SAFETY DATA SHEET

Rovral® Flo

Version	Revision Date:	SDS Number:	Date of last issue: -
2.0	15.02.2022	50000533	Date of first issue: 19.02.2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name Rovral® Flo

Other means of identification

Product code 50000533

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Sub-stance/Mixture : Fungicide

1.3 Details of the supplier of the safety data sheet

Supplier Address

FMC Chemicals (Pty) Ltd
Company Registration Number: 1988/001451/07
West End Office Park, Building C
Cnr. West Ave & Hall Street
Centurion, 0014

E-mail address: SDS-Info@fmc.com (E-Mail General Information)

1.4 Emergency telephone

For leak, fire, spill or accident emergencies, call:
South Africa: 0-800-983-611 (CHEMTREC)

Medical emergency:
For any emergency or poisoning contact: Griffon Poison Information Centre (24 hrs) - +27-(0)-82-446-8946

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H332: Harmful if inhaled.
Carcinogenicity, Category 2	H351: Suspected of causing cancer.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal Word : Warning

Hazard Statements :
H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements :

Prevention:

P201 Obtain special instructions before use.
P261 Avoid breathing mist or vapors.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P391 Collect spillage.

Hazardous ingredients which must be listed on the label:
iprodione (ISO)

Additional Labeling

EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

Restricted to professional users.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No.	Classification	Concentration (% w/w)

	Registration number		
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	72623-86-0 276-737-9 649-482-00-X	Carc. 1B; H350 Asp. Tox. 1; H304	>= 30 - < 50
iprodione (ISO)	36734-19-7 253-178-9 616-054-00-9	Carc. 2; H351 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 20 - < 25
Styrylphenol polyethoxyester phosphate	90093-37-1	Eye Irrit. 2; H319	>= 1 - < 10
Tristyrylphenol ethoxylates	99734-09-5	Aquatic Chronic 3; H412	>= 1 - < 2.5
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411 M-Factor (Acute aquatic toxicity): 10	>= 0.0025 - < 0.025

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of 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 : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

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 : Induce vomiting immediately and call a physician.

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.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

Risks : Harmful if inhaled.
Suspected of causing cancer.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry chemical, CO2, water spray or regular foam.

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

5.2 Special hazards arising from the substance or mixture

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

5.3 Advice for firefighters

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

Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.
Use a water spray to cool fully closed containers.

Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : 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.
Ensure adequate ventilation.
Never return spills in original containers for re-use.
For disposal considerations see section 13.

6.2 Environmental precautions

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.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : General industrial hygiene practice. Avoid contact with skin, eyes and clothing. Do not inhale aerosol.

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

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully re-sealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Advice on common storage : Do not store near acids.

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Routes of exposure	Potential health effects	Value
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	Workers	Inhalation	Long-term systemic effects	2.73 mg/m3
	Workers	Dermal	Long-term systemic effects	0.970 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	0.740 mg/kg bw/day
	Workers	Inhalation	Long-term local effects	5.58 mg/m3
	Consumers	Inhalation	Long-term local effects	1.19 mg/m3
propane-1,2-diol	Workers	Inhalation	Long-term systemic effects	168 mg/m3
	Workers	Inhalation	Long-term local effects	10 mg/m3
	Consumers	Inhalation	Long-term systemic effects	50 mg/m3
	Consumers	Inhalation	Long-term local effects	10 mg/m3
1,2-benzisothiazol-3(2H)-one	Workers	Inhalation	Long-term systemic effects	6.81 mg/m3
	Workers	Dermal	Long-term systemic effects	0.966 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1.2 mg/m3
	Consumers	Dermal	Long-term systemic effects	0.345 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	Oral	9.33 mg/kg
propane-1,2-diol	Fresh water	260 mg/l
	Intermittent use/release	183 mg/l
	Sea water	26 mg/l
	Sewage treatment plant	20 g/l
	Fresh water sediment	572 mg/kg
	Sea sediment	57.2 mg/kg
	Soil	50 mg/kg
1,2-benzisothiazol-3(2H)-one	Fresh water	0.00403 mg/l
	Sea water	0.000403 mg/l
	Sewage treatment plant	1.03 mg/l
	Fresh water sediment	0.0499 mg/l
	Sea sediment	0.00499 mg/l

8.2 Exposure controls

Personal protective equipment

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

Hand protection
Material : Protective gloves

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Protective suit

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Color : white

Odor : odorless

Odor Threshold : No data available

pH : 4.2 (26 °C)

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point	:	> 95 °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 density	:	1.024 (20 °C)
Density	:	No data available
Solubility(ies)		
Water solubility	:	dispersible
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

9.2 Other information

Self-ignition	:	430 °C

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

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

10.4 Conditions to avoid

Conditions to avoid	:	Avoid extreme temperatures Avoid formation of aerosol.

10.5 Incompatible materials

Materials to avoid	:	Avoid strong acids, bases, and oxidizers.

10.6 Hazardous decomposition products

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if inhaled.

Product:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Assessment: The component/mixture is minimally toxic after single ingestion.
Acute inhalation toxicity	:	LC50 (Rat): > 2.88 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The component/mixture is moderately toxic after short term inhalation.
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Assessment: The component/mixture is minimally toxic after single contact with skin.

Components:

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

Acute oral toxicity	:	LD0 (Rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 401 Remarks: Based on data from similar materials
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 5.53 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Based on data from similar materials
Acute dermal toxicity	:	LD0 (Rabbit, male and female): > 5,000 mg/kg Method: OECD Test Guideline 402 Remarks: Based on data from similar materials

iprodione (ISO):

Acute oral toxicity	:	LD50 (Rat): 3,700 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 5.6 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rat): > 2,500 mg/kg

Styrylphenol polyethoxyester phosphate:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

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

Tristyrylphenol ethoxylates:

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

1,2-benzisothiazol-3(2H)-one:

Acute oral toxicity : LD50 (Rat, male and female): 490 mg/kg
Method: OECD Test Guideline 401

Acute toxicity estimate: 490 mg/kg
Method: Calculation method

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

Skin corrosion/irritation

Not classified based on available information.

Product:

Result : No skin irritation

Components:

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

Species : Rabbit
Result : No skin irritation
Remarks : Based on data from similar materials

iprodione (ISO):

Species : Rabbit
Result : No skin irritation

Styrylphenol polyethoxyester phosphate:

Species : Rabbit
Result : No skin irritation

Tristyrylphenol ethoxylates:

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

1,2-benzisothiazol-3(2H)-one:

Species	:	Rabbit
Exposure time	:	72 h
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result	:	No eye irritation

Components:

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

Species	:	Rabbit
Result	:	No eye irritation
Remarks	:	Based on data from similar materials

iprodione (ISO):

Species	:	Rabbit
Result	:	No eye irritation

Styrylphenol polyethoxyester phosphate:

Species	:	Rabbit
Result	:	Irritation to eyes, reversing within 21 days

Tristyrylphenol ethoxylates:

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

1,2-benzisothiazol-3(2H)-one:

Species	:	Bovine cornea
Method	:	OECD Test Guideline 437
Result	:	No eye irritation

Species	:	Rabbit
Method	:	EPA OPP 81-4
Result	:	Irreversible effects on the eye

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Result : Not a skin sensitizer.

Components:

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

Test Type : Buehler Test
Species : Guinea pig
Result : Does not cause skin sensitization.
Remarks : Based on data from similar materials

iprodione (ISO):

Species : Guinea pig
Method : EPA OPP 81-6
Result : Does not cause skin sensitization.

Styrylphenol polyethoxyester phosphate:

Result : Does not cause skin sensitization.

1,2-benzisothiazol-3(2H)-one:

Test Type : Maximization Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : May cause sensitization by skin contact.

Species : Guinea pig
Method : FIFRA 81.06
Result : May cause sensitization by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Product:

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

Components:

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

Genotoxicity in vitro : Test Type: reverse mutation assay
Result: negative
Remarks: Based on data from similar materials

Test Type: reverse mutation assay

Result: positive
Remarks: Based on data from similar materials

Test Type: gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

Test Type: gene mutation test
Method: OECD Test Guideline 476
Result: positive
Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro
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

iprodione (ISO):

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Result: negative

Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Result: negative

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

Styrylphenol polyethoxyester phosphate:

Germ cell mutagenicity- Assessment : No genotoxic potential

Tristyrylphenol ethoxylates:

Genotoxicity in vitro : Test Type: reverse mutation assay
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Remarks: No data available

1,2-benzisothiazol-3(2H)-one:

Genotoxicity in vitro : Test Type: gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476

Result: negative

Test Type: Ames test
Method: OECD Test Guideline 471
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: positive

Genotoxicity in vivo : Test Type: unscheduled DNA synthesis assay
Species: Rat (male)
Cell type: Liver cells
Application Route: Ingestion
Exposure time: 4 h
Method: OECD Test Guideline 486
Result: negative

Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

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

Carcinogenicity

Suspected of causing cancer.

Product:

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Components:

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

Species : Mouse, female
Application Route : Dermal
Exposure time : 78 weeks
Result : negative
Remarks : Based on data from similar materials

iprodione (ISO):

Species : Rat
Result : positive
Symptoms : Testicular effects

Species : Mouse
Result : positive
Symptoms : malignant tumors
Target Organs : Liver, ovaries

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Styrylphenol polyethoxyester phosphate:

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

Reproductive toxicity

Not classified based on available information.

Product:

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

Components:

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Application Route: Oral
Dose: 1000 mg/kg/day
General Toxicity Parent: NOAEL: 1,000 mg/kg body weight
General Toxicity F1: NOAEL: >= 1,000 mg/kg bw/day
Method: OECD Test Guideline 421
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
Dose: 0,8,30,125,500,1000mg/kg/day
Duration of Single Treatment: 20 d
General Toxicity Maternal: LOAEL: 8 mg/kg body weight
Developmental Toxicity: LOAEL: 125 mg/kg bw/day
Result: Embryotoxic effects and adverse effects on the offspring were detected only at high maternally toxic doses
Remarks: Based on data from similar materials

iprodione (ISO):

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

Styrylphenol polyethoxyester phosphate:

Reproductive toxicity - Assessment : No toxicity to reproduction

1,2-benzisothiazol-3(2H)-one:

Effects on fertility : Species: Rat, male
Application Route: Ingestion
General Toxicity Parent: NOAEL: 18.5 mg/kg body weight
General Toxicity F1: NOAEL: 48 mg/kg body weight

Fertility: NOAEL: 112 mg/kg wet weight
Symptoms: No effects on reproduction parameters.
Method: OPPTS 870.3800
Result: negative

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

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.

Styrylphenol polyethoxyester phosphate:

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

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.

Styrylphenol polyethoxyester phosphate:

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

1,2-benzisothiazol-3(2H)-one:

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

Repeated dose toxicity

Components:

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

Species : Rat, male
LOAEL : 125 mg/kg bw/day
Application Route : Oral - gavage
Exposure time : 13 weeks
Dose : 125 or 500 mg/kg/day
Remarks : Based on data from similar materials

Species : Rat, male and female
NOAEL : 980 mg/m3

Application Route	:	Inhalation
Test atmosphere	:	vapor
Exposure time	:	28 d
Dose	:	0, 50, 220 or 1000 mg/m3
Remarks	:	Based on data from similar materials

Species	:	Rabbit, male and female
NOAEL	:	1000 mg/kg bw/day
LOAEL	:	2000 mg/kg bw/day
Application Route	:	Dermal
Exposure time	:	28 d
Dose	:	200,1000,2000mg/kgbw/day
Method	:	OECD Test Guideline 410
Remarks	:	Based on data from similar materials

iprodione (ISO):

Species	:	Rat, male
NOEL	:	30.8 mg/kg
Exposure time	:	90 d

Species	:	Rat, female
NOEL	:	35.8 mg/kg
Exposure time	:	90 d

1,2-benzisothiazol-3(2H)-one:

Species	:	Rat, male and female
NOAEL	:	15 mg/kg
Application Route	:	Ingestion
Exposure time	:	28 d
Method	:	OECD Test Guideline 407
Symptoms	:	Irritation

Species	:	Rat, male and female
NOAEL	:	69 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 d
Symptoms	:	Irritation, Reduced body weight

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

May be fatal if swallowed and enters airways.

iprodione (ISO):

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

Styrylphenol polyethoxyester phosphate:
No aspiration toxicity classification

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (Fish): 24 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia): > 0.46 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (algae): 12.8 mg/l
Exposure time: 72 h

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Components:

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials
water accommodated fractions (WAF)

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test
Remarks: Based on data from similar materials
water accommodated fractions (WAF)

Toxicity to algae/aquatic plants : NOELR (Pseudokirchneriella subcapitata (algae)): >= 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: water accommodated fractions (WAF)

Toxicity to microorganisms : NOEL (Photobacterium phosphoreum): > 1.93 mg/l
Exposure time: 10 min

Toxicity to fish (Chronic toxicity)	:	NOELR: >= 1,000 mg/l Exposure time: 14 d Species: Oncorhynchus mykiss (rainbow trout) Method: QSAR
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOELR: 10 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: semi-static test Remarks: water accommodated fractions (WAF)
Toxicity to terrestrial organisms	:	NOEC: 5,000 ppm Exposure time: 126 d Species: Anas platyrhynchos (Mallard duck)

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 daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0.17 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)
M-Factor (Chronic aquatic toxicity)	:	1
Toxicity to soil dwelling organisms	:	LC50: > 1,000 mg/kg Exposure time: 14 d Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organisms	:	LD50: > 2,000 mg/kg Species: Colinus virginianus (Bobwhite quail) LD50: >250 Exposure time: 48 h Species: Apis mellifera (bees) Remarks: Contact LD50: >25 Exposure time: 48 h Species: Apis mellifera (bees) Remarks: Oral

Styrylphenol polyethoxyester phosphate:

Toxicity to fish	:	LC50 (Brachydanio rerio (zebrafish)): 3,000 mg/l

Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 550 mg/l
Exposure time: 24 h
Remarks: Based on data from similar materials

Tristyrylphenol ethoxylates:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): 21 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to microorganisms :
Remarks: No data available

1,2-benzisothiazol-3(2H)-one:

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 16.7 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Oncorhynchus mykiss (rainbow trout)): 2.15 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.9 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.070 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.04 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (activated sludge): 24 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

EC50 (activated sludge): 12.8 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

12.2 Persistence and degradability

Components:

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:

Biodegradability : Inoculum: activated sludge
Result: Inherently biodegradable.
Biodegradation: 31 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Inoculum: activated sludge
Result: Not inherently biodegradable.
Biodegradation: 2 - 8 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

iprodione (ISO):

Biodegradability : Result: Not readily biodegradable.
Remarks: It undergoes degradation in the environment and in waste water treatment plants.

Styrylphenol polyethoxyester phosphate:

Biodegradability : Result: Not readily biodegradable.

Tristyrylphenol ethoxylates:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 8 %
Exposure time: 28 d
Method: OECD Test Guideline 301

1,2-benzisothiazol-3(2H)-one:

Biodegradability : Result: rapidly biodegradable
Method: OECD Test Guideline 301C

12.3 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 (25 °C)
pH: 5

Tristyrylphenol ethoxylates:

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

1,2-benzisothiazol-3(2H)-one:

Bioaccumulation	:	Species: Lepomis macrochirus (Bluegill sunfish) Exposure time: 56 d Bioconcentration factor (BCF): 6.62 Method: OECD Test Guideline 305 Remarks: This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
Partition coefficient: n-octanol/water	:	log Pow: 0.7 (20 °C) pH: 7 log Pow: 0.99 (20 °C) pH: 5

12.4 Mobility in soil

Components:

iprodione (ISO):

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

1,2-benzisothiazol-3(2H)-one:

Distribution among environmental compartments	:	Koc: 9.33, log Koc: 0.97 Method: OECD Test Guideline 121

12.5 Results of PBT and vPvB assessment

Product:

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product:

Endocrine disrupting potential	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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

13.1 Waste treatment methods

Product	:	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. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number

IMDG	:	UN 3082
IATA	:	UN 3082

14.2 UN proper shipping name

IMDG	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Iprodione) ()
IATA	:	Environmentally hazardous substance, liquid, n.o.s. (Iprodione) (Iprodione)

14.3 Transport hazard class(es)

IMDG	:	9
IATA	:	9

14.4 Packing group

IMDG

Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft)	:	964
Packing instruction (LQ)	:	Y964
Packing group	:	III
Labels	:	Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft)	:	964

Packing instruction (LQ)	:	Y964
Packing group	:	III
Labels	:	Miscellaneous

14.5 Environmental hazards

IMDG

Marine pollutant	:	yes

14.6 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.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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.
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 sodium hydroxide Styrylphenol polyethoxyester phosphate
ENCS	:	Not in compliance with the inventory
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
TECI	:	Not in compliance with the inventory

15.2 Chemical Safety Assessment

SECTION 16: Other information

Full text of H-Statements

H302	:	Harmful if swallowed.
H304	:	May be fatal if swallowed and enters airways.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H350	:	May cause cancer.
H351	:	Suspected of causing cancer.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Carc.	:	Carcinogenicity
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitization

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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 Re-

striction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; 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

Other information :

Classification of the mixture:		**Classification procedure:**
Acute Tox. 4	H332	Based on product data or assessment
Carc. 2	H351	Based on product data or assessment
Aquatic Acute 1	H400	Based on product data or assessment
Aquatic Chronic 1	H410	Based on product data or assessment

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