

ROVRAL[®] BRAND 4 FLOWABLE FUNGICIDE

MSDS Version 2.1

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name	ROVRAL [®] BRAND 4 FLOWABLE FUNGICIDE
Chemical Name	Glycophene; promidione; Iprodione; RP 26019
Synonym	
MSDS Number	183
Chemical Family	
Chemical Formulation	C13H13Cl2N3O3
EPA Registration No.	264-482
Canadian Registrat. No.	

Bayer CropScience
 2 T.W. Alexander Drive
 Research Triangle PK, NC 27709
 USA

For Product Use Information: (866)-992-2937 Monday through Friday(CRLF) 8:00AM-4:30PM(CRLF) For Medical Emergency contact DART: (800) 334-7577 24 Hours/Day(CRLF) For Transportation Emergency CHEMTREC: (800) 424-9300 24 Hours/Day

Product Use Description FIFRA regulated use only.

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component Name</u>	<u>CAS No.</u>	<u>Concentration % by Weight</u>	
		<u>Minimum</u>	<u>Maximum</u>
IPRODIONE	36734-19-7	41.6000	
1,2-Propylene glycol	57-55-6	59.0000	
Other ingredients (Trade secret)			

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview Caution. Harmful if swallowed, inhaled or absorbed through the skin.

Physical State liquid slurry

Odor slight

Appearance white

Immediate Effects
Eye Causes irritation, redness.

Material Safety Data Sheet

MSDS Number: 00000000183

ROVRAL[®] BRAND 4 FLOWABLE FUNGICIDE

MSDS Version 2.1

Skin	Harmful if absorbed through skin. Essentially non-irritating.
Ingestion	Harmful if ingested. May cause nausea, vomiting, abdominal pain, loss of coordination.
Inhalation	Harmful if inhaled. Can cause upper respiratory tract irritation.
Chronic or Delayed Long-Term	This product does not contain any ingredients designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.
Medical Conditions Aggravated by Exposure	Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

SECTION 4. FIRST AID MEASURES

Eye	Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention.
Skin	In case of contact, immediately wash with plenty of soap and water for at least 15 minutes. Seek medical attention. Remove contaminated clothing and shoes while washing. Clean contaminated clothing and shoes before re-use or discard if they cannot be thoroughly cleaned.
Ingestion	If victim is conscious and alert, give 2-3 glasses of water to drink and induce vomiting by touching back of throat with a finger. Do not induce vomiting or give anything by mouth to an unconscious person. Seek immediate medical attention. Do not leave victim unattended. Vomiting may occur spontaneously. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.
Inhalation	Remove victim from immediate source of exposure and assure that the victim is breathing. If breathing is difficult, administer oxygen, if available. If victim is not breathing, administer CPR (cardio-pulmonary resuscitation). Seek medical attention.
Note to Physician	All treatment should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically. No specific antidote available.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point	Not applicable
Fire and Explosion	Under fire conditions, toxic, corrosive fumes are emitted.

Material Safety Data Sheet

ROVRAL® BRAND 4 FLOWABLE FUNGICIDE

MSDS Number: 00000000183
MSDS Version 2.1

Hazards

Suitable Extinguishing Media Not combustible., Use extinguishing method suitable for surrounding fire.

Fire Fighting Instructions Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Dike areas to prevent runoff and contamination of water sources. Dispose of fire control water later.

SECTION 6. ACCIDENTAL RELEASE MEASURES

General and Disposal Evacuation Procedures and Safety: Wear appropriate gear for the situation. See Personal Protection information in Section 8. Stay upwind if possible.

Cleanup and Disposal of Spill: Scrape up and place in appropriate closed container (see Section 7: Handling and Storage). Clean up residual material by washing area with water. Collect washings for disposal. Decontaminate tools and equipment following cleanup. Avoid creation of dusty conditions.

Land Spill or Leaks Containment of Spill: Follow procedure under Cleanup and Disposal of Spill.

Environmental and Regulatory Reporting: Do not flush to drain. If spilled on the ground, the affected area should be removed to a depth of one or two inches and placed in an appropriate container for disposal. Prevent material from entering public sewer system or any waterway.

SECTION 7. HANDLING AND STORAGE

Handling Procedures Do not ingest. Do not breathe dusts. Avoid direct or prolonged contact with skin and eyes.

Storing Procedures Store in an area away from food, feedstuffs, fertilizers and seed.

Work/Hygienic Procedures Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.

Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.

Wash exposed skin promptly to remove accidental splashes of contact with this material.

Min/Max Storage Temperatures Not Available

Material Safety Data Sheet

ROVRAL® BRAND 4 FLOWABLE FUNGICIDE

MSDS Number: 00000000183

MSDS Version 2.1

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls Where engineering controls are indicated by use conditions of a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: local exhaust ventilation at the point of generation.

Eye/Face Protection Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

It is generally regarded as good practice to wear a minimum of safety glasses with side shields when working in industrial environments.

Body Protection Skin contact should be minimized through use of gloves and suitable long-sleeved clothing (i.e., shirts and pants). Consideration must be given both to durability as well as permeation resistance.

Respiratory Protection When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Under normal conditions, in the absence of other airborne contaminants, the following should provide protection from this material up to the conditions specified by the appropriate OSHA, WHMIS or ANSI standard(s): Air-purifying (half-mask/full-face) respirator with cartridge/canister approved for use against pesticides.

Under conditions immediately dangerous to life or health, or emergency conditions with unknown concentrations, use a full-face positive pressure air-supplied respirator equipped with an emergency escape air supply unit or use a self-contained breathing apparatus unit.

General Protection These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

Exposure Limits

1,2-Propylene glycol	57-55-6	WEEL	TWA	50 ppm
----------------------	---------	------	-----	--------

Material Safety Data Sheet

ROVRAL® BRAND 4 FLOWABLE FUNGICIDE

MSDS Number: 00000000183

MSDS Version 2.1

Form of Exposure	Total vapor and aerosol.	
WEEL TWA		10 mg/m3
Form of Exposure	Aerosol.	
ACGIH TWA		3 mg/m3
Form of Exposure	Respirable.	
US CA OEL TWA PEL		5 mg/m3
Form of Exposure	Respirable fraction.	
US CA OEL TWA PEL		10 mg/m3
Form of Exposure	Total dust.	
US CA OEL TWA PEL		5 mg/m3
Form of Exposure	Respirable fraction.	
US CA OEL TWA PEL		5 mg/m3
Form of Exposure	Respirable fraction.	
US CA OEL TWA PEL		10 mg/m3
Form of Exposure	Total dust.	
US CA OEL TWA PEL		10 mg/m3
Form of Exposure	Total dust.	
ACGIH TWA		10 mg/m3
Form of Exposure	Inhalable particulate.	

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white
Physical State	liquid slurry
Odor	slight
pH	5.5 at 100 wt/wt%.
Vapor Pressure	Not available
Vapor Density (air = 1)	Not available
Specific Gravity	1.153 at 25 °C
Boiling Point	100 °C 760 mmHg
Melting/Freezing Point	-14 °C
Solubility (in water)	slightly soluble
Molecular Weight	330.19 g/mol

Material Safety Data Sheet

ROVRAL[®] BRAND 4 FLOWABLE FUNGICIDE

MSDS Number: 00000000183
MSDS Version 2.1

Other Information Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product Information phone number in Section 1 for its exact specifications.

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	This material is stable under normal handling and storage conditions described in Section 7.
Conditions to Avoid	freezing
Incompatibility	strong bases strong acids strong oxidizing agents
Hazardous Products of Decomposition	Decomposition Type: thermal hydrogen chloride oxides of nitrogen
Hazardous Polymerization (Conditions to avoid)	not applicable

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	Rat: LD50: 1,170 mg/kg
Acute Dermal Toxicity	Rabbit: LD50: > 2,000 mg/kg
Acute Inhalation Toxicity	Rat: LC50: 3.65 mg/l 4 h Acute Respiratory Irritation: No test data found for product.
Skin Irritation	Rabbit: Non-irritating to minimally irritating.
Eye Irritation	Rabbit: Slightly irritating. Irritation is transient.
Chronic Toxicity	No additional test data found for product.
Assessment Carcinogenicity	
ACGIH	None
NTP	None
IARC	None

Material Safety Data Sheet

ROVRAL® BRAND 4 FLOWABLE FUNGICIDE

MSDS Number: 00000000183
MSDS Version 2.1

OSHA
None

SECTION 12. ECOLOGICAL INFORMATION

Ecological Information For ecotoxicological data call the product information phone number listed in Section 1.

Environmental Fate For chemical fate data call the product information phone number listed in Section 1.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

Container Disposal Do not reuse containers. Any container or equipment used should be decontaminated immediately after use. Consult state and local regulations regarding the proper disposal of container.

EPA HAZARDOUS WASTE - NO

RCRA Classification Not Regulated under this Statute

SECTION 14. TRANSPORT INFORMATION

Transportation Status:
The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

US Department of Transportation
Shipping Name: NOT REGULATED

SECTION 15. REGULATORY INFORMATION

US Federal

EPA Registration No.	264-482
TSCA list	
1,2-Propylene glycol	57-55-6
TSCA 12b export notification	

Material Safety Data Sheet

MSDS Number: 00000000183
MSDS Version 2.1

ROVRAL® BRAND 4 FLOWABLE FUNGICIDE

None

SARA Title III - section 302 - notification and information

None

SARA Title III - section 313 - toxic chemical release reporting

None

US States Regulatory

CA Prop65

This product contains a chemical known to the state of California to cause cancer. IPRADIONE 36734-19-7

US State right-to-know ingredients

1,2-Propylene glycol 57-55-6 PA, RI

Canadian Regulations

Canadian Registrat. No.

Canadian Domestic Substance List

1,2-Propylene glycol 57-55-6

Environmental

CERCLA

None

Clean Water Section 307 Priority Pollutants

None

Safe Drinking Water Act Maximum Contaminant Levels

None

International Regulations

EU Classification

IPRADIONE 36734-19-7 Harmful Dangerous for the environment

R Phrases Possible risks of irreversible effects. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S Phrases Keep out of the reach of children. Wear suitable protective clothing and gloves. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

European Inventory of Existing Commercial Substances (EINECS)

1,2-Propylene glycol 57-55-6

Material Safety Data Sheet

ROVRAL® BRAND 4 FLOWABLE FUNGICIDE

MSDS Number: 00000000183
MSDS Version 2.1

SECTION 16. OTHER INFORMATION

	Health	Flammability	Reactivity	Others
HMIS	2	0	0	
NFPA	1	0	0	

Reason for Revisions: New Company Name.

Print Date: 12/18/2002

Supersedes MSDS, which is older than: 12/16/2002

This information is provided in good faith but without express or implied warranty. Buyer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer AG. Bayer CropScience