: 190 °C
Thermal decomposition	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
Explosive properties	: Not explosive
Oxidizing properties	: not oxidizing

**9.2 Other information**

Dust explosion class	: Forms flammable dust clouds.
Minimum ignition energy	: 0.001 - 2 kJ
Bulk density	: 0.45 - 0.65 g/cm <sup>3</sup>
Miscibility	: Miscible
Surface tension	: 57.8 mN/m at 20 °C

**SECTION 10. STABILITY AND REACTIVITY****10.1 Reactivity**

No information available.

**10.2 Chemical stability**

No information available.

**10.3 Possibility of hazardous reactions**

None known.  
Hazardous polymerisation does not occur.

**10.4 Conditions to avoid**

No information available.

**RIDOMIL GOLD MZ WG**

Version 4 - This version replaces all previous versions.

Revision Date 11.04.2012

Print Date 11.04.2012

**10.5 Incompatible materials**

No information available.

**10.6 Hazardous decomposition products**

Combustion or thermal decomposition will evolve toxic and irritant vapors.

**SECTION 11. TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects**

Acute oral toxicity	:	LD50 female rat, > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 male and female rat, > 5.13 mg/l , 4 h
Acute dermal toxicity	:	LD50 male and female rat, > 5,000 mg/kg
Skin corrosion/irritation	:	rabbit: Non-irritating
Serious eye damage/eye irritation	:	rabbit: Non-irritating
Germ cell mutagenicity		
mancozeb	:	Did not show mutagenic effects in animal experiments.
metalaxyl-M	:	Did not show mutagenic effects in animal experiments.
Carcinogenicity		
mancozeb	:	Did not show carcinogenic effects in animal experiments.
metalaxyl-M	:	Did not show carcinogenic effects in animal experiments.
Teratogenicity		
metalaxyl-M	:	Did not show teratogenic effects in animal experiments.
Reproductive toxicity		
mancozeb	:	Suspected of damaging the unborn child.
metalaxyl-M	:	Did not show reproductive toxicity effects in animal experiments.
STOT - single exposure	:	<b>May cause respiratory irritation.</b>
STOT - repeated exposure		
mancozeb	:	No adverse effect has been observed in chronic toxicity tests.
metalaxyl-M	:	No adverse effect has been observed in chronic toxicity tests.

**SECTION 12. ECOLOGICAL INFORMATION****12.1 Toxicity**

Toxicity to fish	:	LC50 Cyprinus carpio (Carp), 23 mg/l , 96 h
Toxicity to aquatic invertebrates	:	EC50 Daphnia magna (Water flea), 0.8 mg/l , 48 h

**RIDOMIL GOLD MZ WG**

Version 4 - This version replaces all previous versions.

Revision Date 11.04.2012

Print Date 11.04.2012

- Toxicity to aquatic plants : EbC50 Pseudokirchneriella subcapitata (green algae), 0.09 mg/l , 72 h  
: ErC50 Pseudokirchneriella subcapitata (green algae), 0.2 mg/l , 72 h

**12.2 Persistence and degradability**

## Stability in water

- mancozeb : Degradation half life: 5.8 - 55 h  
Not persistent in water.  
metalaxyl-M : Degradation half life: 22.4 - 47.5 d  
Not persistent in water.

## Stability in soil

- mancozeb : Degradation half life: 6 - 15 h  
Not persistent in soil.  
metalaxyl-M : Degradation half life: < 50 d  
Not persistent in soil.

**12.3 Bioaccumulative potential**

- mancozeb : Does not bioaccumulate.  
metalaxyl-M : Low bioaccumulation potential.

**12.4 Mobility in soil**

- mancozeb : Low mobility in soil.  
metalaxyl-M : Metalaxyl has a range from low to very high mobility in soil depending on soil type.

**12.5 Results of PBT and vPvB assessment**

- mancozeb : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).  
This substance is considered to be very persistent and very bioaccumulating (vPvB).  
metalaxyl-M : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).  
This substance is considered to be very persistent and very bioaccumulating (vPvB).

**12.6 Other adverse effects**

None known.

**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.

**RIDOMIL GOLD MZ WG**

Version 4 - This version replaces all previous versions.

Revision Date 11.04.2012

Print Date 11.04.2012

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.

**SECTION 14. TRANSPORT INFORMATION****Land transport (ADR/RID)**

**14.1 UN number:** UN 3077  
**14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (MANCOZEB)  
**14.3 Transport hazard class(es):** 9  
**14.4 Packing group:** III  
Labels: 9  
**14.5 Environmental hazards :** Environmentally hazardous

**Sea transport(IMDG)**

**14.1 UN number:** UN 3077  
**14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (MANCOZEB)  
**14.3 Transport hazard class(es):** 9  
**14.4 Packing group:** III  
Labels: 9  
**14.5 Environmental hazards :** Marine pollutant

**Air transport (IATA-DGR)**

**14.1 UN number:** UN 3077  
**14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (MANCOZEB)  
**14.3 Transport hazard class(es):** 9  
**14.4 Packing group:** III  
Labels: 9

**14.6 Special precautions for user**

none

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

not applicable

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

GHS-Labeling

## RIDOMIL GOLD MZ WG

Version 4 - This version replaces all previous versions.

Revision Date 11.04.2012

Print Date 11.04.2012

Hazard pictograms



Signal word	:	Warning
Hazard statements	:	<p>H313 May be harmful in contact with skin.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H335 May cause respiratory irritation.</p> <p>H361d Suspected of damaging the unborn child.</p> <p>H410 Very toxic to aquatic life with long lasting effects.</p>
Precautionary statements	:	<p>P102 Keep out of reach of children.</p> <p>P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P280 Wear protective gloves/ protective clothing.</p> <p>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P308 + P313 IF exposed or concerned: Get medical advice/ attention.</p> <p>P391 Collect spillage.</p> <p>P501 Dispose of contents/ container to an approved incineration plant.</p>
Supplemental information	:	<p>EUH401 To avoid risks to human health and the environment, comply with the instructions for use.</p>
Remarks	:	<p>Classified using all GHS hazard classes and categories. Where the GHS contains options, the most conservative option has been chosen.</p> <p>Regional or national implementations of GHS may not implement all hazard classes and categories.</p>

Hazardous components which must be listed on the label:

- mancozeb

### 15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

## SECTION 16. OTHER INFORMATION

### Further information

Full text of R-phrases referred to under sections 2 and 3:

R22	Harmful if swallowed.
R41	Risk of serious damage to eyes.
R43	May cause sensitization by skin contact.

**RIDOMIL GOLD MZ WG**

Version 4 - This version replaces all previous versions.

Revision Date 11.04.2012

Print Date 11.04.2012

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R50	Very toxic to aquatic organisms.
R63	Possible risk of harm to the unborn child.

Full text of H-Statements referred to under sections 2 and 3.

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
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.

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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