



Bayer Environmental Science

MILDOTHANE TURF LIQ

Version 1
Revision Date 19.09.2003

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102000002164

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING**Product information**

Trade name : MILDOTHANE TURF LIQ
 Product code : TADS1583
 Product code : 02337A
 Specification : 18986
 Usage : fungicide
 Company : Bayer Environmental Science
 Durkan House
 214-224 High Street
 Waltham Cross
 Hertfordshire EN8 7DP
 United Kingdom
 Telephone : +44(0)1992 784270
 Telefax : +44(0)1992 784276
 Emergency telephone number : 0800-220876 (UK only)
 +44(0)1223-870312

2. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**

Suspension concentrate (=flowable concentrate)(SC), contains:
 Thiophanate-methyl 500 g/l

Hazardous components

Chemical Name	CAS-No.	Symbol(s):	R-phrases)	Concentration [%]
Thiophanate-methyl	23564-05-8	Xn, N	R20 R43 R50/53 R68	42.90
Ethanediol	107-21-1	Xn	R22	> 1.00 - < 5.00

3. HAZARDS IDENTIFICATION**Risk advice to man and the environment**

May cause sensitization by skin contact.
 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 Possible risks of irreversible effects.

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4. FIRST AID MEASURES

- General advice : Remove contaminated, soaked clothing immediately and dispose of safely.
- Inhalation : Move the patient to fresh air and keep at rest. If symptoms persist, call a physician.
- Skin contact : Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.
- Eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Ingestion : Wash out mouth with water. Do not induce vomiting. Keep at rest. Obtain medical attention.

Notes to physician

- Symptoms : Local: May cause skin and eye irritation., sensitization
- Symptoms : Systemic: To date no symptoms are known.
- Risks : This product, although being a carbamate, is NOT a cholinesterase inhibitor.
Must NOT be confused with organophosphorus compounds!
- Treatment : Local treatment:
Initial treatment should be symptomatic and supportive.
- Treatment : Systemic treatment:
In the event of a mouthful or more being ingested, the following measures should be considered:
Gastric lavage with charcoal, if necessary further treatment.
Monitoring of the blood picture.
There is no antidote.
Recovery: Spontaneous.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : water spray
alcohol-resistant foam
dry chemical
carbon dioxide (CO₂)
- Extinguishing media which must not be used for safety reasons : Product itself is non-combustible; fire extinguishing measures to suit surroundings.
- Specific hazards during fire fighting : In case of fire the evolution of dangerous gases is possible.
- Special protective equipment for fire-fighters : In the event of fire and/or explosion do not breathe fumes.
Wear self contained breathing apparatus for fire fighting if



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necessary.

Further information : Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by bunding area with sand or earth.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke.

Environmental precautions : Keep people and animals away. Do not discharge into the drains/surface water/groundwater. If spillage enters drains leading to sewage works inform local water company immediately. If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

Methods for cleaning up : Take up with absorbent material (e.g. sand, earth or a proprietary absorbent material). Transfer collected material to heavy duty plastic drums and keep safe for disposal. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations

Additional advice : Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13. Check also for any local site procedures.

7. HANDLING AND STORAGE

Handling

Advice on safe handling : No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Provide good ventilation of working area (local exhaust ventilation if necessary).

Advice on protection against fire and explosion : No special precautions required.

Storage

Requirements for storage areas and containers : Keep containers tightly closed in a cool, well-ventilated place. Store in a place accessible by authorized persons only.



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- Further information on storage conditions : Keep away from direct sunlight.
Protect against frost.
- Storage temperature : 0 - 30 °C
- Suitable materials : Keep in original packaging, tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Refer to COSHH assessment (Control of substances Hazardous to Health Regulations 1999 as amended). Engineering controls should be used in preference to personal protective equipment wherever practicable.

Components with workplace control parameters

Components	CAS-No.	Control parameters	Update	Basis
Ethanediol	107-21-1	10 mg/m ³ (TWA)	2001	EH40 OES
		60 mg/m ³ (TWA)	2001	EH40 OES
		125 mg/m ³ (STEL)	2001	EH40 OES
		52 mg/m ³ (TWA)	05 2001	EU ELV
		104 mg/m ³ (STEL)	05 2001	EU ELV

Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.
- Hand protection : Chemical resistant gloves
PVC or nitrile rubber gloves
- Eye protection : Chemical resistant goggles must be worn.
- Skin and body protection : Light protective clothing, PVC
PVC boots
- Hygiene measures : When using, do not eat, drink or smoke.
Remove soaked clothing immediately.
Remove soiled clothing immediately.
Clean hands and face at work intervals and after work.
Work in an adequately ventilated room.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

- Form : Liquid
- Colour : white opaque

Safety data

- pH : 6.0 - 9.0
Note: Determined in the undiluted form



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Density	: ca. 1.20 g/cm ³ at 20 °C
Water solubility	: Note: Miscible
Partition coefficient (n-octanol/water)	: log Pow: 1.50 Note: The value mentioned relates to the active ingredient thiophanate-methyl.
Other information	: The product is not combustible.

10. STABILITY AND REACTIVITY

Conditions to avoid	: Note: Extremes of temperature and direct sunlight.
Materials to avoid	: None
Hazardous reactions	: No hazardous reactions when stored and handled according to prescribed instructions. Note: Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: LD50 (rat) 3,800 mg/kg
Acute dermal toxicity	: LD50 (rat) > 5,000 mg/kg
Skin irritation	: rabbit Result: slight irritant effect - does not require labelling
Eye irritation	: rabbit Result: slight irritant effect - does not require labelling
Sensitization	: guinea pig Result: sensitizing Test substance: Information given is based on data on the components and the toxicology of similar products
Assessment mutagenicity	: Data suggestive of genotoxicity in vivo available., Indication of genotoxicity in vitro available.

12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish	: LC50: 7.8 mg/l Salmo spec. Exposure time: 48 h Test substance: The value mentioned relates to the active ingredient thiophanate-methyl.
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- Toxicity to fish : LC50: 11 mg/l
Carp
Exposure time: 48 h
Test substance: The value mentioned relates to the active ingredient thiophanate-methyl.
- Toxicity to daphnia : EC50: 16 mg/l
Daphnia
Exposure time: 48 h
Test substance: The value mentioned relates to the active ingredient thiophanate-methyl.
- Toxicity to algae : EC50: 0.8 mg/l
Chlorella pyrenoidosa
Exposure time: 96 h
Test substance: The value mentioned relates to the active ingredient thiophanate-methyl.
- Toxicity to algae : EC50: 8.5 mg/l
Chlorella pyrenoidosa
Exposure time: 48 h
Test substance: The value mentioned relates to the active ingredient thiophanate-methyl.
- Toxicity to other organisms : LD50: > 5,000 mg/kg
Japanese quail
Test substance: The value mentioned relates to the active ingredient thiophanate-methyl.

13. DISPOSAL CONSIDERATIONS

- Product : In accordance with current regulations may be taken to waste disposal site or incineration plant, after consultation with site operator and/or with the responsible authority
Can be landfilled or incinerated, when in compliance with local regulations.
Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).
- Contaminated packaging : Packaging that cannot be cleaned should be disposed of as product waste.
Empty containers can be landfilled after cleaning, when in compliance with the Environmental Protection (Duty of Care) Regulations 1991.
- Waste key for the unused product : 020108 agrochemical waste containing dangerous substances

14. TRANSPORT INFORMATION



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ADR/RID/	: UN-No	3082
ADNR	Labels	9
	Packaging group	III
	Hazard no.	90
	Description of the goods	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (THIOPHANATE-METHYL SOLUTION)
IMDG	: UN-No	3082
	Class	9
	Packaging group	III
	EmS	NONE
	Marine pollutant	P
	Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (THIOPHANATE-METHYL SOLUTION)
IATA	: UN-No	3082
	Class	9
	Packaging group	III
	Description of the goods	Environmentally hazardous substance, liquid, n.o.s. (THIOPHANATE-METHYL SOLUTION)
CDG CPL	: UN-No	3082
	Class	9
	Packaging group	III
	Hazard identification number	90
	Emergency action code	2X
	Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (THIOPHANATE- METHYL)

15. REGULATORY INFORMATION

This product has been classified in accordance with The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002: CHIP 3.

Hazardous components which must be listed on the label:

- Thiophanate-methyl

Exceptional labelling of special preparations : Restricted to professional users.
To avoid risks to man and the environment, comply with the instructions for use.

Further information : WHO-classification: III (Slightly hazardous)

Symbol(s): : Xn Harmful
N Dangerous for the environment



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R-phrase(s)	:	R43 R50/53	May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
		R68	Possible risks of irreversible effects.
S-phrase(s)	:	S24 S35	Avoid contact with the skin. This material and its container must be disposed of in a safe way.
		S37 S57	Wear suitable gloves. Use appropriate containment to avoid environmental contamination.

16. OTHER INFORMATION

Further information

Text of R phrases mentioned in Section 2:

- R20 Harmful by inhalation.
- R22 Harmful if swallowed.
- R43 May cause sensitization by skin contact.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R68 Possible risks of irreversible effects.

The above information is intended to give general health and safety guidance on the storage and transport of the product.

It is not intended to apply to the use of the product for which purposes the product label and any appropriate technical usage literature available should be consulted and any relevant licenses, consents or approvals complied with.

The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given.

The information provided in this safety data sheet is accurate at the date of publication and will be updated as and when appropriate.

No liability will be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.

Changes since the last version will be highlighted in the margin. This version replaces all previous versions.