



Safety Data Sheet

ROVRAL® GREEN GT FLOWABLE FUNGICIDE

SDS Number: 102000011863

SDS Version 3.1

Revision Date: 04/30/2014

Print Date: 05/01/2014

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name	ROVRAL® GREEN GT FLOWABLE FUNGICIDE
SDS Number	102000011863
Product code (UVP)	06417450
PCP Registration No.	24379
Product Use	Fungicide

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! May be harmful if inhaled. Avoid breathing spray mist. Avoid contact with skin, eyes and clothing.

Physical State	Liquid
Odor	odourless
Appearance	green
Exposure routes	Inhalation, Ingestion, Eye contact, Skin contact
Immediate Effects	
Eye	May cause eye irritation. May cause redness, tearing. Avoid contact with eyes.
Skin	May cause mild irritation to the skin. Avoid contact with skin and clothing.
Ingestion	May be harmful if swallowed. May produce symptoms similar to those from inhalation. Do not take internally.
Inhalation	May be harmful if inhaled. May cause upper respiratory tract irritation, dizziness, headache, nausea, vomiting. Avoid breathing spray mist.
Chronic or Delayed Long-Term	This product or its components may have target organ effects.



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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	23.30
Distillates (petroleum), solvent-refined light paraffinic	64741-89-5	35.90
1,2-Propanediol	57-55-6	4.90
Naphthalene and alkyl naphthalene sulphonic acids formaldehyde condensate, sodium salt	68425-94-5	2.00

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	> 93.3 °C / 199.9 °F
Autoignition temperature	no data available
Lower Flammability Limit	no data available
Upper Flammability Limit	not applicable



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Explosiveness	not applicable
Fire and Explosion Hazards	Dangerous gases are evolved in the event of a fire.
Suitable extinguishing media	Carbon dioxide (CO ₂), Dry chemical, Foam, Water spray
Fire Fighting Instructions	<p>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.</p> <p>Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.</p>

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.
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 product to contact non-target plants. 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. Use only in area provided with appropriate exhaust ventilation.
Storing Procedures	<p>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.</p>
Work/Hygienic Procedures	<p>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. 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.</p>



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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection	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.
Eye/Face Protection	Chemical resistant goggles must be worn.
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
Distillates (petroleum), solvent-refined light paraffinic	64741-89-5	CAD AB OEL	TWA	5 mg/m3
		CAD AB OEL	STEL	10 mg/m3
		CAD BC OEL	TWA	0.2 mg/m3
		CAD BC OEL	TWA	1 mg/m3
1,2-Propanediol	57-55-6	CAD ON OEL	TWAEV	10 mg/m3
		CAD ON OEL	TWAEV	50 ppm

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	green
Physical State	Liquid
Odor	odourless
pH	6.0 - 6.5 (100 %) at 20 °C
Vapor Pressure	no data available
Vapor Density (Air = 1)	no data available
Density	ca. 1.03 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	miscible
Minimum Ignition Energy	not applicable
Decomposition temperature	not applicable
Partition coefficient: n-octanol/water	no data available
Viscosity	1,000 - 1,500 cps

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	freezing
Incompatibility	Acids Bases Oxidizing agents
Hazardous Decomposition Products	Carbon dioxide (CO ₂) Carbon monoxide Sodium oxides Sulphur oxides
Hazardous reactions	No dangerous reaction known under conditions of normal use.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity studies have been bridged from a similar formulation containing a similar percentage of the active ingredient, iprodione. The non-acute information pertains to the technical-grade active ingredient.

Acute oral toxicity male rat: LD50: > 5,000 mg/kg

female rat: LD50: 4,619 mg/kg

Acute dermal toxicity male/female combined rat: LD50: > 2,000 mg/kg



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Acute inhalation toxicity male/female combined rat: LC50: > 0.8 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.
(actual)
Highest attainable concentration.
No deaths

male/female combined rat: LC50: > 3.2 mg/l
Exposure time: 1 h
Determined in the form of liquid aerosol.
Extrapolated from the 4 hr LC50.
(actual)

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.

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.

ACGIH

None.

NTP

Distillates (petroleum), solvent-refined light paraffinic 64741-89-5

IARC

Distillates (petroleum), solvent-refined light paraffinic 64741-89-5 Overall evaluation: 1

OSHA

None.

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

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.

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

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish Rainbow trout (*Oncorhynchus mykiss*)



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LC50: 4.1 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient iprodione.

Toxicity to aquatic plants Scenedesmus subspicatus
IC50: 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 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. Do not apply when weather conditions favor runoff or drift. Apply this product as specified on the label.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance Dispose in accordance with all local, state/provincial and federal regulations. Follow advice on product label and/or leaflet.

Container Disposal Triple rinse containers. Add washings to sprayer at time of filling. Puncture container to avoid re-use. 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 **3082**
Class 9
Packaging group III
Marine pollutant YES
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (IPRODIONE SOLUTION)

IATA
UN number **3082**
Class 9



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Packaging group III
 Environm. Hazardous Mark YES
 Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (IPRODIONE 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

PCP Registration No. 24379

US Federal Regulations

TSCA list

Distillates (petroleum), solvent-refined light paraffinic 64741-89-5
 Naphthalene and alkyl naphthalene sulphonic acids formaldehyde condensate, sodium salt 68425-94-5

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 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

Distillates (petroleum), solvent-refined light paraffinic 64741-89-5 CA, MA
 1,2-Propanediol 57-55-6 MN

Canadian Regulations

Canadian Domestic Substance List

Distillates (petroleum), solvent-refined light paraffinic 64741-89-5
 1,2-Propanediol 57-55-6
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Environmental

CERCLA

None.



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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
Distillates (petroleum), solvent-refined light paraffinic	64741-89-5

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: Reviewed and updated for general editorial purposes.

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

Revision Date: 04/30/2014

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