



STRATEGO® YLD FUNGICIDE

Version 2.0 / USA
102000020519

1/11
Revision Date: 03/20/2014
Print Date: 03/16/2015

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

Product identifier

Trade name STRATEGO® YLD FUNGICIDE

Product code (UVP) 79463820

SDS Number 102000020519

EPA Registration No. 264-1093

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 CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States

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

Product Information
Telephone Number 1-866-99BAYER (1-866-992-2937)

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

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Acute toxicity (Inhalation): Category 4



Signal word: Warning

Hazard statements

Harmful if inhaled.

Precautionary statements

Avoid breathing mist or vapours.

Use only outdoors or in a well-ventilated area.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Call a POISON CENTER or doctor/ physician if you feel unwell.



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Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Average % by Weight
Trifloxystrobin	141517-21-7	32.30
Prothioconazole	178928-70-6	10.80
1,2-Propanediol	57-55-6	10.00

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 To date no symptoms are known.

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.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Water spray, Carbon dioxide (CO ₂), Foam, Sand
Unsuitable	None known.



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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	In the event of fire and/or explosion do not breathe fumes. 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	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Explosivity	not applicable
Dust explosion class	Not applicable.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions Keep unauthorized people away. Isolate hazard area. 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.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling



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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Trifloxystrobin	141517-21-7	2.7 mg/m3 (TWA)		OES BCS*
Prothioconazole	178928-70-6	1.4 mg/m3 (TWA)		OES BCS*
Prothioconazole	178928-70-6	50ug/m3 (ST ESL)	07 2011	TX ESL
Prothioconazole	178928-70-6	5ug/m3 (AN ESL)	07 2011	TX ESL
1,2-Propanediol (Aerosol.)	57-55-6	10 mg/m3 (TWA)	2010	WEEL
1,2-Propanediol	57-55-6	1000ug/m3 (ST ESL)	03 2012	TX ESL
1,2-Propanediol	57-55-6	50ug/m3 (ST ESL)	03 2012	TX ESL
1,2-Propanediol	57-55-6	100ug/m3 (AN ESL)	03 2012	TX ESL
1,2-Propanediol	57-55-6	50ppb (AN ESL)	03 2012	TX ESL
1,2-Propanediol	57-55-6	500ppb (ST ESL)	03 2012	TX ESL
1,2-Propanediol	57-55-6	5ug/m3 (AN ESL)	03 2012	TX ESL

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

Exposure controls



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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	Tightly fitting safety goggles
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	white to light beige
Physical State	liquid suspension
Odor	characteristic
Odour Threshold	no data available
pH	6.5 - 7.5 at 10 % (25 °C) aqueous suspension
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
Boiling Point	no data available
Melting / Freezing Point	no data available
Water solubility	no data available
Minimum Ignition Energy	not applicable
Decomposition temperature	not applicable
Partition coefficient: n-octanol/water	no data available
Viscosity	250 - 450 mPa.s at 20 °C Velocity gradient 20 /s
Flash point	no data available
Autoignition temperature	no data available



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Lower explosion limit	no data available
Upper explosion limit	no data available
Explosivity	not applicable
Dust explosion class	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	no data available
Incompatible materials	no data available
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Eye contact, Skin Absorption, Inhalation, Ingestion
Immediate Effects	
Eye	Moderate eye irritation.
Skin	Harmful if absorbed through skin.
Ingestion	Harmful if swallowed.
Inhalation	Harmful if inhaled.
Information on toxicological effects	
Acute oral toxicity	LD50 (female rat) > 5,000 mg/kg
Acute inhalation toxicity	LC50 (rat) > 2.6 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. LC50 (rat) > 10.4 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. Extrapolated from the 4 hr LC50.
Acute dermal toxicity	LD50 (rat) > 5,000 mg/kg
Skin irritation	Slight irritation (rabbit)
Eye irritation	Mild eye irritation. (rabbit)



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Sensitisation Non-sensitizing. (guinea pig)

Assessment repeated dose toxicity

Trifloxystrobin did not cause specific target organ toxicity in experimental animal studies.
Prothioconazole 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.
Prothioconazole was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity

Trifloxystrobin was not carcinogenic in lifetime feeding studies in rats and mice.
Prothioconazole was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

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.

Prothioconazole 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 Prothioconazole is related to parental toxicity.

Assessment developmental toxicity

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

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

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 (Rainbow trout (*Oncorhynchus mykiss*)) 0.015 mg/l
Exposure time: 96 h



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	<p>The value mentioned relates to the active ingredient trifloxystrobin. LC50 (Rainbow trout (<i>Oncorhynchus mykiss</i>)) 1.83 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient prothioconazole.</p>
Toxicity to aquatic invertebrates	<p>EC50 (Water flea (<i>Daphnia magna</i>)) 0.016 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient trifloxystrobin.</p> <p>EC50 (Water flea (<i>Daphnia magna</i>)) 1.3 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient prothioconazole.</p>
Toxicity to aquatic plants	<p>IC50 (<i>Desmodemus subspicatus</i>) 0.0053 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient trifloxystrobin.</p> <p>IC50 (<i>Pseudokirchneriella subcapitata</i>) 2.18 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient prothioconazole.</p>
Biodegradability	<p>Trifloxystrobin: ; not rapidly biodegradable Prothioconazole: ; not rapidly biodegradable</p>
Koc	<p>Trifloxystrobin: Koc: 2377 Prothioconazole: Koc: 1765; log Koc: < 3</p>
Bioaccumulation	<p>Trifloxystrobin: Bioconcentration factor (BCF) 431; Does not bioaccumulate. Prothioconazole: Bioconcentration factor (BCF) 19; Does not bioaccumulate.</p>
Mobility in soil	<p>Trifloxystrobin: Slightly mobile in soils Prothioconazole: Slightly mobile in soils</p>
Environmental precautions	<p>Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. 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. Apply this product as specified on the label.</p>

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product

Do not contaminate water, food, or feed by disposal.
Dispose in accordance with all local, state/provincial and federal regulations.
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.
Follow advice on product label and/or leaflet.



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Contaminated packaging	Triple rinse containers. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State 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. (TRIFLOXYSTROBIN, PROTHIOCONAZOLE SOLUTION)
IATA	
UN number	3082
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN, PROTHIOCONAZOLE 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.	264-1093
US Federal Regulations	
TSCA list	
1,2-Propanediol	57-55-6
US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)	
None.	



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SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

US States Regulatory Reporting

CA Prop65

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

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

US State Right-To-Know Ingredients

1,2-Propanediol	57-55-6	MN, RI
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Canadian Regulations

Canadian Domestic Substance List

1,2-Propanediol	57-55-6
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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)

1,2-Propanediol	57-55-6
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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 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.
Moderate eye irritation.
Avoid inhalation of vapour or mist.
Avoid contact with skin, eyes and clothing.
Wash thoroughly with soap and water after handling.

SECTION 16: OTHER INFORMATION



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NFPA 704 (National Fire Protection Association):

Health - 1 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)

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