



BAYLETON® FLO TURF AND ORNAMENTAL FUNGICIDE

Version 2.0 / USA
102000013850

1/11
Revision Date: 09/17/2014
Print Date: 05/06/2015

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name BAYLETON® FLO TURF AND ORNAMENTAL FUNGICIDE

SDS Number 102000013850

EPA Registration No. 432-1445

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

Use Fungicide

Restrictions on use See product label for restrictions.

Information on manufacturer

Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days) 1-800-334-7577 (24 hours/day)

Product Information Telephone Number 1-800-331-2867

SDS Information or Request SDSINFO.BCS-NA@bayer.com

SECTION 2: HAZARDS IDENTIFICATION

Acute toxicity (Oral, Inhalation): Category 4



Signal word: Warning

Hazard statements

Harmful if swallowed or if inhaled.

Precautionary statements

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Avoid breathing mist and spray.

Use only outdoors or in a well-ventilated area.

IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.

Rinse mouth.



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IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.
Dispose of contents/container in accordance with local regulation.

Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Hazardous Component Name | CAS-No. | Concentration % by weight |
|--|----------------|----------------------------------|
| Triadimefon | 43121-43-3 | 43.00 |
| Glycerine | 56-81-5 | 10.70 |
| Polyethylene-polypropylene copolymer | 9003-11-6 | 1.80 |
| Naphthalene and alkyl naphthalene sulphonic acids formaldehyde condensate, sodium salt | 68425-94-5 | 1.70 |

SECTION 4: FIRST AID MEASURES

Description of first aid measures

| | |
|-----------------------|---|
| General advice | When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment. |
| Inhalation | Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately. |
| Skin contact | Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately. |
| Eye contact | Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately. |
| Ingestion | Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended. |

Most important symptoms and effects, both acute and delayed

Symptoms Hyperactivity followed by sedation

Indication of any immediate medical attention and special treatment needed

Treatment Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.



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SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Water, Carbon dioxide (CO₂), Dry chemical, Foam

Unsuitable None known.

Special hazards arising from the substance or mixture Dangerous gases are evolved in the event of a fire.

Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Further information Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Flash point > 100 °C
No flash point - Determination conducted up to the boiling point.

Autoignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Explosivity not applicable

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions Isolate hazard area. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.

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). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

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.



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SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

Hygiene measures Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.
Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Protect from freezing.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

| Components | CAS-No. | Control parameters | Update | Basis |
|---|------------|----------------------|---------|----------|
| Triadimefon | 43121-43-3 | 0.7 mg/m3 (TWA) | | OES BCS* |
| Triadimefon | 43121-43-3 | 100ug/m3 (ST ESL) | 07 2011 | TX ESL |
| Triadimefon | 43121-43-3 | 10ug/m3 (AN ESL) | 07 2011 | TX ESL |
| Glycerine (Total dust.) | 56-81-5 | 15 mg/m3 (PEL) | 02 2006 | OSHA Z1 |
| Glycerine (Respirable fraction.) | 56-81-5 | 5 mg/m3 (PEL) | 02 2006 | OSHA Z1 |
| Glycerine (Respirable fraction.) | 56-81-5 | 5 mg/m3 (TWA) | 1989 | OSHA Z1A |
| Glycerine (Total dust.) | 56-81-5 | 10 mg/m3 (TWA) | 1989 | OSHA Z1A |
| Glycerine (Total dust and mist.) | 56-81-5 | 10 mg/m3 (TWA) | 06 2008 | TN OEL |
| Glycerine (Respirable fraction and dust or fume.) | 56-81-5 | 5 mg/m3 (TWA) | 06 2008 | TN OEL |
| Glycerine (Particulate.) | 56-81-5 | 50ug/m3 (ST ESL) | 02 2013 | TX ESL |
| Glycerine | 56-81-5 | 5ug/m3 | 02 2013 | TX ESL |



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| | | | | |
|---|-----------|--------------------|---------|--------|
| (Particulate.) | | (AN ESL) | | |
| Glycerine (Vapor.) | 56-81-5 | 100ug/m3 (AN ESL) | 02 2013 | TX ESL |
| Glycerine (Vapor.) | 56-81-5 | 1000ug/m3 (ST ESL) | 02 2013 | TX ESL |
| Polyethylene-polypropylene copolymer (Vapor.) | 9003-11-6 | 1000ug/m3 (ST ESL) | 02 2013 | TX ESL |
| Polyethylene-polypropylene copolymer (Vapor.) | 9003-11-6 | 100ug/m3 (AN ESL) | 02 2013 | TX ESL |

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

Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection

When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Hand protection

Chemical resistant nitrile rubber gloves

Eye protection

Safety glasses with side-shields

Skin and body protection

Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.
Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--------------------------------|--|
| Appearance | brown |
| Physical State | liquid suspension opaque |
| Odor | characteristic |
| Odour Threshold | no data available |
| pH | ca. 6.7 at 10 % (20 °C) (CIPAC D water (342ppm)) |
| Vapor Pressure | no data available |
| Vapor Density (Air = 1) | no data available |
| Density | ca. 1.16 g/cm ³ at 20 °C |
| Evaporation rate | no data available |



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| | |
|---|---|
| Boiling Point | no data available |
| Melting / Freezing Point | no data available |
| Water solubility | dispersible |
| Minimum Ignition Energy | not applicable |
| Decomposition temperature | not applicable |
| Partition coefficient: n-octanol/water | not applicable |
| Viscosity | 600 - 1,500 cps |
| Flash point | > 100 °C No flash point - Determination conducted up to the boiling point. |
| Autoignition temperature | no data available |
| Lower explosion limit | no data available |
| Upper explosion limit | no data available |
| Explosivity | not applicable |

SECTION 10: STABILITY AND REACTIVITY

Reactivity

| | |
|---|--|
| Thermal decomposition | not applicable |
| Chemical stability | Stable under normal conditions. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| Conditions to avoid | Extremes of temperature and direct sunlight. |
| Incompatible materials | no data available |
| Hazardous decomposition products | No decomposition products expected under normal conditions of use. |

SECTION 11: TOXICOLOGICAL INFORMATION

| | |
|--------------------------|---|
| Exposure routes | Ingestion, Inhalation, Eye contact, Skin Absorption |
| Immediate Effects | |
| Eye | Mild eye irritation. |
| Skin | Harmful if absorbed through skin. Slight irritation |
| Ingestion | Harmful if swallowed. |



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Inhalation Harmful if inhaled.

Information on toxicological effects

Acute oral toxicity LD50 (female rat) 1,750 mg/kg

Acute inhalation toxicity LC50 (male/female combined rat) > 2.1 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.
highest concentration tested
(actual)

LC50 (male/female combined rat) > 8.4 mg/l
Exposure time: 1 h
Determined in the form of liquid aerosol.
Extrapolated from the 4 hr LC50.
(actual)

Acute dermal toxicity LD50 (male/female combined rat) > 5,000 mg/kg

Skin irritation Slight irritation (rabbit)

Eye irritation Mild eye irritation. (rabbit)

Sensitisation Non-sensitizing. (guinea pig)

Assessment repeated dose toxicity

Triadimefon did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity

Triadimefon was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity

Triadimefon was not carcinogenic in a lifetime feeding study in rats. Triadimefon caused an increased incidence of tumours in mice in the following organ(s): liver. The mechanism that triggers these tumours is not relevant to humans.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

Triadimefon caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. Triadimefon caused reduced fertility, a reduced pup survival.

Assessment developmental toxicity



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Triadimefon caused developmental toxicity in only at dose levels toxic to the dams. Triadimefon caused an increased incidence of non-specific malformations.

Further information

Only acute toxicity studies have been performed on the formulated product.
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

| | |
|--|---|
| Toxicity to fish | LC50 (Oncorhynchus mykiss (Rainbow trout)) 4.08 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient triadimefon. |
| Toxicity to aquatic invertebrates | EC50 (Water flea (Daphnia magna)) 7.16 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient triadimefon. |
| Toxicity to aquatic plants | IC50 (Pseudokirchneriella subcapitata) 2.01 mg/l Exposure time: 120 h The value mentioned relates to the active ingredient triadimefon. |
| Biodegradability | Triadimefon: ; not rapidly biodegradable |
| Koc | Triadimefon: Koc: 150 - 510 |
| Bioaccumulation | Triadimefon: Bioconcentration factor (BCF) 31; Does not bioaccumulate. |
| Mobility in soil | Triadimefon: Moderately mobile in soils |
| Environmental precautions | Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not apply when weather conditions favor runoff or drift. Apply this product as specified on the label. |

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

| | |
|-------------------------------|--|
| Product | Follow container label instructions for disposal of wastes generated during use in compliance with the product label. Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility. |
| Contaminated packaging | Do not re-use empty containers. Triple rinse containers. |



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Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning.
If burned, stay out of smoke.
Follow advice on product label and/or leaflet.

RCRA Information

Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

49CFR Not dangerous goods / not hazardous material

IMDG

UN number **3082**
Class 9
Packaging group III
Marine pollutant YES
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIADIMEFON SOLUTION)

IATA

UN number **3082**
Class 9
Packaging group III
Environm. Hazardous Mark YES
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIADIMEFON SOLUTION)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 432-1445



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US Federal Regulations

TSCA list

| | |
|--|------------|
| Glycerine | 56-81-5 |
| Polyethylene-polypropylene copolymer | 9003-11-6 |
| Naphthalene and alkyl naphthalene | 68425-94-5 |
| sulphonic acids formaldehyde condensate, sodium salt | |

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

| | | |
|-------------|------------|-----------|
| Triadimefon | 43121-43-3 | 25,000lbs |
|-------------|------------|-----------|

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

| | | |
|-------------|------------|----------------------------|
| Triadimefon | 43121-43-3 | Developmental toxin. |
| Triadimefon | 43121-43-3 | Male reproductive toxin. |
| Triadimefon | 43121-43-3 | Female reproductive toxin. |

US State Right-To-Know Ingredients

| | | |
|-------------|------------|----|
| Triadimefon | 43121-43-3 | NJ |
| Glycerine | 56-81-5 | MN |

Canadian Regulations

Canadian Domestic Substance List

| | |
|--|------------|
| Glycerine | 56-81-5 |
| Polyethylene-polypropylene copolymer | 9003-11-6 |
| Naphthalene and alkyl naphthalene | 68425-94-5 |
| sulphonic acids formaldehyde condensate, sodium salt | |

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

| | |
|-------------|------------|
| Triadimefon | 43121-43-3 |
| Glycerine | 56-81-5 |

EPA/FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification



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criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Caution!

Hazard statements: Harmful if swallowed, inhaled or absorbed through the skin.
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
Avoid breathing dust or spray mist.
Avoid contact with skin, eyes and clothing.
Wash thoroughly with soap and water after handling.
Remove and wash contaminated clothing before re-use.

SECTION 16: OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 1 Instability - 0 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1 Flammability - 1 Physical Hazard - 0 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

Revision Date: 09/17/2014

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