SAFETY DATA SHEET

CORAGEN®

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04.08.2025	50000015	Date of first issue: 04.08.2025

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

1.1 Product identifier

Product name CORAGEN®

Other means of identification

Product code 50000015

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

Use of the Substance/Mixture : Can be used as insecticide only.

Recommended restrictions on use : Use as recommended by the label.

1.3 Details of the supplier of the safety data sheet

Supplier Address

FMC Chemicals (Pty) Ltd
Company Registration No.: 1988/001451/07
West End Office Park, Building C
Cnr. West Ave & Hall Street
Centurion
0014
South Africa
E-mail address: SDS-Info@fmc.com

Distributor address:
Polachem Investments (Private) Limited
12 Connaught Road
Avondale, Harare, Zimbabwe

1.4 Emergency telephone

For leak, fire, spill or accident emergencies, call:
South Africa: 080-001-4676 (CHEMTREC)

Medical emergency:
DaTIS (Drug and Toxicology Information Service
+263 24 2933452 or
+263 24 2791631 - 11 extension 2172 (Business hours)
E-Mail: datis@medsch.uz.ac.zw, datis.zim23@gmail.com, datiszim@gmail.com

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)

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 : H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements :

Prevention:

P273 Avoid release to the environment.

Response:

P391 Collect spillage.

Disposal:

P501 Dispose of contents/container as hazardous waste in accordance with local regulations.

Additional Labeling

EUH208	Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

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. Registration number	Classification	Concentration (% w/w)
Chlorantraniliprole	500008-45-7	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 ——————— M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	>= 10 - < 20
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9 613-167-00-5	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 2; H310 Skin Corr. 1C; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 ——————— M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100	>= 0.0002 - < 0.0015

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 material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

Protection of first-aiders : Avoid inhalation, ingestion and contact with skin and eyes.

If inhaled	:	If unconscious, place in recovery position and seek medical advice. If experiencing any discomfort, immediately remove from exposure. Get medical attention if discomfort does not disappear.
In case of skin contact	:	If on clothes, remove clothes. If on skin, rinse well with water. Wash off with soap and plenty of water. Get medical attention immediately if irritation develops and persists. Wash contaminated clothing before re-use.
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	:	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. Do not induce vomiting without medical advice.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	Treat symptomatically. Immediate medical attention is required in case of ingestion.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Dry chemical, CO2, water spray or regular foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	Do not spread spilled material with high-pressure water streams. High volume water jet

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	:	Fire may produce irritating, corrosive and/or toxic gases. Nitrogen oxides (NOx) Carbon oxides Bromine compounds Chlorine compounds

Hydrogen cyanide
Hydrogen chloride

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	:	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. Do not touch or walk through the spilled material. If it can be safely done, stop the leak. Use personal protective equipment. Never return spills in original containers for re-use. Mark the contaminated area with signs and prevent access to unauthorized personnel. Only qualified personnel equipped with suitable protective equipment may intervene.

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	:	Never return spills in original containers for re-use. Collect as much of the spill as possible with a suitable absorbent material. Pick up and transfer to properly labeled containers. Keep in suitable, closed containers for disposal. Clean contaminated surface thoroughly.

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	:	For personal protection see section 8. Avoid formation of respirable particles. Dispose of rinse water in accordance with local and national regulations. Smoking, eating and drinking should be prohibited in the application area.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Hygiene measures	:	Avoid contact with skin, eyes and clothing. This product should be used only by all personnel thoroughly trained to handle it. Do not inhale aerosol. Wash hands before breaks and immediately after handling the product. When using do not smoke. When using do not eat or drink. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Store in a place accessible by authorized persons only. Store in original container. 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. Electrical installations / working materials must comply with the technological safety standards.
Further information on storage conditions	:	The product is stable under normal conditions of warehouse storage. Store in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorised persons or children. The room should only be used for storage of chemicals. Food, drink, feed and seed should not be present. A hand wash station should be available.
Further information on storage stability	:	No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s)	:	Registered pesticide to be used in accordance with a label approved by country-specific regulatory authorities.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

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

Substance name	End Use	Routes of exposure	Potential health effects	Value
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Workers	Inhalation	Long-term local effects	0.02 mg/m3
	Workers	Inhalation	Acute local effects	0.04 mg/m3
	Consumers	Inhalation	Long-term local effects	0.02 mg/m3
	Consumers	Inhalation	Acute local effects	0.04 mg/m3
	Consumers	Oral	Long-term systemic effects	0.09 mg/kg
	Consumers	Oral	Acute systemic effects	0.11 mg/kg

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

Substance name	Environmental Compartment	Value
Chlorantraniliprole	Water	0.00045 mg/l
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Fresh water	0.00339 mg/l
	Intermittent use/release	0.00339 mg/l
	Sea water	0.00339 mg/l
	Sewage treatment plant	0.23 mg/l
	Fresh water sediment	0.027 mg/kg
	Sea sediment	0.027 mg/kg

8.2 Exposure controls

Personal protective equipment

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

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.

Skin and body protection : Impervious clothing
Long sleeved clothing.
Footwear protecting against chemicals
Choose body protection according to the amount and concen-

tration of the dangerous substance at the work place.

Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

Protective measures : Plan first aid action before beginning work with this product.
Always have on hand a first-aid kit, together with proper instructions.
Wear suitable protective equipment.
When using do not eat, drink or smoke.
In the context of professional plant protection use as recommended, the end user must refer to the label and the instructions for use.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Form	:	suspension
Color	:	white
Odor	:	alcohol-like
Odor Threshold	:	not determined
pH	:	7.8 Concentration: 1 % Method: CIPAC MT 75.3
Boiling point/boiling range	:	not determined
Flash point	:	> 100 °C No flash up to boiling point.
Evaporation rate	:	Not available for this mixture.
Flammability (solid, gas)	:	The product is not flammable.
Upper explosion limit / Upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined
Vapor pressure	:	Not available for this mixture.
Relative vapor density	:	Not available for this mixture.
Relative density	:	1.08 - 1.10
Density	:	1.094 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	Not available for this mixture.
Autoignition temperature	:	No data available
Viscosity		

Viscosity, dynamic	:	583 mPa.s 30 rpm
Viscosity, kinematic	:	367 - 734 mm2/s 30 rpm
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing

9.2 Other information

Molecular weight	:	Not applicable
Particle size	:	Not applicable
Self-ignition	:	not auto-flammable

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 formation of aerosol.
Heat, flames and sparks.
Protect from frost, heat and sunlight.
Heating of the product will produce harmful and irritant vapours.

10.5 Incompatible materials

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

10.6 Hazardous decomposition products

Stable under recommended storage conditions.
No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

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

Product:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 425
GLP: yes
Remarks: Information source: Internal study report
(Data on the product itself)

Acute inhalation toxicity : LC50 (Rat): > 2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Highest attainable concentration.
no mortality

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Remarks: Information source: Internal study report
(Data on the product itself)

Components:

Chlorantraniliprole:

Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg
Method: OECD Test Guideline 425
GLP: yes
Assessment: The substance or mixture has no acute oral toxicity

LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 425
GLP: yes
Remarks: Information source: Internal study report

LD50 (Mouse, female): > 2,000 mg/kg
Method: OECD Test Guideline 425
GLP: no

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.1 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Information source: Internal study report

LC50 (Rat, male and female): > 5.1 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: no mortality

LC50 (Rat, male and female): > 5.0 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: GB 15670-1995
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: no mortality

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Information source: Internal study report

LD50 (Rat, male and female): > 5,000 mg/kg
Method: GB 15670-1995
GLP: yes
Remarks: no mortality

LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Remarks: no mortality

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Acute oral toxicity : LD50 Oral (Rat, female): 200 mg/kg
Method: OECD Test Guideline 423

Acute inhalation toxicity : LC50 (Rat, male and female): 0.33 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : LD50 (Rabbit, male): 87 mg/kg

Skin corrosion/irritation

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

Product:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes
Remarks : Information source: Internal study report
(Data on the product itself)

Components:

Chlorantraniliprole:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
GLP	:	yes
Remarks	:	Information source: Internal study report

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

Species	:	Rabbit
Method	:	GB 15670-1995
Result	:	No skin irritation
GLP	:	yes

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Method	:	OECD Test Guideline 404
Result	:	Corrosive after 1 to 4 hours of exposure

Serious eye damage/eye irritation

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

Product:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation
GLP	:	yes
Remarks	:	Information source: Internal study report (Data on the product itself)

Components:

Chlorantraniliprole:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation
GLP	:	yes
Remarks	:	Information source: Internal study report

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

Species	:	Rabbit
Assessment	:	Not classified as irritant
Method	:	OECD Test Guideline 405
Result	:	Slight or no eye irritation

GLP : yes

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Result : Irreversible effects on the eye

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 test
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Animal test did not cause sensitization by skin contact.
GLP	:	yes
Remarks	:	Information source: Internal study report (Data on the product itself)

Components:

Chlorantraniliprole:

Test Type	:	Maximization Test
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitization.
GLP	:	yes
Remarks	:	Information source: Internal study report
Test Type	:	Local lymph node assay (LLNA)
Species	:	mice
Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitization.

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Test Type	:	Local lymph node assay (LLNA)
Species	:	Mouse
Result	:	The product is a skin sensitizer, sub-category 1A.

Germ cell mutagenicity

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

Product:

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

Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Method: OECD Test Guideline 474
Result: negative

Components:

Chlorantraniliprole:

Genotoxicity in vitro : Test Type: reverse mutation assay
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Method: OECD Test Guideline 474
Result: negative

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

Carcinogenicity

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

Components:

Chlorantraniliprole:

Species	:	Rat, male and female
Application Route	:	Oral
Exposure time	:	2 Years
NOAEL	:	805 - 1,076 mg/kg bw/day
Method	:	OECD Test Guideline 453
Result	:	negative

Species	:	Mouse, male and female
Application Route	:	Oral
Exposure time	:	18 month(s)
NOAEL	:	158 - 1,155 mg/kg bw/day
Method	:	OECD Test Guideline 453
Result	:	negative

Species	:	Dog
Exposure time	:	1 Years
NOAEL	:	1,164 mg/kg bw/day
Result	:	negative

Carcinogenicity - Assess- : Animal testing did not show any carcinogenic effects.

ment

Reproductive toxicity

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

Components:

Chlorantraniliprole:

Effects on fertility	:	Test Type: Two-generation study Species: Rat, male and female Application Route: Oral General Toxicity Parent: NOAEL: 20,000 ppm General Toxicity F1: NOAEL: 20,000 ppm Method: OECD Test Guideline 416 Result: negative
Effects on fetal development	:	Test Type: Pre-natal Species: Rat Application Route: Oral Duration of Single Treatment: 6 - 20 Days General Toxicity Maternal: NOEL: 1,000 mg/kg bw/day Developmental Toxicity: NOEL: 1,000 mg/kg bw/day Method: OECD Test Guideline 414 Result: negative
Reproductive toxicity - Assessment	:	Weight of evidence does not support classification for reproductive toxicity

STOT-single exposure

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

Product:

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

STOT-repeated exposure

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

Product:

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

Repeated dose toxicity

Components:

Chlorantraniliprole:

Species	:	Rat, male and female
NOEL	:	1188 - 1526 mg/kg
Application Route	:	Oral
Exposure time	:	90 Days
Method	:	OECD Test Guideline 408

Species	:	Rat
NOAEL	:	8,000 mg/kg
Application Route	:	Oral - feed
Exposure time	:	28 Days
Method	:	OECD Test Guideline 407
GLP	:	yes

Species	:	Rat
NOAEL	:	300 mg/kg
Application Route	:	Dermal
Exposure time	:	28 Days
Method	:	OECD Test Guideline 410
GLP	:	yes

Species	:	Rat
NOAEL	:	20,000 mg/kg
Application Route	:	Oral - feed
Exposure time	:	90 Days
Method	:	OECD Test Guideline 408
GLP	:	yes
Remarks	:	Information source: Internal study report

Species	:	Mouse
NOAEL	:	7,000 mg/kg
Application Route	:	Oral - feed
Exposure time	:	90 Days
Method	:	OECD Test Guideline 408
GLP	:	yes
Remarks	:	Information source: Internal study report

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Species	:	Dog
NOAEL	:	22 mg/kg
Application Route	:	Oral

Species	:	Rat
NOAEL	:	16.3 - 24.7 mg/kg
Application Route	:	Skin contact

Species	:	Rat
NOAEL	:	2.36 mg/m³
Application Route	:	Inhalation

Aspiration toxicity

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

Product:

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

Components:

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

Neurological effects

Components:

Chlorantraniliprole:
Remarks : No neurotoxicity observed in animal studies.

Further information

Product:
Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 9.9 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 GLP: yes Remarks: Information source: Internal study report (Data on the product itself) LC50 (Danio rerio (zebra fish)): >1.6 mg a.i./L Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia): 0.035 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: yes Remarks: Information source: Internal study report (Data on the product itself) EC50 (Daphnia magna (Water flea)): 8.2 µg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 20 mg/l Exposure time: 72 h

Method: OECD Test Guideline 201
GLP: yes
Remarks: Information source: Internal study report
(Data on the product itself)

NOEC (Pseudokirchneriella subcapitata (green algae)): 20 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

Toxicity to soil dwelling organisms : LC50: > 1,000 mg/kg
Exposure time: 14 d
Species: Eisenia fetida (earthworms)
Method: OECD Test Guideline 207
GLP:yes
Remarks: Information source: Internal study report
(Data on the product itself)

NOEC: 1,000 mg/kg
Exposure time: 28 d
Species: Eisenia andrei (red worm)
Method: OECD Test Guideline 222

LC50: > 1,000 mg/kg
Exposure time: 28 d
Species: Eisenia andrei (red worm)
Method: OECD Test Guideline 222

Toxicity to terrestrial organisms : LD50: > 2,000 mg/kg
Species: Colinus virginianus (Bobwhite quail)
Method: US EPA Test Guideline OPPTS 850.2100
GLP:yes
Remarks: Information source: Internal study report
(Data on the product itself)

LD50: > 541 µg/bee
Exposure time: 48 h
End point: Acute oral toxicity
Species: Apis mellifera (bees)
Method: OECD Test Guideline 213
GLP:yes
Remarks: Information source: Internal study report
(Data on the product itself)

LD50: > 541 µg/bee
Exposure time: 48 h
End point: Acute contact toxicity
Species: Apis mellifera (bees)
Method: OECD Test Guideline 214
GLP:yes
Remarks: Information source: Internal study report
(Data on the product itself)

LD50: >= 109.91 µg a.i./bee
Exposure time: 48 h
End point: Acute oral toxicity
Species: Apis mellifera L.
Method: OECD Test Guideline 213

NOEL: >= 109.91 µg a.i./bee
Exposure time: 48 h
End point: Acute oral toxicity
Species: Apis mellifera L.
Method: OECD Test Guideline 213

LD50: >= 100 µg a.i./bee
Exposure time: 48 h
End point: Acute contact toxicity
Species: Apis mellifera L.
Method: OECD Test Guideline 214

NOEL: >= 100 µg a.i./bee
Exposure time: 48 h
End point: Acute contact toxicity
Species: Apis mellifera L.
Method: OECD Test Guideline 214

NOEC: 1,726 mg/kg
Exposure time: 5 d
Species: Colinus virginianus (Bobwhite quail)
Method: US EPA Test Guideline OPP 71-2

LC50: > 1,726 mg/kg
Exposure time: 5 d
Species: Colinus virginianus (Bobwhite quail)
Method: US EPA Test Guideline OPP 71-2

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.
Remarks: According to calculation method of Regulation (EC) No 1272/2008.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.
Remarks: According to calculation method of Regulation (EC) No 1272/2008.

Components:

Chlorantraniliprole:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 13.8 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
Remarks: Information source: Internal study report

LC50 (Lepomis macrochirus (Bluegill sunfish)): > 15.1 mg/l

Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes
Remarks: Information source: Internal study report

LC50 (Cyprinodon sp. (minnow)): > 12 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.0116 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

LC50 (Hyalella azteca (Amphipod)): 0.26 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

LC50 (Ceriodaphnia dubia (water flea)): 0.0067 - 0.011 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 2 mg/l
Exposure time: 120 h

NOEC (Lemna gibba (duckweed)): > 2 mg/l
End point: Biomass
Exposure time: 14 d
Test Type: static test

ErC50 (Selenastrum capricornutum (green algae)): > 2 mg/l
Exposure time: 72 h

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 2 mg/l
Exposure time: 72 h
Method: US EPA Test Guideline OPP 122-2 & 123-2
GLP: yes
Remarks: Information source: Internal study report

EbC50 (Lemna gibba (duckweed)): > 2 mg/l
End point: Frond
Exposure time: 14 d
Test Type: static test
Method: US EPA Test Guideline OPP 122-2 & 123-2
GLP: yes
Remarks: Information source: Internal study report

NOEC (Anabaena flos-aquae (cyanobacterium)): > 2 mg/l
End point: Growth rate

Exposure time: 120 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

NOEC (Skeletonema costatum (Diatom)): > 14.6 mg/l
End point: Growth rate
Exposure time: 120 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

NOEC (Navicula pelliculosa (Diatom)): > 15.1 mg/l
End point: Growth rate
Exposure time: 120 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : NOEC: 1.28 mg/l
Exposure time: 36 d
Species: Cyprinodon variegatus (sheepshead minnow)

NOEC: 0.110 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 210
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.00447 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: US EPA Test Guideline OPPTS 850.1300
GLP: yes

M-Factor (Chronic aquatic toxicity) : 10

Toxicity to soil dwelling organisms : LC50: > 1,000 mg/kg
Exposure time: 14 d
Species: Eisenia fetida (earthworms)
Method: OECD Test Guideline 207
GLP:yes

Method: OECD Test Guideline 216
Remarks: No significant adverse effect on Nitrogen mineralization.

Method: OECD Test Guideline 217

Remarks: No significant adverse effect on Carbon mineralization.

EC50:
>100 mg/kg dry weight (d.w.)
Exposure time: 16 d
Species: Hypoaspis aculeifer
Method: OECD Test Guideline 207

NOEC:
100 mg/kg dry weight (d.w.)
Exposure time: 16 d
Species: Hypoaspis aculeifer
Method: OECD Test Guideline 207

Toxicity to terrestrial organisms : LD50: > 4.0 µg/bee
Exposure time: 72 h
End point: Acute contact toxicity
Species: Apis mellifera (bees)
Remarks: Active substance dissolved in acetone

LD50: > 0.005 µg/bee
Exposure time: 48 h
End point: Acute contact toxicity
Species: Apis mellifera (bees)
Remarks: Active substance dissolved in water

LD50: > 104.1 µg/bee
Exposure time: 48 h
End point: Acute oral toxicity
Species: Apis mellifera (bees)
Remarks: Active substance dissolved in acetone

LD50: > 0.0274 µg/bee
Exposure time: 48 h
End point: Acute oral toxicity
Species: Apis mellifera (bees)
Remarks: Active substance dissolved in water

LD50: > 2,250 mg/kg
Species: Poephila guttata (zebra finch)

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.19 mg/l
Exposure time: 96 h
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.16 mg/l
Exposure time: 48 h

NOEC (Daphnia magna (Water flea)): 0.1 mg/l
Exposure time: 21 d

		EC50 (Daphnia magna (Water flea)): 0.18 mg/l Exposure time: 21 d
Toxicity to algae/aquatic plants	:	NOEC (Skeletonema costatum (marine diatom)): 0.00049 mg/l Exposure time: 48 h Method: OECD Test Guideline 201 NOEC (Skeletonema costatum (marine diatom)): 0.019 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 EC50 (Skeletonema costatum (marine diatom)): 0.037 mg/l Exposure time: 48 h Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	100
Toxicity to microorganisms	:	NOEC (activated sludge): 0.91 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 GLP: yes EC50 (activated sludge): 4.5 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 GLP: yes
Toxicity to fish (Chronic toxicity)	:	NOEC: 0.02 mg/l Exposure time: 35 d Species: Danio rerio (zebra fish) Method: OECD Test Guideline 210 GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0.1 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Chronic Toxicity Value: 0.18 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)
M-Factor (Chronic aquatic toxicity)	:	100

12.2 Persistence and degradability

Product:

Biodegradability	:	Result: Not readily biodegradable. Remarks: Estimation based on data obtained on active ingredient.

Components:

Chlorantraniliprole:

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life (DT50): 10 d (25 °C)
pH: 9

Degradation half life (DT50): 0.3 d (50 °C)
pH: 9

Degradation half life (DT50): > 31 d
pH: 5

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Biodegradability : Result: Readily biodegradable.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Does not bioaccumulate.
Estimation based on data obtained on active ingredient.

Components:

Chlorantraniliprole:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 14
Method: OECD Test Guideline 305
GLP: yes
Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 2.77 (20 °C)
pH: 4

log Pow: 2.86 (20 °C)
pH: 7

log Pow: 2.80 (20 °C)
pH: 9

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Bioaccumulation : Exposure time: 28 d
Bioconcentration factor (BCF): < 54
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : Pow: 0.75

12.4 Mobility in soil

Product:

Distribution among environmental compartments : Remarks: The product is not expected to be mobile in soils.
Estimation based on data obtained on active ingredient.

Components:

Chlorantraniliprole:

Distribution among environmental compartments : Koc: 362 ml/g, log Koc: 2.55
Remarks: Mobile in soils

Stability in soil : Remarks: Very persistent in soil.

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.

Components:

Chlorantraniliprole:

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.

Components:

Chlorantraniliprole:

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. Triple rinse containers. Do not re-use empty containers. Packaging that is not properly emptied must be disposed of as the unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number

UNRTDG	:	UN 3082
IMDG	:	UN 3082
IATA	:	UN 3082

14.2 UN proper shipping name

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

14.3 Transport hazard class(es)

		Class	Subsidiary risks
UNRTDG	:	9	
IMDG	:	9	
IATA	:	9	

14.4 Packing group

UNRTDG

Packing group	:	III
Labels	:	9

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

UNRTDG

Environmentally hazardous	:	yes

IMDG

Marine pollutant	:	yes

IATA (Passenger)

Environmentally hazardous	:	yes

IATA (Cargo)

Environmentally hazardous	:	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	:	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
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

A chemical safety assessment is not required for this product (mixture).

SECTION 16: Other information

Full text of H-Statements

H301	:	Toxic if swallowed.
H310	:	Fatal in contact with skin.
H314	:	Causes severe skin burns and eye damage.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H330	:	Fatal if inhaled.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic 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
Eye Dam.	:	Serious eye damage
Skin Corr.	:	Skin corrosion
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 Restriction 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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information :

Classification of the mixture:		**Classification procedure:**
Aquatic Acute 1	H400	Based on product data or assessment
Aquatic Chronic 1	H410	Based on product data or assessment

Disclaimer

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