

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

### SECTION 1. IDENTIFICATION

#### Product identifier

**Product name** ROVRAL® 50 WP

#### Other means of identification

**Product code** 50000150

**Product Registration Number** RSCO-FUNG-0320-001-002-050

#### 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.  
For professional users only.

#### Details of the supplier of the safety data sheet

**Manufacturer** FMC Corporation  
2929 WALNUT ST  
PHILADELPHIA PA 19104  
USA  
(215) 299-6000  
SDS-Info@fmc.com

#### 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)**

Carcinogenicity : Category 2

#### **GHS label elements**

Hazard pictograms :



# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

Signal Word : Warning

Hazard Statements : H351 Suspected of causing cancer.

Precautionary Statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P391 Collect spillage.

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

### Other hazards

Very toxic to aquatic life.  
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	50
kaolin	1332-58-7	>= 30 - < 50
Polyethylene glycol, C12-15-alkyl ethers	68131-39-5	>= 1 - < 5
Silicic acid, aluminum sodium salt	1344-00-9	>= 1 - < 5

Actual concentration is withheld as a trade secret

## SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.

If inhaled : Move to fresh air.  
If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.

In case of skin contact : Wash off with soap and water.  
Take off all contaminated clothing immediately.

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

- Call a physician if irritation develops or persists.
- 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 and effects, both acute and delayed : Suspected of causing cancer.
- 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 : Water spray, fog, or regular foam.
- Unsuitable extinguishing media : Do not spread spilled material with high-pressure water streams.  
High volume water jet
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Thermal decomposition can lead to release of irritating gases and vapors.  
Nitrogen oxides (NOx)  
Carbon oxides  
Chlorine compounds
- 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.
- Special protective equipment for fire-fighters : Firefighters should wear protective clothing and self-contained breathing apparatus.

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Avoid dust formation.  
Avoid breathing dust.  
Pick up and arrange disposal without creating dust.  
Never return spills in original containers for re-use.  
For disposal considerations see section 13.
- 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 : Pick up and transfer to properly labeled containers without creating dust.  
Move it to a safe place.
- Keep in suitable, closed containers for disposal.

### SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Avoid dust formation.  
Provide appropriate exhaust ventilation at places where dust is formed.
- Advice on safe handling : Avoid formation of respirable particles.  
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.  
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : 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 : Keep in a dry place.  
No decomposition if stored and applied as directed.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Components	CAS-No.	Value type	Control parameters	Basis
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# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version  
1.1

Revision Date:  
02/01/2024

SDS Number:  
50000150

Date of last issue: -  
Date of first issue: 03/19/2015

		(Form of exposure)	ters / Permissible concentration	
kaolin	1332-58-7	TWA (Respirable particulate matter)	2 mg/m3	ACGIH
		TWA (Respirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
Silicic acid, aluminum sodium salt	1344-00-9	TWA (Respirable particulate matter)	1 mg/m3 (Aluminum)	ACGIH

### Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

### 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 : Dust impervious protective suit  
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 in-

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version 1.1	Revision Date: 02/01/2024	SDS Number: 50000150	Date of last issue: - Date of first issue: 03/19/2015
----------------	------------------------------	-------------------------	--

structions.

Ensure that eye flushing systems and safety showers are located close to the working place.

Wear suitable protective equipment.

In the context of professional plant protection use as recommended, the end user must refer to the label and the instructions for use.

Hygiene measures : When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: solid
Form	: powder
Color	: gray
Odor	: slight
Odor Threshold	: No data available
pH	: 5 - 6 (1% emulsion)
Melting point/range	: No data available
Initial boiling point and boiling range	: No data available
Flash point	: Not applicable
Flammability (solid, gas)	: Will not burn
Self-ignition	: No data available
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

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version 1.1	Revision Date: 02/01/2024	SDS Number: 50000150	Date of last issue: - Date of first issue: 03/19/2015
----------------	------------------------------	-------------------------	--

Relative density	:	No data available
Density	:	1.024 g/cm <sup>3</sup>
Bulk density	:	224 - 368 kg/m <sup>3</sup>
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	:	68 mPa.s (68 °F / 20 °C)
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Particle size	:	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.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed. Dust may form explosive mixture in air.
Conditions to avoid	:	Heat, flames and sparks. Avoid extreme temperatures.
Incompatible materials	:	Avoid strong acids, bases, and oxidizers.
Hazardous decomposition products	:	Nitrogen oxides (NO <sub>x</sub> ) Sulfur oxides Carbon oxides Halogenated compounds

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version 1.1	Revision Date: 02/01/2024	SDS Number: 50000150	Date of last issue: - Date of first issue: 03/19/2015
----------------	------------------------------	-------------------------	--

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

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

#### Product:

- |                           |  |
|---------------------------|--|
| Acute oral toxicity       | : LD50 (Rat, female): > 2,000 mg/kg<br>Method: OECD Test Guideline 425<br>Assessment: The substance or mixture has no acute oral toxicity  |
| Acute inhalation toxicity | : LC50 (Rat, male and female): > 5.18 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Method: OECD Test Guideline 403<br>Assessment: The substance or mixture has no acute inhalation toxicity |
| Acute dermal toxicity     | : LD50 (Rat, male and female): > 2,000 mg/kg<br>Method: OECD Test Guideline 402<br>Assessment: The substance or mixture has no acute dermal toxicity   |

#### Components:

##### **iprodione (ISO):**

- |                           |   |
|---------------------------|---|
| Acute oral toxicity       | : LD50 (Rat, male and female): > 2,000 mg/kg<br>Assessment: The component/mixture is minimally toxic after single ingestion.  |
| Acute inhalation toxicity | : LC50 (Rat): > 3.29 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Symptoms: Breathing difficulties<br>Assessment: The component/mixture is minimally toxic after short term inhalation.<br>Remarks: no mortality |
| Acute dermal toxicity     | : LD50 (Rat, male and female): > 2,000 mg/kg<br>Method: EPA OPP 81-2<br>Symptoms: Irritation<br>GLP: yes<br>Assessment: The component/mixture is minimally toxic after single contact with skin.                                |

##### **kaolin:**

- |                     |  |
|---------------------|--|
| Acute oral toxicity | : LD50 (Rat): > 5,000 mg/kg<br>Method: OECD Test Guideline 401 |
|                     | LD50: > 2,000 mg/kg<br>Method: OECD Test Guideline 420         |



# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version 1.1	Revision Date: 02/01/2024	SDS Number: 50000150	Date of last issue: - Date of first issue: 03/19/2015
----------------	------------------------------	-------------------------	--

Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LD50: 5.07 mg/l  
Method: OECD Test Guideline 436

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg  
LD50: > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

### Polyethylene glycol, C12-15-alkyl ethers:

Acute oral toxicity : Acute toxicity estimate: 500 mg/kg  
Method: Expert judgment

Acute inhalation toxicity : LC50 (Rat, male and female): > 1.6 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: Based on data from similar materials

### Silicic acid, aluminum sodium salt:

Acute oral toxicity : LD50 (Rat, male and female): 10,000 mg/kg  
Method: OECD Test Guideline 401  
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC0 (Rat, male and female): > 2.08 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Remarks: Based on data from similar materials  
no mortality

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg  
Method: OECD Test Guideline 402

### Skin corrosion/irritation

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

### Product:

Species : Rabbit  
Method : OECD Test Guideline 404

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

Result : slight irritation

### Components:

#### **iprodione (ISO):**

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

#### **kaolin:**

Method	: OECD Test Guideline 404
Result	: No skin irritation

#### **Polyethylene glycol, C12-15-alkyl ethers:**

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: No skin irritation
Remarks	: Based on data from similar materials

#### **Silicic acid, aluminum sodium salt:**

Species	: Rabbit
Result	: No skin irritation

#### **Serious eye damage/eye irritation**

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

### Product:

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

### Components:

#### **iprodione (ISO):**

Species	: Rabbit
Result	: Mild eye irritant
Assessment	: Mild eye irritation
Method	: EPA OPP 81-4
GLP	: yes

#### **kaolin:**

Result	: No eye irritation
Method	: OECD Test Guideline 405

#### **Polyethylene glycol, C12-15-alkyl ethers:**

Result	: Irreversible effects on the eye
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# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

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### Silicic acid, aluminum sodium salt:

Species	:	Rabbit
Result	:	No eye irritation

### 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:

Test Type	:	Local lymph node assay (LLNA)
Species	:	mice
Method	:	OECD Test Guideline 429
Result	:	Not a skin sensitizer.

#### 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.

##### kaolin:

Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitization.

##### Polyethylene glycol, C12-15-alkyl ethers:

Test Type	:	Maximization Test
Routes of exposure	:	Intradermal
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.
Remarks	:	Based on data from similar materials

### 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
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Test Type: in vitro DNA damage and/or repair study

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

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.

### kaolin:

Genotoxicity in vitro : Test Type: Ames test  
Method: OECD Test Guideline 471  
Result: negative

Genotoxicity in vivo : Remarks: No data available

### Polyethylene glycol, C12-15-alkyl ethers:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative  
Remarks: Based on data from similar materials

Test Type: Ames test  
Method: OECD Test Guideline 471  
Result: negative  
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Micronucleus test  
Species: Mouse (male and female)  
Application Route: Intraperitoneal injection  
Method: OECD Test Guideline 474  
Result: negative  
Remarks: Based on data from similar materials

Test Type: Bone marrow chromosome aberration.  
Species: Rat (male and female)  
Method: OECD Test Guideline 475  
Result: negative  
Remarks: Based on data from similar materials

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

### Silicic acid, aluminum sodium salt:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative  
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: chromosome aberration assay  
Species: Rat (male)  
Application Route: Oral  
Result: negative  
Remarks: Based on data from similar materials

### Carcinogenicity

Suspected of causing cancer.

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

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

### Silicic acid, aluminum sodium salt:

Species : Rat, male and female  
Application Route : Oral  
Exposure time : 103 weeks  
Result : negative  
Remarks : Based on data from similar materials

**IARC** Group 1: Carcinogenic to humans  
kaolin 1332-58-7  
(Silica dust, crystalline)

**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** Known to be human carcinogen  
kaolin 1332-58-7  
(Silica, Crystalline (Respirable Size))

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

---

### Reproductive toxicity

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

#### 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

##### **kaolin:**

Effects on fertility : Remarks: No data available

Effects on fetal development : Remarks: No data available

##### **Polyethylene glycol, C12-15-alkyl ethers:**

Effects on fertility : Test Type: Two-generation study  
Species: Rat, male and female  
Application Route: Dermal  
General Toxicity Parent: NOAEL: 250 mg/kg body weight  
Fertility: NOAEC Mating/Fertility: 250 mg/kg body weight  
Method: OECD Test Guideline 416  
Result: negative  
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: reproductive and developmental toxicity study  
Species: Rat  
Application Route: Dermal  
General Toxicity Maternal: NOEL: 100 mg/kg body weight  
Embryo-fetal toxicity.: NOAEL: > 250 mg/kg body weight  
Method: OECD Test Guideline 416  
Result: negative  
Remarks: Based on data from similar materials

### **STOT-single exposure**

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

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

---

### Components:

#### **iprodione (ISO):**

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

#### **kaolin:**

Remarks : No significant adverse effects were reported

### **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.

#### **kaolin:**

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  
Target Organs : Adrenal gland

Species : Rat, female  
NOAEL : 43 mg/kg  
LOAEL : 241 mg/kg  
Application Route : Inhalation

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

Exposure time : 28 d  
Target Organs : Adrenal gland

### kaolin:

Remarks : No data available

### Polyethylene glycol, C12-15-alkyl ethers:

Species : Rat, male and female  
NOAEL : 500 mg/kg  
Application Route : Oral  
Exposure time : 90d  
Method : OECD Test Guideline 408  
Remarks : Based on data from similar materials

### Silicic acid, aluminum sodium salt:

Species : Rat, male and female  
NOAEL : 2,500 - 3,200 mg/kg  
Application Route : Oral  
Exposure time : 2 years  
Remarks : Based on data from similar materials

Species : Rat, male and female  
NOAEL : 0.0013 mg/l  
Application Route : Inhalation  
Exposure time : 13 weeks  
Remarks : Based on data from similar materials

### 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



# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.25 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Scenedesmus subspicatus): > 0.5 mg/l Exposure time: 72 h
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

### kaolin:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Raphidocelis subcapitata (freshwater green alga)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: No data available
Toxicity to microorganisms	:	Remarks: No data available

### Polyethylene glycol, C12-15-alkyl ethers:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 2 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
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# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 2 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: Based on data from similar materials
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 2 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials
- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.11 - 0.28 mg/l  
Exposure time: 30 d  
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 1.75 mg/l  
End point: Immobilization  
Exposure time: 21 d  
Remarks: Based on data from similar materials
- NOEC (Daphnia magna (Water flea)): 0.77 mg/l  
End point: reproduction  
Exposure time: 21 d  
Remarks: Based on data from similar materials
- Toxicity to microorganisms : EC50 (Pseudomonas putida): > 10 g/l  
Exposure time: 16.9 h  
Remarks: Based on data from similar materials
- Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg

### Silicic acid, aluminum sodium salt:

- Toxicity to fish : LL50 (Danio rerio (zebra fish)): 10,000 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 10,000 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: Based on data from similar materials
- Toxicity to algae/aquatic plants : EL50 (Desmodesmus subspicatus (green algae)): 10,000 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

### Persistence and degradability

#### Components:

#### iprodione (ISO):

- Biodegradability : Result: Not readily biodegradable.

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version 1.1	Revision Date: 02/01/2024	SDS Number: 50000150	Date of last issue: - Date of first issue: 03/19/2015
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Stability in water : Degradation half life (DT50): 146 d pH: 5  
Degradation half life (DT50): 0.2 d pH: 8

### kaolin:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

### Polyethylene glycol, C12-15-alkyl ethers:

Biodegradability : Result: Readily biodegradable.  
Method: OECD Test Guideline 301B  
Remarks: Based on data from similar materials

### Silicic acid, aluminum sodium salt:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

### 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

#### kaolin:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : Remarks: Not applicable

### Polyethylene glycol, C12-15-alkyl ethers:

Bioaccumulation : Species: Pimephales promelas (fathead minnow)  
Bioconcentration factor (BCF): 237  
Exposure time: 24 d  
Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: 4.91 - 6.78 (104 °F / 40 °C)

### Silicic acid, aluminum sodium salt:

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

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version 1.1	Revision Date: 02/01/2024	SDS Number: 50000150	Date of last issue: - Date of first issue: 03/19/2015
----------------	------------------------------	-------------------------	--

### Mobility in soil

#### Components:

##### **iprodione (ISO):**

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

##### **kaolin:**

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 with long lasting effects.

## 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.

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### **UNRTDG**

UN number : UN 3077  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(Iprodione)

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

Class : 9  
Subsidiary risk : ENVIRONM.  
Packing group : III  
Labels : 9 (ENVIRONM.)  
Environmentally hazardous : yes

### IATA-DGR

UN/ID No. : UN 3077  
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.  
(Iprodione)

Class : 9  
Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 956  
Packing instruction (passenger aircraft) : 956  
Environmentally hazardous : yes

### IMDG-Code

UN number : UN 3077  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(Iprodione)

Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes

### 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 3077  
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.  
(Iprodione)  
Class : 9  
Packing group : III  
Labels : CLASS 9  
ERG Code : 171  
Marine pollutant : yes  
Remarks : Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

### Special precautions for user

Remarks : 49CFR: no dangerous good in non-bulk packaging

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.

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

### SECTION 15. REGULATORY INFORMATION

#### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

#### 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** : Carcinogenicity

**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).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

#### Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

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

kaolin	1332-58-7
tert-butyl-4-methoxyphenol	25013-16-5

##### Pennsylvania Right To Know

iprodione (ISO)	36734-19-7
kaolin	1332-58-7
Calcium lignosulfonate	8061-52-7
Sodium lignosulfonate	8061-51-6

##### Maine Chemicals of High Concern

tert-butyl-4-methoxyphenol	25013-16-5
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##### Vermont Chemicals of High Concern

tert-butyl-4-methoxyphenol	25013-16-5
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# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version 1.1	Revision Date: 02/01/2024	SDS Number: 50000150	Date of last issue: - Date of first issue: 03/19/2015
----------------	------------------------------	-------------------------	--

### Washington Chemicals of High Concern

tert-butyl-4-methoxyphenol

25013-16-5

### California Prop. 65

WARNING: This product can expose you to chemicals including iprodione (ISO), kaolin, tert-butyl-4-methoxyphenol, which is/are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### California Permissible Exposure Limits for Chemical Contaminants

kaolin

1332-58-7

### California Regulated Carcinogens

kaolin

1332-58-7

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

TCSI	: On the inventory, or in compliance with the inventory
TSCA	: Product contains substance(s) not listed on TSCA inventory.
AIIC	: Not in compliance with the inventory
DSL	: This product contains the following components that are not on the Canadian DSL nor NDSL.  3-(3,5-DICHLOROPHENYL)-N-ISOPROPYL-2,4-DIOXOIMIDAZOLIDINE-1-CARBOXAMIDE
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
NZIoC	: Not in compliance with the inventory
TECI	: 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.

## SECTION 16. OTHER INFORMATION

### Further information

# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

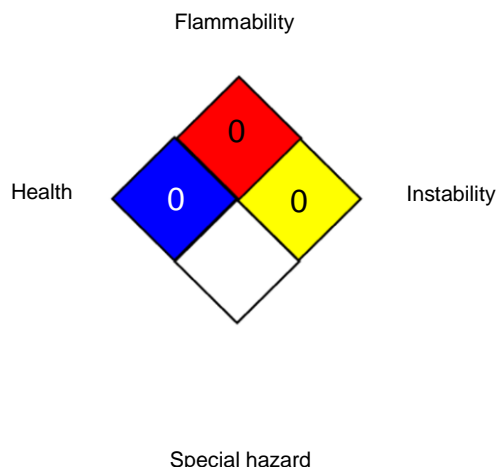
Version  
1.1

Revision Date:  
02/01/2024

SDS Number:  
50000150

Date of last issue: -  
Date of first issue: 03/19/2015

### NFPA 704:



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

### HMIS® IV:

HEALTH	*	0
FLAMMABILITY		0
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

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average

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 Admin-



# SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



## ROVRAL® 50 WP

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	02/01/2024	50000150	Date of first issue: 03/19/2015

istration; 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 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

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