

**FUNGUS FIGHTER PLUS**Version 4 / GB
1020000127491/10
Revision Date: 12.08.2015
Print Date: 12.08.2015**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier**

Trade name FUNGUS FIGHTER PLUS
Product code (UVP) 05769077

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

Supplier Bayer CropScience Limited
230 Cambridge Science Park
Milton Road
Cambridge
Cambridgeshire CB4 0WB
United Kingdom

Telephone +44(0)1223 226500
Telefax +44(0)1223 426240
Responsible Department Email: gardening.adviser@bayergarden.co.uk

1.4 Emergency telephone no.

Emergency telephone no. 0800-220876 (UK 24 hr)
+44(0)1635-563000 (Overseas 24 hr)

SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture**

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Chronic aquatic toxicity: Category 3
H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

- Trifloxystrobin
- Tebuconazole

Hazard statements

H412 Harmful to aquatic life with long lasting effects.
EUH208 Contains 5-chloro-2-methyl-isothiazol-3-one/2-methyl-isothiazol-3-one. May produce an allergic reaction.
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

**FUNGUS FIGHTER PLUS**Version 4 / GB
102000012749

2/10

Revision Date: 12.08.2015
Print Date: 12.08.2015

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| P102 | Keep out of reach of children. |
| P260 | Do not breathe spray. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P501 | Dispose of contents/container to a household waste recycling centre as hazardous waste except for empty containers which can be disposed of by recycling. Contact your local council for details. |

2.3 Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures****Chemical nature**

Any other liquids (AL)

Trifloxystrobin/Tebuconazole 0.0125:0.0125 %

Hazardous components

Hazard statements according to Regulation (EC) No. 1907/2006

| Name | CAS-No. / EC-No. / REACH Reg. No. | Classification | Conc. [%] |
|--|---|---|------------------------|
| | | Regulation (EC) No 1272/2008 | |
| Trifloxystrobin | 141517-21-7 | Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | 0.0125 |
| Tebuconazole | 107534-96-3 403-640-2 | Repr. 2, H361d Acute Tox. 4, H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 | 0.0125 |
| Mixture of 5-Chlor-2-methyl-3(2H)-isothiazolon and 2-Methyl-2H-isothiazol-3-on | 55965-84-9 | Skin Corr. 1B, H314 Aquatic Chronic 1, H410 Aquatic Acute 1, H400 Skin Sens. 1, H317 Acute Tox. 3, H301 Acute Tox. 3, H331 Acute Tox. 3, H311 | > 0.0002 – < 0.0015 |
| 1-Propanol | 71-23-8 200-746-9 | Flam. Liq. 2, H225 Eye Dam. 1, H318 STOT SE 3, H336 | > 1.00 |

Further information

| | | |
|-----------------|-------------|-----------------------------------|
| Trifloxystrobin | 141517-21-7 | M-Factor: 100 (acute) |
| Tebuconazole | 107534-96-3 | M-Factor: 1 (acute), 10 (chronic) |

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

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

Move to fresh air. Keep patient warm and at rest.

Skin contact

Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.

**FUNGUS FIGHTER PLUS**Version 4 / GB
1020000127493/10
Revision Date: 12.08.2015
Print Date: 12.08.2015

| | |
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| Eye contact | Remove contact lens and rinse eyes immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation develops and persists. |
| Ingestion | DO NOT induce vomiting unless directed to do so by a physician or poison control center. Rinse out mouth and give water in small sips to drink. Keep patient warm and at rest. |

4.2 Most important symptoms and effects, both acute and delayed**|| Symptoms** No symptoms known or expected.**4.3 Indication of any immediate medical attention and special treatment needed**

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| Treatment | Local treatment: Initial treatment: symptomatic. Systemic treatment: Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote. |
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SECTION 5: FIREFIGHTING MEASURES**5.1 Extinguishing media**

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| Suitable | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Unsuitable | High volume water jet |

5.2 Special hazards arising from the substance or mixture Dangerous gases are evolved in the event of a fire.**5.3 Advice for firefighters****Special protective equipment for fire-fighters** In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.**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 diking area with sand or earth.**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures****Precautions** Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke.**6.2 Environmental precautions** Do not allow to get into surface water, drains and ground water. 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).

**FUNGUS FIGHTER PLUS**Version 4 / GB
102000012749

4/10

Revision Date: 12.08.2015
Print Date: 12.08.2015**6.3 Methods and materials for containment and cleaning up**

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Clean floors and contaminated objects with plenty of water.

Additional advice Check also for any local site procedures.

6.4 Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for safe handling**

Advice on safe handling No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.

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

Hygiene measures When using, do not eat, drink or smoke. Wash hands immediately after work, if necessary take a shower.

7.2 Conditions for safe storage, including any incompatibilities

Advice on common storage Keep away from food, drink and animal feedingstuffs.

Suitable materials HDPE (high density polyethylene)

7.3 Specific end uses Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters**

| Components | CAS-No. | Control parameters | Update | Basis |
|-----------------|-------------|--|---------|----------|
| Trifloxystrobin | 141517-21-7 | 2.7 mg/m ³ (TWA) | | OES BCS* |
| Tebuconazole | 107534-96-3 | 0.2 mg/m ³ (TWA) | | OES BCS* |
| 1-Propanol | 71-23-8 | 625 mg/m ³ /250 ppm (STEL) | 12 2011 | EH40 WEL |
| 1-Propanol | 71-23-8 | 500 mg/m ³ /200 ppm (TWA) | 12 2011 | EH40 WEL |
| 1-Propanol | 71-23-8 | 200 ppm (TWA) | | OES BCS* |

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

8.2 Exposure controls

Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials.

**FUNGUS FIGHTER PLUS**Version 4 / GB
102000012749

5/10

Revision Date: 12.08.2015

Print Date: 12.08.2015

Personal protective equipment

In normal use conditions personal protective equipment is not deemed to be necessary. If there is a potential for excessive exposure the following applies:

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| Respiratory protection | Respiratory protection is not required under anticipated circumstances of exposure. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance. |
| Hand protection | Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness of 0,4 mm). Wash when contaminated and dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet. |
| Eye protection | Wear goggles (conforming to EN166, Field of Use = 5 or equivalent). |
| Skin and body protection | Wear standard coveralls and Category 3 Type 6 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently. |

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

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|---|--|
| Form | Liquid, slightly turbid |
| Colour | colourless to light brown |
| Odour | alcoholic |
| pH | 5.0 - 6.0 at 100 % (23 °C) |
| Flash point | 69.5 °C at 1,013.3 hPa |
| Autoignition temperature | > 667 °C |
| Density | ca. 1.00 g/cm ³ at 20 °C |
| Water solubility | soluble |
| Partition coefficient: n-octanol/water | Trifloxystrobin: log Pow: 4.5 at 25 °C Tebuconazole: log Pow: 3.7 |
| Viscosity, kinematic | 1.116 mm ² /s at 20 °C 0.726 mm ² /s at 40 °C |
| Surface tension | 46.7 mN/m |
| Oxidizing properties | No oxidizing properties |
| Explosivity | Not explosive 92/69/EEC, A.14 / OECD 113 |

9.2 Other information Further safety related physical-chemical data are not known.

**FUNGUS FIGHTER PLUS**Version 4 / GB
1020000127496/10
Revision Date: 12.08.2015
Print Date: 12.08.2015

SECTION 10: STABILITY AND REACTIVITY**10.1 Reactivity****Thermal decomposition** Stable under normal conditions.**10.2 Chemical stability** Stable under recommended storage conditions.**10.3 Possibility of hazardous reactions** No hazardous reactions when stored and handled according to prescribed instructions.**10.4 Conditions to avoid** Extremes of temperature and direct sunlight.**10.5 Incompatible materials** Store only in the original container.**10.6 Hazardous decomposition products** No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Acute oral toxicity** LD50 (rat) \geq 5,000 mg/kg**Acute inhalation toxicity** LC50 (rat) > 5.604 mg/l
Exposure time: 4 h**Acute dermal toxicity** LD50 (rat) > 2,000 mg/kg**Skin irritation** No skin irritation (rabbit)**Eye irritation** No eye irritation (rabbit)**Sensitisation** Non-sensitizing. (mouse)
OECD Test Guideline 429, local lymph node assay (LLNA)**Assessment repeated dose toxicity**Trifloxystrobin did not cause specific target organ toxicity in experimental animal studies.
Tebuconazole did not cause specific target organ toxicity in experimental animal studies.**Assessment mutagenicity**Trifloxystrobin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Tebuconazole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.**Assessment carcinogenicity**Trifloxystrobin was not carcinogenic in lifetime feeding studies in rats and mice.
Tebuconazole caused at high dose levels an increased incidence of tumours in mice in the following organ(s): liver. The mechanism of tumour formation is not considered to be relevant to man.**Assessment toxicity to reproduction**

Trifloxystrobin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Trifloxystrobin is related to parental toxicity.

Tebuconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Tebuconazole is related to parental toxicity.

Assessment developmental toxicity

**FUNGUS FIGHTER PLUS**Version 4 / GB
102000012749

7/10

Revision Date: 12.08.2015
Print Date: 12.08.2015

Trifloxystrobin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Trifloxystrobin are related to maternal toxicity.

Tebuconazole caused developmental toxicity only at dose levels toxic to the dams. Tebuconazole caused an increased incidence of post implantation losses, an increased incidence of non-specific malformations.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity**

| | |
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| Toxicity to fish | LC50 (Oncorhynchus mykiss (rainbow trout)) 4.4 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient tebuconazole. |
| | LC50 (Oncorhynchus mykiss (rainbow trout)) 0.015 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient trifloxystrobin. |
| Toxicity to aquatic invertebrates | EC50 (Daphnia magna (Water flea)) 86 mg/l Exposure time: 48 h |
| Chronic toxicity to aquatic invertebrates | NOEC (Daphnia (water flea)): 0.01 mg/l Exposure time: 21 d The value mentioned relates to the active ingredient tebuconazole. |
| Toxicity to aquatic plants | EC50 (Raphidocelis subcapitata (freshwater green alga)) 3.8 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient tebuconazole. |
| | EC50 (Desmodesmus subspicatus (green algae)) 0.0053 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient trifloxystrobin. |

12.2 Persistence and degradability

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|-------------------------|---|
| Biodegradability | Trifloxystrobin: not rapidly biodegradable Tebuconazole: not rapidly biodegradable |
| Koc | Trifloxystrobin: Koc: 2377 Tebuconazole: Koc: 769 |

12.3 Bioaccumulative potential

| | |
|------------------------|---|
| Bioaccumulation | Trifloxystrobin: Bioconcentration factor (BCF) 431 Does not bioaccumulate. Tebuconazole: Bioconcentration factor (BCF) 35 - 59 Does not bioaccumulate. |
|------------------------|---|

12.4 Mobility in soil

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|-------------------------|---|
| Mobility in soil | Trifloxystrobin: Slightly mobile in soils Tebuconazole: Slightly mobile in soils |
|-------------------------|---|

12.5 Results of PBT and vPvB assessment

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| PBT and vPvB assessment | Trifloxystrobin: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Tebuconazole: This substance is not considered to be persistent, |
|--------------------------------|--|

**FUNGUS FIGHTER PLUS**Version 4 / GB
102000012749

8/10

Revision Date: 12.08.2015
Print Date: 12.08.2015

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

12.6 Other adverse effects

Additional ecological information No other effects to be mentioned.

SECTION 13: DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

| | |
|---|--|
| Product | Do not empty into drains. Dispose of unused product in its container at a household waste site (civic amenity site). Contact your local council (local authority) for details. |
| Contaminated packaging | Dispose of empty container in the dustbin. Follow advice on product label and/or leaflet. |
| Waste key for the unused product | 02 01 08* agrochemical waste containing dangerous substances |

SECTION 14: TRANSPORT INFORMATION

According to ADN/ADR/UK 'Carriage' Regulations/RID/IMDG/IATA not classified as dangerous goods.

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

14.1 – 14.5 Not applicable.

14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

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

No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****UK and Northern Ireland Regulatory References**

This material may be subject to some or all of the following regulations (and any subsequent amendments). Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

Transport

Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No 1348)
Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997 (SI 1997 No 2367)
Air Navigation Dangerous Goods Regulations 2002 (SI 2002 No 2786)

Supply and Use

Chemical (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No 716)
Chemical (Hazard Information and Packaging for Supply) (Northern Ireland) Regulations 2009

**FUNGUS FIGHTER PLUS**Version 4 / GB
102000012749

9/10

Revision Date: 12.08.2015

Print Date: 12.08.2015

Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No 2677)
EH40 Occupational Exposure Limits - Table 1 List of approved workplace exposure limits
Control of Pesticide Regulations 1986
Dangerous Substances and Explosive Atmospheres Regulations 2002

Waste Treatment

Environmental Protection Act 1990, Part II
Environmental Protection (Duty of Care) Regulations 1991
The Waste Management Licensing Regulations 1994 (as amended)
Hazardous Waste Regulations 2005 (Replacing Special Waste Regulations 1996 as amended)
Landfill Directive
Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)
Water Resources Act 1991
Anti-Pollution Works Regulations 1999

Further information

||WHO-classification: III (Slightly hazardous)

15.2 Chemical Safety Assessment

A chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION**Text of the hazard statements mentioned in Section 3**

| | |
|-------|---|
| H225 | Highly flammable liquid and vapour. |
| H301 | Toxic if swallowed. |
| H302 | Harmful if swallowed. |
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H331 | Toxic if inhaled. |
| H336 | May cause drowsiness or dizziness. |
| H361d | Suspected of damaging the unborn child. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Abbreviations and acronyms

| | |
|----------|--|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| CAS-Nr. | Chemical Abstracts Service number |
| Conc. | Concentration |
| EC-No. | European community number |
| ECx | Effective concentration to x % |
| EH40 WEL | Worker Exposure Limit |
| EINECS | European inventory of existing commercial substances |
| ELINCS | European list of notified chemical substances |
| EN | European Standard |
| EU | European Union |
| IATA | International Air Transport Association |
| IBC | International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code) |

**FUNGUS FIGHTER PLUS**Version 4 / GB
10200001274910/10
Revision Date: 12.08.2015
Print Date: 12.08.2015

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| ICx | Inhibition concentration to x % |
| IMDG | International Maritime Dangerous Goods |
| LCx | Lethal concentration to x % |
| LDx | Lethal dose to x % |
| LOEC/LOEL | Lowest observed effect concentration/level |
| MARPOL | MARPOL 73/78: International Convention for the prevention of marine pollution from ships |
| N.O.S. | Not otherwise specified |
| NOEC/NOEL | No observed effect concentration/level |
| OECD | Organization for Economic Co-operation and Development |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SI | Statutory Instrument |
| TWA | Time weighted average |
| UN | United Nations |
| WHO | World health organisation |

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.

Reason for Revision: Section 2: Hazards Identification. Section 3: Composition / Information on Ingredients. Section 8: Exposure Controls / Personal Protection.

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