

FOLIO GOLD 537.5 SC

Version 3

Revision Date 06.09.2005

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT INFORMATION

Product name : FOLIO GOLD 537.5 SC
Design Code : A9652B
Use : Fungicide
Company : Syngenta Crop Protection AG
 Postfach
 CH-4002 Basel
 Switzerland
Telephone : +41 61 323 11 11
Telefax : +41 61 323 12 12
Emergency telephone number : +44 1484 538444



Harmful



Dangerous for the environment

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical Name	CAS-No.	EC-No.	Symbol(s)	R-phrase(s)	Concentration
metalaxyl-M	70630-17-0		Xn	R22 R41	3 % W/W
chlorothalonil	1897-45-6	217-588-1	T+, N	R26 R37 R40 R41 R43 R50/53	39.7 % W/W

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

3. Hazards identification

Harmful by inhalation.
 Irritating to eyes, respiratory system and skin.
 May cause sensitization by skin contact.
 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 Limited evidence of a carcinogenic effect.

4. 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.

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- Inhalation** : Remove to fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Keep patient warm and at rest.
Call a physician or Poison Control Center 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.
- Medical advice** : There is no specific antidote available. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

- 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
water spray
- Extinguishing media which must not be used for safety reasons** : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during fire fighting** : 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.
- Special protective equipment for fire-fighters** : In the event of fire, wear 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.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Refer to protective measures listed in sections 7 and 8.
- Environmental** : Prevent further leakage or spillage if safe to do so.

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- precautions** Do not flush into surface water or sanitary sewer system.
- Methods for cleaning up** : Contain and collect spillage 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).
- Additional advice** : If the product contaminates rivers and lakes or drains inform respective authorities.
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7. HANDLING AND STORAGE**HANDLING**

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

STORAGE

- 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 feed.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	Exposure limit(s)	Value type	Source
metalaxyl-M	10 mg/m ³	8 h TWA	SYNGENTA
chlorothalonil	0.1 mg/m ³	8 h TWA	SYNGENTA

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 mists or vapors are 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.

PERSONAL PROTECTIVE EQUIPMENT

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 : A particulate filter respirator may be necessary until effective technical measures are installed.
Protection provided by air-purifying respirators is limited.
Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

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 changed when breakthrough is suspected.
Suitable material
nitrile rubber

Eye protection : If eye contact is possible, use tight-fitting chemical safety goggles.

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:

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dust impervious protective suit

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: liquid
Colour	: beige to grey
pH	: 5 - 9 at 1 % w/v
Flash point	: ≥ 90 °C
Explosive properties	: Not explosive
Density	: 1.24 - 1.28 g/cm ³ at 20 °C
Water solubility	: Miscible
Viscosity, dynamic	: 83.1 - 199 mPa.s at 20 °C : 66.3 - 165 mPa.s at 40 °C
Surface tension	: 40.0 mN/m at 20 °C

10. STABILITY AND REACTIVITY

Hazardous decomposition products	: Combustion or thermal decomposition will evolve toxic and irritant vapors.
Hazardous reactions	: None known. Hazardous polymerization does not occur. Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: LD50 male Rat, > 3,000 mg/kg : LD50 female Rat, > 2,000 - < 3,000 mg/kg
Acute inhalation toxicity	: LC50 Rat, ca. 0.23 mg/l, 4 h
Acute dermal toxicity	: LD50 Rat, > 4,000 mg/kg
Skin irritation	: Rabbit: Irritant assessment according to 93/21/EEC
Eye irritation	: Rabbit: Irritant assessment according to 93/21/EEC

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Sensitization : Guinea Pig sensitizing assessment according to 93/21/EEC

Long term toxicity

Did not show mutagenic effects in animal experiments.
Chlorothalonil causes kidney tumours in rats and mice via a non-gentoxic mode of action secondary to target organ toxicity.
Did not show reproductive toxicity effects in animal experiments.
Did not show teratogenic effects in animal experiments.

This is not considered to be a risk to man when handled and used as directed on the label., This information refers to Chlorothalonil

12. ECOLOGICAL INFORMATION**ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)**

Bioaccumulation : Metalaxyl-M has low potential for bioaccumulation
Chlorothalonil has low potential for bioaccumulation

Stability in water : Metalaxyl-M is not persistent in water
Chlorothalonil is not persistent in water

Stability in soil : Metalaxyl-M is not persistent in soil.
Chlorothalonil is not persistent in soil.

Mobility : Metalaxyl-M has a range from low to very high mobility in soil depending on soil type.
Chlorothalonil has low to slight mobility in soil

ECOTOXICITY EFFECTS

Toxicity to fish : LC50 Salmo trutta (trout), 0.09 mg/l , 96 h

Toxicity to aquatic invertebrates : EC50 Daphnia magna (water flea), 0.58 mg/l , 48 h

Toxicity to algae : ERC50 Scenedesmus subspicatus (green algae), 57 mg/l , 72 h

13. DISPOSAL CONSIDERATIONS

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.

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

14. TRANSPORT INFORMATION**Land transport***ADR/ RID:*

UN-No: 3082
Class: 9
Danger Label Number : 9
Packaging group III
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(CHLOROTHALONIL)

Sea transport*IMDG:*

UN-No: 3082
Class: 9
Danger Label Number : 9
Packaging group: III
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(CHLOROTHALONIL)

Marine pollutant : Marine pollutant

Air transport*IATA-DGR*

UN-No: 3082
Class: 9
Danger Label Number : 9
Packaging group: III
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(CHLOROTHALONIL)

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15. REGULATORY INFORMATION**Labelling according to EC Directives**

Hazardous components which must be listed on the label:

- chlorothalonil

Symbol(s)	: Xn N	Harmful Dangerous for the environment
R-phrase(s)	: R20 R36/37/38 R40 R43 R50/53	Harmful by inhalation. Irritating to eyes, respiratory system and skin. Limited evidence of a carcinogenic effect. May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s)	: S 2 S13 S20/21 S35 S36/37 S57	Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs. When using do not eat, drink or smoke. This material and its container must be disposed of in a safe way. Wear suitable protective clothing and gloves. Use appropriate container to avoid environmental contamination.
Exceptional labelling of special preparations	: To avoid risks to man and the environment, comply with the instructions for use.	

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16. OTHER INFORMATION**Further information**

Text of R phrases mentioned in Section 2:

R22	Harmful if swallowed.
R26	Very toxic by inhalation.
R37	Irritating to respiratory system.
R40	Limited evidence of a carcinogenic effect.
R41	Risk of serious damage to eyes.
R43	May cause sensitization by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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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