

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

SECTION 1. IDENTIFICATION

Product identifier

Product name Rovral® Brand 4 Flowable Fungicide

Other means of identification

Product code 50000422

Recommended use of the chemical and restrictions on use

Recommended use Can be used as fungicide only.

Restrictions on use Use as recommended by the label.

Manufacturer or supplier's details

Manufacturer FMC Corporation
2929 WALNUT ST
PHILADELPHIA PA 19104
USA
+1 (215) 299-6000 (Corporate)
SDS-Info@fmc.com, +1-(800)-346-0833 (FMC Cust. Service)

Supplier Address FMC Corporation
2929 Walnut Street
Philadelphia PA 19104
USA

Emergency telephone

For leak, fire, spill or accident emergencies, call:
1 800 / 424-9300 (CHEMTREC - U.S.A.)
1 703 / 741-5970 (CHEMTREC - International)
1 703 / 527-3887 (CHEMTREC - Alternate)

Medical emergency:
U.S.A. & Canada: +1 800 / 331-3148
All other countries: +1 651 / 632-6793 (Collect)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids : Category 4

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



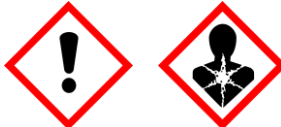
Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

Carcinogenicity : Category 2

Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms : 

Signal Word : WARNING

Hazard Statements : H227 Combustible liquid.
H302 Harmful if swallowed.
H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H361f Suspected of damaging fertility.

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

Other hazards

Very toxic to aquatic life with long lasting effects.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
iprodione (ISO)	36734-19-7	41.7
propane-1,2-diol	57-55-6	>= 5 - < 10

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.
- If inhaled : Move to fresh air.
Call a physician or poison control center immediately.
If unconscious, place in recovery position and seek medical advice.
If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance.
- In case of skin contact : Wash off with soap and water.
Wash off immediately with plenty of water for at least 15 minutes.
Take off all contaminated clothing immediately.
Wash contaminated clothing before re-use.
If skin irritation persists, call a physician.
- In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Do not induce vomiting without medical advice.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms : Harmful if swallowed.

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version	Revision Date:	SDS Number:	Date of last issue: 05/20/2022
1.6	11/18/2025	50000422	Date of first issue: 05/26/2016

and effects, both acute and delayed : Toxic if inhaled.
Suspected of causing cancer.
Suspected of damaging fertility.

Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
Avoid inhalation, ingestion and contact with skin and eyes.
If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Dry chemical, CO2, water spray or regular foam.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet
Do not spread spilled material with high-pressure water streams.

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No hazardous combustion products are known

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.

Special protective equipment for fire-fighters : Firefighters should wear protective clothing and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.
Use personal protective equipment.
If it can be safely done, stop the leak.
Do not touch or walk through the spilled material.
Never return spills in original containers for re-use.
Mark the contaminated area with signs and prevent access to unauthorized personnel.
Only qualified personnel equipped with suitable protective equipment may intervene.
For disposal considerations see section 13.

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.
Keep away from open flames, hot surfaces and sources of ignition.
- Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Prevent unauthorized access.
No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.
- Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
propane-1,2-diol	57-55-6	TWA	10 mg/m3	US WEEL

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version	Revision Date:	SDS Number:	Date of last issue: 05/20/2022
1.6	11/18/2025	50000422	Date of first issue: 05/26/2016

Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.
- Hand protection
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
- Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Protective measures : Plan first aid action before beginning work with this product. Always have on hand a first-aid kit, together with proper instructions.
Ensure that eye flushing systems and safety showers are located close to the working place.
Wear suitable protective equipment.
- Hygiene measures : Avoid contact with skin, eyes and clothing.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : liquid
- Form : suspension
- Color : white, tan
- Odor : slight
- Odor Threshold : No data available
- pH : 4.5 - 7.5
- Melting point/freezing point : 7 °F / -14 °C

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

Initial boiling point and boiling range : 212 °F / 100 °C

Flash point : > 150.1 °F / > 65.6 °C

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Density : 1.153 g/cm³ (68 °F / 20 °C)

Bulk density : No data available

Solubility(ies)

 Water solubility : dispersible

 Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

 Viscosity, dynamic : No data available

 Viscosity, kinematic : No data available

Explosive properties : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : No decomposition if stored and applied as directed.

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version	Revision Date:	SDS Number:	Date of last issue: 05/20/2022
1.6	11/18/2025	50000422	Date of first issue: 05/26/2016

Possibility of hazardous reactions : No decomposition if stored and applied as directed. Vapors may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks. Protect from frost.

Incompatible materials : Avoid strong acids, bases, and oxidizers.

Hazardous decomposition products : No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.
Harmful if inhaled.

Product:

Acute oral toxicity : LD50 (Rat): 1,170 mg/kg
GLP: yes

Acute inhalation toxicity : LC50 (Rat): 3.7 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
GLP: yes

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
GLP: yes

Components:

iprodione (ISO):

Acute oral toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Assessment: The component/mixture is minimally toxic after single ingestion.

LD50 (Rat, male and female): 3,100 - 4,300 mg/kg
Symptoms: ataxia, Diarrhea, Nose bleeding

Acute inhalation toxicity : LC50 (Rat): > 3.29 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Symptoms: Breathing difficulties
Assessment: The component/mixture is minimally toxic after short term inhalation.
Remarks: no mortality

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: EPA OPP 81-2
Symptoms: Irritation
GLP: yes

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

Assessment: The component/mixture is minimally toxic after single contact with skin.

propane-1,2-diol:

Acute oral toxicity : LD50 (Rat, male and female): 22,000 mg/kg

Acute inhalation toxicity : LC0 (Rabbit): 31.7 mg/l
Exposure time: 2 h
Test atmosphere: vapor
Remarks: no mortality

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Product:

Species : Rabbit
Assessment : Not classified as irritant
Result : slight irritation
GLP : yes

Components:

iprodione (ISO):

Species : Rabbit
Assessment : Not classified as irritant
Method : EPA OPP 81-5
Result : No skin irritation
GLP : yes

propane-1,2-diol:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Product:

Species : Rabbit
Result : slight irritation
Assessment : Not classified as irritant
GLP : yes

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

Components:

iprodione (ISO):

Species : Rabbit
Result : slight irritation
Method : EPA OPP 81-4
GLP : yes

propane-1,2-diol:

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization

Based on available data, the classification criteria are not met.

Respiratory sensitization

Based on available data, the classification criteria are not met.

Product:

Assessment : Not a skin sensitizer.
Result : Does not cause skin sensitization.
GLP : yes

Components:

iprodione (ISO):

Test Type : Buehler Test
Species : Guinea pig
Assessment : Not a skin sensitizer.
Method : EPA OPP 81-6
Result : Does not cause skin sensitization.
GLP : yes

propane-1,2-diol:

Test Type : Maximization Test
Species : Guinea pig
Result : negative

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Components:

iprodione (ISO):

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

Test Type: in vitro DNA damage and/or repair study
Test system: Bacillus subtilis
Metabolic activation: with and without metabolic activation
Result: positive

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Result: negative

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

propane-1,2-diol:

Genotoxicity in vitro : Test Type: reverse mutation assay
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse
Result: negative

Carcinogenicity

Suspected of causing cancer.

Product:

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Components:

iprodione (ISO):

Species : Rat, male
Exposure time : 2 y
: 6.1 mg/kg bw/day
: 12.4 mg/kg bw/day
Result : positive
Symptoms : Testicular effects
Target Organs : Adrenal gland, Testes

Species : Rat, female
Exposure time : 2 y

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

Target Organs : 8.4 mg/kg bw/day
: 16.5 mg/kg bw/day
: Adrenal gland

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

propane-1,2-diol:

Species : Rat
Application Route : Oral
Exposure time : 2 Years
Result : negative

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Suspected of damaging fertility.

Product:

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

Components:

iprodione (ISO):

Effects on fetal development : Species: Rabbit
General Toxicity Maternal: NOAEL: 20 mg/kg bw/day
Developmental Toxicity: NOAEL: 60 mg/kg bw/day
Symptoms: Reduced body weight, Total Resorptions / resorption rate.

Species: Rat
General Toxicity Maternal: NOAEL: 20 mg/kg bw/day
Developmental Toxicity: NOAEL: 20 mg/kg bw/day
Symptoms: Reduced body weight, Fetal mortality.
Target Organs: Adrenal gland

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

propane-1,2-diol:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Mouse

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

Application Route: Oral
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 414
Result: Animal testing did not show any effects on fertility.
Remarks: Based on data from similar materials

STOT-single exposure

Based on available data, the classification criteria are not met.

Components:

iprodione (ISO):

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Components:

iprodione (ISO):

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

iprodione (ISO):

Species : Rat, male
NOAEL : 78 mg/kg
LOAEL : 151 mg/kg
Application Route : Oral
Exposure time : 90 d
Target Organs : Reproductive organs

Species : Rat, female
NOAEL : 89 mg/kg
LOAEL : 189 mg/kg
Application Route : Oral
Exposure time : 90 d
Target Organs : Reproductive organs

Species : Rat, male
NOAEL : 28 mg/kg
LOAEL : 207 mg/kg
Application Route : Inhalation
Exposure time : 28 d

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

Target Organs : Adrenal gland

Species : Rat, female
NOAEL : 43 mg/kg
LOAEL : 241 mg/kg
Application Route : Inhalation
Exposure time : 28 d
Target Organs : Adrenal gland

propane-1,2-diol:

Species : Rat, male and female
NOAEL : 1,700 mg/kg
Application Route : Oral
Exposure time : 2 Years

Species : Rat, male and female
NOAEL : 1,000 mg/kg
LOAEL : 160 mg/kg
Application Route : Inhalation
Exposure time : 90 Days

Aspiration toxicity

Based on available data, the classification criteria are not met.

Components:

iprodione (ISO):

The substance does not have properties associated with aspiration hazard potential.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

iprodione (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4.1 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0.25 mg/l
aquatic invertebrates : Exposure time: 48 h

Toxicity to algae/aquatic : EC50 (Scenedesmus subspicatus): > 0.5 mg/l
plants : Exposure time: 72 h

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 0.26 mg/l
Exposure time: 21 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.17 mg/l
Exposure time: 21 d

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg
Exposure time: 14 d

Toxicity to terrestrial organisms : LD50 (Colinus virginianus (Bobwhite quail)): > 2,000 mg/kg

LD50 (Apis mellifera (bees)): > 250 µg/bee
Exposure time: 48 h
Remarks: Contact

LD50 (Apis mellifera (bees)): > 25 µg/bee
Exposure time: 48 h
Remarks: Oral

propane-1,2-diol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : (Mysidopsis bahia (opossum shrimp)): 18,800 mg/l
Exposure time: 96 h

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 34,100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 13,020 mg/l
Exposure time: 7 d

Toxicity to microorganisms : EC50 (Pseudomonas putida): > 20,000 mg/l
Exposure time: 18 h

Persistence and degradability

Components:

iprodione (ISO):

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life (DT50): 146 d pH: 5
Degradation half life (DT50): 0.2 d pH: 8

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

propane-1,2-diol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 23.6 %
Exposure time: 64 d
Method: OECD Test Guideline 306

Bioaccumulative potential

Components:

iprodione (ISO):

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 70
Remarks: Bioaccumulation is unlikely.
See section 9 for octanol-water partition coefficient.

Partition coefficient: n-octanol/water : log Pow: 3 (68 °F / 20 °C)
pH: 7

propane-1,2-diol:

Partition coefficient: n-octanol/water : log Pow: -1.07

Mobility in soil

Components:

iprodione (ISO):

Distribution among environmental compartments : Remarks: Low mobility in soil.

Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version	Revision Date:	SDS Number:	Date of last issue: 05/20/2022
1.6	11/18/2025	50000422	Date of first issue: 05/26/2016

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

- Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
- Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.
-

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

- UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Iprodione)
Class : 9
Packing group : III
Labels : 9
Environmentally hazardous : no

IATA-DGR

- UN/ID No. : UN 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s. (Iprodione)
Class : 9
Packing group : III
Labels : Miscellaneous
Packing instruction (cargo aircraft) : 964
Packing instruction (passenger aircraft) : 964

IMDG-Code

- UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Iprodione)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes
-

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR Road

UN/ID/NA number : UN 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(Iprodione)
Class : 9
Packing group : III
Labels : CLASS 9
ERG Code : 171
Marine pollutant : yes

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
naphthalene	91-20-3	100	

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Carcinogenicity
Reproductive toxicity

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version 1.6 Revision Date: 11/18/2025 SDS Number: 50000422 Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

propane-1,2-diol 57-55-6 $\geq 5 - < 10 \%$

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

sodium hydroxide 1310-73-2 $\geq 0 - < 0.1 \%$
naphthalene 91-20-3 $\geq 0 - < 0.1 \%$

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

sodium hydroxide 1310-73-2 $\geq 0 - < 0.1 \%$
naphthalene 91-20-3 $\geq 0 - < 0.1 \%$

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

water 7732-18-5
iprodione (ISO) 36734-19-7
propane-1,2-diol 57-55-6
Polymer of 2-methyloxirane / oxirane 9003-11-6

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

California Prop. 65

WARNING: This product can expose you to chemicals including iprodione (ISO), naphthalene, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

The ingredients of this product are reported in the following inventories:

TCSI : Not in compliance with the inventory

TSCA : Product contains substance(s) not listed on TSCA inventory.

AICS : Not in compliance with the inventory

DSL : This product contains chemical substance(s) exempt from CEPA DSL Inventory requirements. It is regulated as a pesticide subject to Pest Control Products Act (PCPA) requirements. Read the PCPA label, authorized under the Pest Control Products Act, prior to using or handling this pest control product.

ENCS : Not in compliance with the inventory

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version	Revision Date:	SDS Number:	Date of last issue: 05/20/2022
1.6	11/18/2025	50000422	Date of first issue: 05/26/2016

ISHL : Not in compliance with the inventory
KECI : Not in compliance with the inventory
PICCS : Not in compliance with the inventory
IECSC : Not in compliance with the inventory
NZIoC : Not in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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 as required on the pesticide label:

CAUTION

Harmful if swallowed, Harmful if absorbed through the skin., Causes eye irritation, Avoid contact with skin, eyes and clothing., Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet., Remove and wash contaminated clothing before reuse.

SECTION 16. OTHER INFORMATION

Further information

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

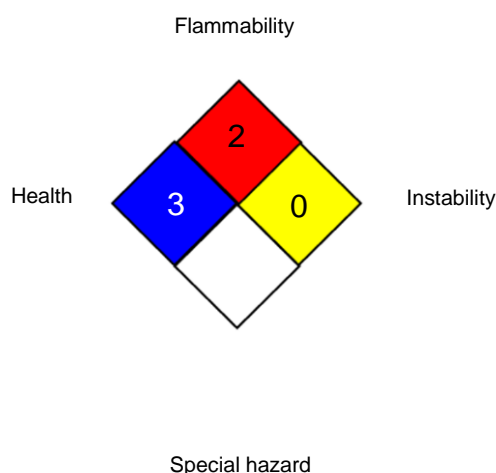
Version
1.6

Revision Date:
11/18/2025

SDS Number:
50000422

Date of last issue: 05/20/2022
Date of first issue: 05/26/2016

NFPA 704:



0 No health threat, 1 Slightly Hazardous, 2 Hazardous, 3 Extreme danger, 4 Deadly

HMIS® IV:

HEALTH	*	1
FLAMMABILITY		2
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

US WEEL : USA. Workplace Environmental Exposure Levels (WEEL)
US WEEL / TWA : 8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Rovral® Brand 4 Flowable Fungicide

Version	Revision Date:	SDS Number:	Date of last issue: 05/20/2022
1.6	11/18/2025	50000422	Date of first issue: 05/26/2016

Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Disclaimer

FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. You can contact FMC Corporation to insure that this document is the most current available from FMC Corporation. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the information provided herein. The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. The user is responsible for determining whether the product is fit for a particular purpose and suitable for the user's conditions and methods of use. Since the conditions and methods of use are beyond the control of FMC Corporation, FMC Corporation expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

US / EN

Prepared by:

FMC Corporation

FMC and the FMC Logo are trademarks of FMC Corporation and/or an affiliate.

© 2021-2025 FMC Corporation. All Rights Reserved.

End of Safety Data Sheet