



SAFETY DATA SHEET

Rovral® Liquid Fungicide

SDS # : 7062-A
Revision date: 2018-08-21
Format: AP
Version 2

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name Rovral® Liquid Fungicide

Product Code(s) 7062-A

Synonyms IPRADIONE: 3-(3,5-dichlorophenyl)-N-isopropyl-2,4 dioxoimidazolidine-1-carboxamide (IUPAC name);
3-(3,5-dichlorophenyl)-N-(1-methylethyl)-2,4-dioxo-1-imidazolidinecarboxamide (CAS name)

Active Ingredient(s) Iprodione

Chemical Family Dicarboximide

Recommended Use: Fungicide.

Restrictions on Use: Use as recommended by the label.

Manufacturer/Supplier

FMC Corporation
Agricultural Solutions
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Philadelphia, PA 19104
General Information:
Phone: (215) 299-6000
E-Mail: msdsinfo@fmc.com

Telephone: 86 21 20675888
Telefax: 86 21 20675858

Emergency telephone 86 532 8388 9090

Section 2: HAZARDS IDENTIFICATION

GHS - Classification

Carcinogenicity	Category 2
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

Label Elements



Signal Word

WARNING

Hazard Statements

H351 - Suspected of causing cancer

H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - Prevention

P202 - Do not handle until all safety precautions have been read and understood

P281 - Use personal protective equipment as required

P273 - Avoid release to the environment

Precautionary Statements - Response

P308 + P313 - If exposed or concerned: Get medical advice/attention

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P391 - Collect spillage

Precautionary Statements - Storage

P405 - Store locked up

Precautionary Statements - Disposal

P501 - Dispose of contents/container to an approved waste disposal plant

Other Information

None known

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms IPRODIONE: 3-(3,5-dichlorophenyl)-N-isopropyl-2,4 dioximidazolidine-1-carboxamide (IUPAC name);
3-(3,5-dichlorophenyl)-N-(1-methylethyl)-2,4-dioxo-1-imidazolidinecarboxamide (CAS name)

Chemical name	CAS-No	Weight %
Iprodione	36734-19-7	25
Lubricating oils, petroleum, C15-30, hydrotreated neutral oil-based	72623-86-0	20 - 40
Propylene glycol	57-55-6	1 - 5

Section 4: FIRST AID MEASURES**Inhalation**

Move to fresh air. If person is not breathing, contact emergency medical services, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Skin Contact

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

Eye Contact

Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for further treatment advice.

Ingestion

Call a physician or poison control center immediately. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

None known.

Protection of first-aiders

Use personal protective equipment. See Section 8 for more detail.

Indication of immediate medical attention and special treatment needed, if necessary

Treatment is symptomatic and supportive.

Section 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Water spray. Carbon dioxide (CO ₂). Foam. Dry chemical.
Unsuitable extinguishing media	No information available
Specific Hazards Arising from the Chemical	Thermal decomposition can lead to release of irritating and toxic gases and vapors.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus and full protective gear.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.
Other	For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
Environmental Precautions	Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.
Methods for Containment	Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
Methods for cleaning up	Clean and neutralize spill area, tools and equipment by washing with water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.

Section 7: HANDLING AND STORAGE

Handling	Handle in accordance with good industrial hygiene and safety practice. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.
Storage	Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Store in original container.
Materials to avoid	Strong acids, Strong bases, Strong oxidizing agents.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Component	China	Japan	Korea	Australia	Taiwan
Propylene glycol 57-55-6 (1 - 5)				TWA 150 ppm TWA 474 mg/m ³ TWA 10 mg/m ³	

Engineering measures	Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.
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Personal protective equipment

Respiratory Protection	The product does not automatically present an airborne exposure concern during normal handling. In the event of an accidental discharge of the material which produces a heavy vapour or mist, workers should put on officially approved respiratory protection equipment with a universal filter type including particle filter.
Hand Protection	Wear chemical protective gloves made of materials such as nitrile or neoprene.
Eye/Face Protection	For dust, splash, mist or spray exposure, wear chemical protective goggles.

Skin and Body Protection	Minimize skin contamination by following good industrial hygiene practices.
Hygiene measures	Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	White Suspension
Odor	No off odor
Color	White
Odor threshold	No information available
pH	2.0 - 4.0
Melting point/freezing point	No information available
Boiling Point/Range	>100 °C
Flash point	277 °C Closed cup
Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific gravity	No information available
Water solubility	Miscible with water
Solubility(ies)	No information available
Partition coefficient	No information available
Autoignition temperature	430 °C
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Density	1.018 g/cm ³ @ 20°C
Bulk density	No information available

Section 10: STABILITY AND REACTIVITY

Reactivity	Not applicable
Stability	Stable under recommended storage conditions
Hazardous reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to Avoid	Heat, flames and sparks.
Incompatible products	Strong acids, Strong bases, Strong oxidizing agents.
Hazardous Decomposition Products	Carbon oxides (COx). Nitrogen oxides (NOx). Sulfur oxides. Hydrogen chloride. Hydrogen fluoride.

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Numerical measures of toxicity - Product Information

LD50 Oral	> 2,000 mg/kg (rat)
LD50 Dermal	> 2,000 mg/kg (rat)
LC50 Inhalation	> 2.88 mg/L 4 hr (rat) - Maximum attainable concentration (zero mortality)

Skin corrosion/irritation	Slightly or non-irritating (rabbit).
Serious eye damage/eye irritation	Slightly or non-irritating (rabbit).
Sensitization	Non-sensitizer.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Mutagenicity	Iprodione: Not genotoxic in laboratory studies.
Carcinogenicity	Iprodione: Animal studies showed significant increased incidences of liver tumors in mice and Leydig cell tumor not relevant to humans. Ovarian tumors in rats are within historical controls.
Reproductive toxicity	Iprodione: No toxicity to reproduction in animal studies. Delayed sexual maturation in males observed at maternally toxic doses.
Developmental toxicity	Iprodione: Caused minor delays or variations in fetal development at doses that were maternally toxic.
STOT - single exposure	Not classified.
STOT - repeated exposure	Not classified.
Chronic toxicity	Iprodione: Prolonged exposure caused liver, adrenal and reproductive organ toxicity at high doses in animal studies.
Target organ effects	Liver, Testes, Adrenal glands.
Neurological effects	Iprodione: Not neurotoxic.
Aspiration hazard	No information available.

Section 12: ECOLOGICAL INFORMATION**Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

Iprodione (36734-19-7)				
Active Ingredient(s)	Duration	Species	Value	Units
Iprodione	48 h EC50	Crustacea	0.7	mg/L
	72 h EC50	Algae	1.8	mg/L
	96 h LC50	Fish	3.7	mg/L
	21 d NOEC	Fish	0.26	mg/L
	21 d NOEC	Crustacea	0.17	mg/L
	96 h NOEC	Algae	3.2	mg/L

Birds: Quail, LD50 (7d) >1000 a.i. mg/kg

Daphnia: Water Flea EC50 (48h) = 0.19 mg/L
0.047 mg a.i. (measured concentration)

Bees: LD50 (48h), oral = 797 mg a.i./L
No contact toxicity

Fish: Rainbow trout, LC50 (96 h) = 24 mg/L

Algae: EC50 (72h) = 12.8 mg/L (measured concentration)

Earthworms: Eisenia foetida, LOEC >1000 mg/kg soil

Persistence and degradability Iprodione: Moderately persistent. Readily hydrolyzed.

Bioaccumulation Iprodione: The substance does not have a potential for bioconcentration.

Mobility Iprodione: Medium mobility; has some potential to reach groundwater.

Other Adverse Effects No information available.

Section 13: DISPOSAL CONSIDERATIONS

Waste disposal methods

Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance. Proper personal protective equipment, as described in Sections 7 and 8, must be worn while handling materials for waste disposal.

Contaminated Packaging

Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions.

Section 14: TRANSPORT INFORMATION

IMDG/IMO

UN/ID no	UN3082
Hazard class	9
Packing Group	III
EmS No.	F-A, S-F
Marine Pollutant	Iprodione

ICAO/IATA

UN/ID no	UN3082
Hazard class	9
Packing Group	III
Marine Pollutant	Iprodione

Section 15: REGULATORY INFORMATION

International Inventories

A food, food additive, drug, cosmetic, or device, when manufactured, processed or distributed in commerce for use as a food, food additive, drug, cosmetic, or device may not be subject to local notification requirements. Check local regulations for more information.

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Iprodione 36734-19-7			X			X		X
Lubricating oils, petroleum, C15-30, hydrotreated neutral oil-based 72623-86-0	X	X	X		X	X	X	X
Propylene glycol 57-55-6	X	X	X	X	X	X	X	X

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

Section 16: OTHER INFORMATION

Prepared By:

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End of Safety Data Sheet