



## Safety Data Sheet

### TRILOGY™ SC FUNGICIDE

SDS Number: 102000021914

SDS Version 1.1

Revision Date: 06/03/2013

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## SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product name** TRILOGY™ SC FUNGICIDE  
**SDS Number** 102000021914  
**Product code (UVP)** 79883684

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.

<b>Physical State</b>	Liquid
<b>Odor</b>	characteristic
<b>Appearance</b>	green
<b>Exposure routes</b>	Inhalation, Skin contact, Eye contact
<b>Immediate Effects</b>	
<b>Eye</b>	Mild eye irritation. Avoid contact with eyes.
<b>Skin</b>	May cause mild irritation to the skin. Avoid contact with skin and clothing.
<b>Inhalation</b>	Harmful if inhaled. Avoid breathing spray mist.
<b>Chronic or Delayed Long-Term</b>	This product or its components may have target organ effects.
<b>Potential Environmental Effect</b>	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	2.36
Isodecyl poly(ethyleneoxy)ethanol	78330-20-8	2.00

#### SECTION 4. FIRST AID MEASURES

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

#### SECTION 5. FIRE FIGHTING MEASURES

<b>Flash point</b>	no data available
<b>Autoignition temperature</b>	no data available
<b>Lower Flammability Limit</b>	no data available
<b>Upper Flammability Limit</b>	no data available



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<b>Explosiveness</b>	not applicable
<b>Suitable extinguishing media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Fire Fighting Instructions</b>	<p>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.</p> <p>Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.</p>
<b>Dust explosion class</b>	Not applicable.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.
<b>Methods for cleaning up</b>	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.
<b>Additional advice</b>	Do not allow to enter soil, waterways or waste water canal.

## SECTION 7. HANDLING AND STORAGE

<b>Handling procedures</b>	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.
<b>Storing Procedures</b>	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.
<b>Work/Hygienic Procedures</b>	<p>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.</p> <p>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.</p>



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#### SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General Protection</b>	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.
<b>Eye/Face Protection</b>	Safety glasses with side-shields
<b>Hand protection</b>	Chemical resistant nitrile rubber gloves
<b>Body Protection</b>	Wear long-sleeved shirt and long pants and shoes plus socks.
<b>Respiratory protection</b>	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	CAD AB OEL	TWA	10 mg/m3
		CAD BC OEL	TWA	10 mg/m3
		CAD BC OEL	TWA	3 mg/m3
		CAD MB OEL	TWA	10 mg/m3
		CAD ON OEL	TWAEV	10 mg/m3
		CAD SK OEL	15 MIN ACL	20 mg/m3
		CAD SK OEL	8 HR ACL	10 mg/m3
OEL (QUE)	TWA	10 mg/m3		

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

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	green
<b>Physical State</b>	Liquid
<b>Odor</b>	characteristic
<b>pH</b>	5.0 - 7.5 (100 %)
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available



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### Specific Gravity

<b>Density</b>	1.16 g/cm <sup>3</sup> at 20 °C
<b>Evaporation rate</b>	no data available
<b>Melting / Freezing Point</b>	no data available
<b>Water solubility</b>	dispersible
<b>Minimum Ignition Energy</b>	not applicable
<b>Decomposition temperature</b>	not applicable
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Viscosity</b>	500 - 1,000 cps

## SECTION 10. STABILITY AND REACTIVITY

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

<b>Acute oral toxicity</b>	female rat: LD50: 5,000 mg/kg
<b>Acute dermal toxicity</b>	male/female combined rat: > 5,000 mg/kg



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**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 specific target organ toxicity in experimental animal studies in rats in the following organ(s): adrenal gland.

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

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

**Assessment Carcinogenicity**

Iprodione caused at high dose levels an increased incidence of tumours in the following organ(s): liver, testes. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

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

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.

**Developmental Toxicity**            Iprodione caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Iprodione are related to maternal toxicity.



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

**Assessment neurotoxicity**

Triticonazole was not a neurotoxicant in acute and subchronic neurotoxicity screening studies 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 mutagenic or genotoxic in a battery of 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

**49CFR** Not dangerous goods / not hazardous material

**IMDG**

UN number	<b>3082</b>
Class	9
Packaging group	III
Marine pollutant	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (IPRODIONE, TRITICONAZOLE SOLUTION)

**IATA**

UN number	<b>3082</b>
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
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**

**US Federal Regulations**

**TSCA list**

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

**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 contains a chemical known to the State of California to cause cancer.

Iprodione 36734-19-7

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)

Iprodione	36734-19-7
1,2-Propanediol	57-55-6

## SECTION 16. OTHER INFORMATION

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: Reviewed and updated for general editorial purposes. The following sections have been revised: Section 3: Composition / Information on Ingredients. Section 5: Fire Fighting Measures. Section 9: Physical and Chemical Properties. Section 11: Toxicological Information.

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



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