



Material Safety Data Sheet

TRILOGY™ SC FUNGICIDE

MSDS Number: 102000021914

MSDS Version 1.0

Revision Date: 10/19/2010

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name TRILOGY™ SC FUNGICIDE
MSDS Number 102000021914
PCP Registration No. 29870

Bayer CropScience Inc
 #200, 160 Quarry Park Blvd, SE
 Calgary, Alberta T2C 3G3
 Canada

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
 For Product Information call: 1-888-283-6847

SECTION 2. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview Caution! Harmful if inhaled or absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid breathing spray mist. Avoid contact with skin, eyes and clothing.

Physical State liquid

Appearance green

Exposure routes Inhalation, Skin contact, Eye contact

Immediate Effects

Eye Mild eye irritation. Avoid contact with eyes.

Skin May cause mild irritation to the skin. Avoid contact with skin and clothing.

Inhalation Harmful if inhaled. Avoid breathing spray mist.

Chronic or Delayed Long-Term

This product or its components may have target organ effects.

Potential Environmental Effect

Toxic to fish and aquatic organisms.



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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Iprodione	36734-19-7	29.41
Triticonazole	131983-72-7	3.14
Trifloxystrobin	141517-21-7	1.47
1,2-Propanediol	57-55-6	
Isodecyl poly(ethyleneoxy)ethanol	78330-20-8	

SECTION 4. FIRST AID MEASURES

General	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Eye	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.
Skin	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.
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.
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.
Notes to physician Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5. FIRE FIGHTING MEASURES

Flash point	no data available
Autoignition temperature	no data available
Lower Flammability Limit	no data available
Upper Flammability Limit	no data available



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Fire Fighting Instructions	Evacuate personnel to safe areas. Avoid contact with spilled product or contaminated surfaces. Contain the spread of the fire-fighting media. Keep out of smoke. Do not allow run-off from fire fighting to enter drains or water courses. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Dust Explosion Class	Not applicable.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.
Methods for cleaning up	Dike area to prevent runoff. 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. Decontaminate tools and equipment following cleanup. Contaminated soil may have to be removed and disposed.
Additional advice	Do not allow to enter soil, waterways or waste water canal.

SECTION 7. HANDLING AND STORAGE

Handling procedures	Handle and open container in a manner as to prevent spillage. Avoid contact with skin, eyes and clothing. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.
Storing Procedures	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.
Work/Hygienic Procedures	Handle in accordance with good industrial hygiene and safety practice. 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. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.
Min/Max Storage Temperatures	no data available



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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- General Protection** Keep and wash PPE separately from other laundry. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.
- Eye/Face Protection** Safety glasses with side-shields
- Hand protection** Chemical resistant nitrile rubber gloves
- Body Protection** Wear long-sleeved shirt and long pants and shoes plus socks.
- 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.

Exposure Limits

Iprodione	36734-19-7	OES BCS*	TWA	2 mg/m3
Triticonazole	131983-72-7	OES BCS*	TWA	4 mg/m3
Trifloxystrobin	141517-21-7	OES BCS*	TWA	2.7 mg/m3
1,2-Propanediol	57-55-6	CAD ON OEL	TWAEV	50 ppm
		CAD ON OEL	TWAEV	10 mg/m3
Glycerine	56-81-5	OEL (QUE)	TWA	10 mg/m3
		CAD AB OEL	TWA	10 mg/m3
		CAD BC OEL	TWA	10 mg/m3
		CAD BC OEL	TWA	3 mg/m3
		CAD ON OEL	TWAEV	10 mg/m3
		OEL (QUE)	TWA	10 mg/m3

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance** green
- Physical State** liquid
- pH** 5.0 - 7.5 (100 %)
- Vapor Pressure** no data available
- Vapor Density (Air = 1)** no data available
- Density** 1.16 g/cm³ at 20 °C
- Evaporation rate** no data available



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Melting / Freezing Point	no data available
Water solubility	dispersible
Partition coefficient: n-octanol/water	no data available
Viscosity	500 - 1,000 cps

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	no data available
Incompatibility	no data available
Hazardous Decomposition Products	no data available
Hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical Stability	Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the technical-grade active ingredients.

Acute oral toxicity	female rat: LD50: 5,000 mg/kg
Acute dermal toxicity	male/female combined rat: > 5,000 mg/kg
Acute inhalation toxicity	rat: LC50: > 2.54 mg/l Exposure time: 4 h Determined in the form of liquid aerosol.
	rat: LC50: > 10.2 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. Extrapolated from the 4 hr LC50.
Skin irritation	rabbit: slight irritation
Eye irritation	rabbit: Minimally irritating.
Sensitisation	guinea pig: Non-sensitizing.
Chronic toxicity	Iprodione caused effects in the liver, adrenal, ovary and testes in chronic feeding



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studies.

Triticonazole caused liver and/or adrenal effects in chronic studies in rats and dogs.

Trifloxystrobin caused liver effects in chronic studies in mice, rats and/or dogs.

Assessment Carcinogenicity

Iprodione produced benign testicular tumors in rats and benign liver and ovary tumors in mice when tested at a maximum tolerated dose.

Triticonazole was not carcinogenic in lifetime feeding studies in rats and mice.

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

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Reproductive toxicity

REPRODUCTION: Iprodione caused toxicity in offspring at doses producing systemic toxicity in adult rats.

Triticonazole was not a primary reproductive toxicant in a two-generation reproduction study in rats. Reproductive effects were observed only at high doses that caused systemic toxicity in parental animals.

Trifloxystrobin is not considered a primary reproductive toxicant in rats.

DEVELOPMENTAL TOXICITY: Iprodione was not a primary developmental toxicant in rats and rabbits. Developmental effects were observed but were considered secondary to maternal toxicity.

Triticonazole was not a primary developmental toxicant in rats and rabbits. Any developmental effects observed were considered secondary to maternal toxicity.

Trifloxystrobin is not considered a primary developmental toxicant in laboratory animals. Developmental effects were observed only at doses that caused maternal toxicity.

Neurotoxicity

Iprodione is not considered to be a neurotoxicant.

Triticonazole was not a neurotoxicant in acute and subchronic neurotoxicity screening studies in rats.

Trifloxystrobin is not a primary neurotoxicant based on an acute (oral gavage)



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neurotoxicity screening study in rats.

Mutagenicity

Iprodione was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

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

Trifloxystrobin was not considered mutagenic or genotoxic based on in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish

Oncorhynchus mykiss (rainbow trout)
LC50: 4.1 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient iprodione.

Lepomis macrochirus (Bluegill sunfish)
LC50: 3.7 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient iprodione.

Toxicity to aquatic plants

Scenedesmus subspicatus
15.3 mg/l
Exposure time: 72 h
The value mentioned relates to the active ingredient iprodione.

Acute Toxicity to Aquatic Invertebrates

Water flea (Daphnia magna)
EC50: 0.25 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient iprodione.

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. Apply this product as specified on the label. 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 apply when weather conditions favor runoff or drift.



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SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance Dispose in accordance with all local, state/provincial and federal regulations. Follow container label instructions for disposal of wastes generated during use in compliance with the product label. It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.

Container Disposal Puncture container to avoid re-use. Do not re-use empty containers. Triple rinse containers. Consult state and local regulations regarding the proper disposal of container. Follow advice on product label and/or leaflet.

SECTION 14. TRANSPORT INFORMATION

TDG Not dangerous goods / not hazardous material

CFR Not dangerous goods / not hazardous material

IMDG

UN-Number **3082**
Class 9
Packaging group III
Marine pollutant Marine Pollutant
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (IPRODIONE, TRITICONAZOLE SOLUTION)

IATA

UN-Number **3082**
Class 9
Packaging group III
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (IPRODIONE, TRITICONAZOLE 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.

SECTION 15. REGULATORY INFORMATION

PCP Registration No. 29870

US Federal Regulations

TSCA list

1,2-Propanediol 57-55-6
Isodecyl poly(ethyleneoxy)ethanol 78330-20-8



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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

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
Isodecyl poly(ethyleneoxy)ethanol	78330-20-8

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)

lprodione	36734-19-7
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SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 1 Reactivity - 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: New Material Safety Data Sheet.

Prepared by the HSE Department of Bayer CropScience Inc. (306)-721-0310.



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