SAFETY DATA SHEET

ROVRAL® 50 WP

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SECTION 1: Identification of the hazardous chemical and of the supplier

Product identifier

Product name : ROVRAL® 50 WP

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.

Manufacturer or supplier's details

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

Local registrant : FMC Chemicals (Malaysia) Sdn Bhd
Level 16, 1 Sentral, Jalan Stesen Sentral 5, Kuala Lumpur Sentral
50470, Kuala Lumpur, Malaysia
Phone No: +60320929423
Fax No: +603-2092 9201

Emergency telephone : For leak, fire, spill or accident emergencies, call:
CHEMTREC (Asia-Pacific Regional Number): +65 3163 8374

Medical emergency:
All other countries: +1 651 / 632-6793 (Collect)
1 703 / 741-5970 (CHEMTREC - International)

SECTION 2: Hazards identification

Classification of the hazardous chemical

Carcinogenicity : Category 2

Hazardous to the aquatic environment - acute hazard : Category 1

Hazardous to the aquatic environment - chronic hazard : Category 1

Label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H351 Suspected of causing cancer.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements :

Prevention:

P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P281 Use personal protective equipment as required.

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 which do not result in classification

None known.

SECTION 3: Composition and information of the ingredients of the hazardous chemical

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
iprodione (ISO)	36734-19-7	>= 30 -< 60
kaolin	1332-58-7	>= 30 -< 60
Polyethylene glycol, C12-15-alkyl ethers	68131-39-5	>= 1 -< 2.5
Silicic acid, aluminum sodium salt	1344-00-9	>= 1 -< 3

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.
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: Firefighting measures

Extinguishing media

Suitable extinguishing media	:	Water spray, fog, or regular foam.
Unsuitable extinguishing media	:	High volume water jet

Physicochemical hazards arising from the chemical

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

Special protective equipment and precautions for fire-fighters

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

Hazchem Code : 2Z

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

Handling

Precautions for safe handling

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.

Storage

Conditions for safe storage, including any incompatibilities

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 and personal protection

Control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
kaolin	1332-58-7	TWA (Respirable particulates)	2 mg/m3	MY PEL
		PEL (Respirable dust)	5 mg/m3	MY PEL
		PEL (Total dust)	10 mg/m3	MY PEL
		TWA (Respirable particulate matter)	2 mg/m3	ACGIH
Silicic acid, aluminum sodium salt	1344-00-9	TWA (Respirable particulate matter)	1 mg/m3 (Aluminum)	ACGIH

Individual protection measures, such as personal protective equipment

Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Skin protection : Dust impervious protective suit
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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.

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Particulates type

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
Relative density	:	No data available
Density	:	1.024 g/cm3
Bulk density	:	224 - 368 kg/m3
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 (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 (NOx) Sulfur oxides Carbon oxides Halogenated compounds

SECTION 11: Toxicological information

Information on likely routes of exposure : None known.

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	LD50 (Rat, female): > 2,000 mg/kg Method: OECD Test Guideline 425 Assessment: The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 5.18 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

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

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.

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

kaolin:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

LD50: > 2,000 mg/kg
Method: OECD Test Guideline 420
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): 36 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist

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

Not classified based on available information.

Product:

Species : Rabbit
Method : OECD Test Guideline 404
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

Not classified based on available information.

Product:

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

Components:

iprodione (ISO):

Species : Rabbit
Result : No eye irritation
Method : EPA OPP 81-4
Remarks : Based on available data, the classification criteria are not met.

kaolin:

Result : No eye irritation
Method : OECD Test Guideline 405

Polyethylene glycol, C12-15-alkyl ethers:

Result : Irreversible effects on the eye

Silicic acid, aluminum sodium salt:

Species : Rabbit
Result : No eye irritation

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

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

Not classified based on available information.

Components:

iprodione (ISO):

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

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

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

Reproductive toxicity

Not classified based on available information.

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

Not classified based on available information.

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

Not classified based on available information.

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
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

Not classified based on available information.

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 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
M-Factor (Acute aquatic toxicity)	:	1
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
M-Factor (Chronic aquatic toxicity)	:	1
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
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.

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 (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 (40 °C)

Silicic acid, aluminum sodium salt:

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

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:

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 information

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

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.

Hazchem Code : 2Z

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

Safety, health, and environmental regulations specific for the hazardous chemical

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.

Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

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

SECTION 16: Other information

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Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
MY PEL	:	Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.
MY PEL	:	Malaysia. Factories and Machinery (Mineral Dust) Regulations - Permissible Exposure Limit
ACGIH / TWA	:	8-hour, time-weighted average
MY PEL / TWA	:	Eight-hour time-weighted average airborne concentration
MY PEL / PEL	:	Permissible exposure limit (PEL)

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with

x% response; 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; 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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