



STRATEGO® FUNGICIDE

Version 3 / USA
102000016845

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Revision Date: 11/19/2013
Print Date: 10/22/2015

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

Product identifier

Trade name	STRATEGO® FUNGICIDE
Product code (UVP)	05584590
SDS Number	102000016845
EPA Registration No.	264-779

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 no.

All Emergencies, 24hr/ 7 days 1-800-334-7577

Product Information Telephone No.

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

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Eye irritation : Category 2A



Signal word: Warning

Hazard statements

Causes serious eye irritation.

Precautionary statements

Wash thoroughly after handling.

Wear eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Other hazards

No other hazards known.



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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Average % by Weight
Trifloxystrobin	141517-21-7	11.40
Propiconazole	60207-90-1	11.40
N-Methyl-2-pyrrolidone	872-50-4	49.40

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 Carbon dioxide (CO₂), Dry chemical, Alcohol-resistant foam

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	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Further information	Avoid contact with spilled product or contaminated surfaces. Evacuate personnel to safe areas. Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray.
Flash point	> 93.4 °C
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 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. Contaminated soil may have to be removed and disposed.

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

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



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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 contaminated clothing immediately and dispose of safely. 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
Trifloxystrobin	141517-21-7	2.7 mg/m ³ (TWA)		OES BCS*
Propiconazole	60207-90-1	70 ug/m ³ (ST ESL)	07 2011	TX ESL
Propiconazole	60207-90-1	7 ug/m ³ (AN ESL)	07 2011	TX ESL
N-Methyl-2-pyrrolidone	872-50-4	19 ppm (TWA)		OES BCS*
N-Methyl-2-pyrrolidone	872-50-4	400 ug/m ³ (ST ESL)	07 2011	TX ESL
N-Methyl-2-pyrrolidone	872-50-4	40 ug/m ³ (AN ESL)	07 2011	TX ESL
N-Methyl-2-pyrrolidone	872-50-4	10 ppb (AN ESL)	07 2011	TX ESL
N-Methyl-2-pyrrolidone	872-50-4	100 ppb (ST ESL)	07 2011	TX ESL
N-Methyl-2-pyrrolidone	872-50-4	40 mg/m ³ / 10 ppm (TWA)	2010	WEEL
Castor oil, ethoxylated	61791-12-6	100 ug/m ³ (AN ESL)	07 2011	TX ESL
Castor oil, ethoxylated	61791-12-6	1000 ug/m ³ (ST ESL)	07 2011	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



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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
Odor	characteristic
Odour Threshold	no data available
pH	6 - 8 (1 %) at 25 °C (as aqueous solution)
Vapor Pressure	0.0000034 hPa at ca. 25 °C
Vapor Density (Air = 1)	no data available
Density	1.09 g/cm ³ at 20 °C
Evaporation rate	no data available
Boiling Point	no data available
Melting / Freezing Point	no data available
Water solubility	ca. 0.00061 g/l
Minimum Ignition Energy	not applicable
Decomposition temperature	not applicable



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Partition coefficient: n-octanol/water	4.5 at 25 °C
Viscosity	no data available
Flash point	> 93.4 °C
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 recommended storage conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid freezing
Extremes of temperature and direct sunlight.

Incompatible materials no data available

Hazardous decomposition products Carbon dioxide (CO₂)
Carbon monoxide
Nitrogen oxides (NO_x)

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes Eye contact, Ingestion, Skin contact, Inhalation

Immediate Effects

Eye

Causes substantial but temporary eye injury. Severe eye irritation.

Skin

May cause slight irritation. May cause sensitisation by skin contact.



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Ingestion Harmful if swallowed.

Information on toxicological effects

Acute oral toxicity LD50 (male rat) 4,757 mg/kg
LD50 (female rat) 4,830 mg/kg

Acute inhalation toxicity LC50 (rat) > 2.2 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.
highest concentration tested
No deaths

LC50 (rat) > 8.8 mg/l
Exposure time: 1 h
Determined in the form of liquid aerosol.
Extrapolated from the 4 hr LC50.

Acute dermal toxicity LD50 (rat) > 5,050 mg/kg

Skin irritation Slight irritation (rabbit)

Eye irritation Severe eye irritation. (rabbit)

Sensitisation Non-sensitizing. (guinea pig)
OECD Test Guideline 406, Buehler test

Assessment repeated dose toxicity

Trifloxystrobin did not cause specific target organ toxicity in experimental animal studies.
Propiconazole 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.
Propiconazole 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.
Propiconazole was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.



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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.

Propiconazole did not cause reproductive toxicity in a two-generation study in rats.

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.

Propiconazole did not cause developmental toxicity in rats and rabbits.

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 (Lepomis macrochirus (Bluegill sunfish)) 0.046 mg/l LC50 (Cyprinus carpio (Carp)) ca. 0.025 mg/l
Chronic toxicity to fish	Oncorhynchus mykiss (rainbow trout) flow-through test NOEC: ca. 0.183 mg/l
Biodegradability	Trifloxystrobin: not rapidly biodegradable
Koc	Trifloxystrobin: Koc:2377
Bioaccumulation	Trifloxystrobin: Bioconcentration factor (BCF) 431 Does not bioaccumulate.
Mobility in soil	Trifloxystrobin: Slightly mobile in soils
Environmental precautions	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 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. Apply this product as specified on the label.

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.



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Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law.
Follow container label instructions for disposal of wastes generated during use in compliance with the product label.

Contaminated packaging

Triple rinse containers.
Do not re-use empty containers.
Puncture container to avoid re-use.
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. (TRIFLOXYSTROBIN, PROPICONAZOLE 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, PROPICONAZOLE 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



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SECTION 15: REGULATORY INFORMATION

EPA Registration No. 264-779

US Federal Regulations

TSCA list

N-Methyl-2-pyrrolidone 872-50-4

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

Propiconazole	60207-90-1	25,000lbs
N-Methyl-2-pyrrolidone	872-50-4	1.0%

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.

N-Methyl-2-pyrrolidone	872-50-4	Developmental toxin.
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US State Right-To-Know Ingredients

Propiconazole	60207-90-1	NJ
N-Methyl-2-pyrrolidone	872-50-4	MN, NJ

Canadian Regulations

Canadian Domestic Substance List

N-Methyl-2-pyrrolidone	872-50-4
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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)

Propiconazole	60207-90-1
N-Methyl-2-pyrrolidone	872-50-4

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:



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Signal word: Warning!

Hazard statements: Causes substantial but temporary eye injury.
Harmful if swallowed.
Do not get in eyes or on clothing.

SECTION 16: OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

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

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

Health - 2 Flammability - 1 Physical Hazard - 1 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: 11/19/2013

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