according to the Hazardous Products Regulations



## Exirel® Insecticide

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 03/01/2018

 1.2
 03/06/2025
 50000098
 Date of first issue: 03/01/2018

### **SECTION 1. IDENTIFICATION**

**Product identifier** 

Product name Exirel® Insecticide

Other means of identification

Product code 50000098

**Product Registration Num-**

ber

PCP #30895

Recommended use of the chemical and restrictions on use

Can be used as insecticide only.

**Restrictions on use**Use as recommended by the label.

Manufacturer or supplier's details

<u>Manufacturer</u> FMC Corporation

2929 WALNUT ST

PHILADELPHIA PA 19104

USA

Web: https://ag.fmc.com/ca/en

SDS-Info@fmc.com

<u>Supplier Address</u> FMC of Canada Limited

6755 Mississauga Road, Suite 204

Mississauga, ON L5N 7Y2

Canada

**Emergency telephone** 

For leak, fire, spill or accident emergencies, call:

1 800 / 424-9300 (CHEMTREC - U.S.A.) 1 703 / 741-5970 (CHEMTREC - International) 1 703 / 527-3887 (CHEMTREC - Alternate)

Medical emergency:

U.S.A. & Canada: +1 800 / 331-3148

All other countries: +1 651 / 632-6793 (Collect)

## **SECTION 2. HAZARDS IDENTIFICATION**

GHS classification in accordance with the Hazardous Products Regulations

Acute toxicity (Inhalation) : Category 4

Skin irritation : Category 2

according to the Hazardous Products Regulations



## Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018
1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

Skin sensitization : Category 1

**GHS** label elements

Hazard pictograms

**!**>

Signal Word : WARNING

Hazard Statements : H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

Precautionary Statements : Prevention:

P261 Avoid breathing mist or vapors. P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of

the workplace.

P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/

doctor if you feel unwell.

P333 + P313 If skin irritation or rash occurs: Get medical advice/

attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse.

Disposal:

P501 Dispose of contents/ container to an approved waste dis-

posal plant.

Other hazards

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

### Components

Chemical name	Common	CAS-No.	Concentration (% w/w)
	Name/Synonym		
Cyantraniliprole	Cyantraniliprole	736994-63-1	10.2
Fatty acids, soya, Me	Fatty acids,	68919-53-9	>= 30 - < 60
esters	soya, Me esters		>= 30 - < 60

according to the Hazardous Products Regulations



## Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018 03/06/2025 50000098 Date of first issue: 03/01/2018 1.2

propane-1,2-diol	propane-1,2-diol	57-55-6	>= 1 - < 5
calcium dodecylben-	calcium do-	26264-06-2	
zenesulphonate	decylbenzene-		>= 1 - < 5
	sulphonate		

#### **SECTION 4. FIRST AID MEASURES**

General advice Move out of dangerous area.

Show this material safety data sheet to the doctor in attend-

ance.

Do not leave the victim unattended.

If inhaled Remove to fresh air.

If unconscious, place in recovery position and seek medical

advice.

If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambu-

lance.

In case of skin contact Take off all contaminated clothing immediately.

> If on clothes, remove clothes. If on skin, rinse well with water.

Wash off immediately with soap and plenty of water. Get medical attention immediately if irritation develops and

persists.

Wash contaminated clothing before re-use.

Immediately flush eye(s) with plenty of water. In case of eye contact

Remove contact lenses. Protect unharmed eye.

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist.

If swallowed Do not induce vomiting without medical advice.

Keep respiratory tract clear.

Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.

If symptoms persist, call a physician.

Most important symptoms and effects, both acute and Causes skin irritation. May cause an allergic skin reaction.

Harmful if inhaled.

delayed

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

Notes to physician Treat symptomatically.

Immediate medical attention is required in case of ingestion.

#### **SECTION 5. FIRE-FIGHTING MEASURES**

according to the Hazardous Products Regulations



# Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018 03/06/2025 50000098 Date of first issue: 03/01/2018 1.2

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

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment.

Unsuitable extinguishing

media

Do not spread spilled material with high-pressure water

streams.

High volume water jet

Specific hazards during fire

fighting

Do not allow run-off from fire fighting to enter drains or water

courses.

Hazardous combustion prod-

Fire may produce irritating, corrosive and/or toxic gases.

Bromine compounds Nitrogen oxides (NOx)

Carbon oxides Hydrogen cyanide Sulfur oxides

Chlorine compounds

Specific extinguishing meth-

ods

Remove undamaged containers from fire area if it is safe to do

Use a water spray to cool fully closed containers.

Further information Standard procedure for chemical fires.

Use extinguishing measures that are appropriate to local cir-

cumstances 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.

Special protective equipment:

for fire-fighters

Firefighters should wear protective clothing and self-contained

breathing apparatus.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protec- :

tive equipment and emer-

gency procedures

Evacuate personnel to safe areas. Use personal protective equipment.

Do not touch or walk through the spilled material.

If it can be safely done, stop the leak.

Ensure adequate ventilation.

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.

**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.

according to the Hazardous Products Regulations



# Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018 1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

Methods and materials for containment and cleaning up

Never return spills in original containers for re-use.

Collect as much of the spill as possible with a suitable absor-

bent material.

Pick up and transfer to properly labeled containers.

Soak up with inert absorbent material (e.g. sand, silica gel,

acid binder, universal binder, sawdust).

Keep in suitable, closed containers for disposal.

### **SECTION 7. HANDLING AND STORAGE**

Advice on protection against :

fire and explosion

Normal measures for preventive fire protection.

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 ap-

plication area.

Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national

regulations.

Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being

used.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated

place.

Containers which are opened must be carefully resealed and

kept upright to prevent leakage.

Electrical installations / working materials must comply with

the technological safety standards.

Further information on stor-

age conditions

The product is stable under normal conditions of warehouse

storage.

Protect from frost and extreme heat.

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.

Recommended storage tem-

perature

> 0 - 30 °C

Further information on stor-

age stability

No decomposition if stored and applied as directed.

according to the Hazardous Products Regulations



# Exirel® Insecticide

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 03/01/2018

 1.2
 03/06/2025
 50000098
 Date of first issue: 03/01/2018

#### **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

## Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
propane-1,2-diol	57-55-6	TWA (Va- pour and aerosols)	50 ppm 155 mg/m3	CA ON OEL
		TWA (aero-sol)	10 mg/m3	CA ON OEL

Personal protective equipment

Respiratory protection : In case of mist, spray or aerosol exposure wear suitable per-

sonal respiratory protection and protective suit.

Hand protection

Material : Wear chemical resistant gloves, such as barrier laminate,

butyl rubber or nitrile rubber.

Remarks : The suitability for a specific workplace should be discussed

with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water

Tightly fitting safety goggles

Wear face-shield and protective suit for abnormal processing

problems.

Skin and body protection : 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.

Always have on hand a first-aid kit, together with proper in-

structions.

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 instruc-

tions for use.

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. Remove and wash contaminated clothing and gloves, includ-

ing the inside, before re-use.

according to the Hazardous Products Regulations



## Exirel® Insecticide

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 03/01/2018

 1.2
 03/06/2025
 50000098
 Date of first issue: 03/01/2018

### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state : liquid

Color : off-white

Odor : mild, phenol-like

Odor Threshold : not determined

pH : 5.6

Concentration: 10 g/l 1 %

(as a dispersion)

Melting point/ range : No data available

Boiling point/boiling range : 97 °C

Flash point : > 97 °C

Method: closed cup

No flash up to boiling point.

Evaporation rate : No data available

Flammability (solid, gas) : The product is not flammable.

Self-ignition : 358 °C

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

Vapor pressure : Not available for this mixture.

Relative vapor density : No data available

Relative density : 0.982

Method: Regulation (EC) No. 440/2008, Annex, A.3

Density : No data available

Solubility(ies)

Water solubility : dispersible

according to the Hazardous Products Regulations



## Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018 1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

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 : 649.5 mPa.s (24.7 °C)

Method: CIPAC MT 192

25 rpm

454.3 mPa.s ( 24.7 °C) Method: CIPAC MT 192

50 rpm

329.9 mPa.s ( 24.7 °C) Method: CIPAC MT 192

100 rpm

Explosive properties : Not explosive

Oxidizing properties : The product is not oxidizing.

Surface tension : 25.9 mN/m, 22 °C, Regulation (EC) No. 440/2008, Annex, A.5

Molecular weight : Not applicable

Particle size : Not applicable

### **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous reac-

tions

No decomposition if stored and applied as directed.

Conditions to avoid : Avoid extreme temperatures.

Avoid formation of aerosol. Heat, flames and sparks.

Heating of the product will produce harmful and irritant va-

pours.

Incompatible materials : Avoid strong acids, bases, and oxidizers.

Hazardous decomposition

products

Nitrogen oxides (NOx)

Carbon oxides

according to the Hazardous Products Regulations



## Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018
1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

Sulfur oxides

### **SECTION 11. TOXICOLOGICAL INFORMATION**

### **Acute toxicity**

Harmful if inhaled.

**Product:** 

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 tox-

icity

Acute inhalation toxicity : LC50 (Rat): > 2.4 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, male and female): > 5,000 mg/kg

Method: OECD Test Guideline 402

## **Components:**

**Cyantraniliprole:** 

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

Method: OECD Test Guideline 425

GLP: yes

Assessment: The substance or mixture has no acute oral tox-

icity

Remarks: no mortality

LD50 (Rat, female): > 5,000 mg/kg Method: OECD Test Guideline 425

GLP: yes

Assessment: The substance or mixture has no acute oral tox-

icity

Remarks: no mortality

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.2 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 inhala-

tion toxicity

Remarks: no mortality

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

according to the Hazardous Products Regulations



# Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018
1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

Method: OECD Test Guideline 402

GLP: yes

Assessment: The substance or mixture has no acute dermal

toxicity

Remarks: no mortality

Fatty acids, soya, Me esters:

Acute oral toxicity : LD50 (Rat): 5,000 - 15,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 2,000 - 20,000 mg/kg

propane-1,2-diol:

Acute oral toxicity : LD50 (Rat, male and female): 22,000 mg/kg

Acute inhalation toxicity : LC0 (Rabbit): 31.7 mg/l

Exposure time: 2 h
Test atmosphere: vapor
Remarks: no mortality

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

calcium dodecylbenzenesulphonate:

Acute oral toxicity : LD50 (Rat, male and female): 1,300 mg/kg

Remarks: Based on data from similar materials

Acute inhalation toxicity : Remarks: Not classified

Acute dermal toxicity : LD50 (Rat, male and female): > 2000 milligram per kilogram

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

Remarks: Based on data from similar materials

Skin corrosion/irritation

Causes skin irritation.

**Product:** 

Species : Rabbit

Assessment : Irritating to skin.

Method : OECD Test Guideline 404

Result : Skin irritation

GLP : yes

**Components:** 

Cyantraniliprole:

Species : Rabbit

according to the Hazardous Products Regulations



# Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018
1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

Assessment : No skin irritation

Method : OECD Test Guideline 404

Result : No skin irritation

GLP : yes

Fatty acids, soya, Me esters:

Result : slight irritation

propane-1,2-diol:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

calcium dodecylbenzenesulphonate:

Species : Rabbit

Method : OECD Test Guideline 404

Result : Skin irritation

Serious eye damage/eye irritation

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

**Product:** 

Species : Rabbit
Result : Eye irritation
Assessment : Irritating to eyes.

Method : OECD Test Guideline 405

GLP : yes

**Components:** 

**Cyantraniliprole:** 

Species : Rabbit Result : slight in

Result : slight irritation
Assessment : Not classified as irritant

Method : Not classified as irritant

OECD Test Guideline 405

GLP : yes

Fatty acids, soya, Me esters:

Result : Irritation to eyes, reversing within 7 days

propane-1,2-diol:

Species : Rabbit

Result : No eye irritation

Method : OECD Test Guideline 405

calcium dodecylbenzenesulphonate:

Species : Rabbit

according to the Hazardous Products Regulations



# Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018 1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

Result : Irreversible effects on the eye Method : OECD Test Guideline 405

Remarks : Based on data from similar materials

Species : Rabbit

Result : Irreversible effects on the eye Method : OECD Test Guideline 405

## Respiratory or skin sensitization

#### Skin sensitization

May cause an allergic skin reaction.

### Respiratory sensitization

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

#### **Product:**

Test Type : Buehler Test Species : Guinea pig

Method : OECD Test Guideline 406

Result : May cause sensitization by skin contact.

GLP : yes

Test Type : Local lymph node assay (LLNA)

Species : mice

Method : OECD Test Guideline 429

Result : The product is a skin sensitizer, sub-category 1B.

GLP : yes

## **Components:**

## Cyantraniliprole:

Test Type : Local lymph node test

Routes of exposure : Dermal Species : Mouse

Method : OECD Test Guideline 429

Result : Does not cause skin sensitization.

GLP : yes

Test Type : Maximization Test

Routes of exposure : Dermal Species : Guinea pig

Method : OECD Test Guideline 406
Result : Does not cause skin sensitization.

GLP : yes

Test Type : Buehler Test Routes of exposure : Dermal Species : Guinea pig

Method : OECD Test Guideline 406

Result : Does not cause skin sensitization.

GLP : yes

according to the Hazardous Products Regulations



# Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018
1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

Test Type : Magnussen-Kligman test

Routes of exposure : Dermal Species : Guinea pig

Method : OECD Test Guideline 406 Result : Causes skin sensitization.

GLP : yes

Remarks : see user defined free text

Fatty acids, soya, Me esters:

Result : Does not cause skin sensitization.

propane-1,2-diol:

Test Type : Maximization Test

Species : Guinea pig Result : negative

calcium dodecylbenzenesulphonate:

Test Type : Maximization Test

Species : Guinea pig

Method : OECD Test Guideline 406
Result : Not a skin sensitizer.

Remarks : Based on data from similar materials

Germ cell mutagenicity

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

**Components:** 

Cyantraniliprole:

Genotoxicity in vitro : Test Type: reverse mutation assay

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: reverse mutation assay Test system: Escherichia coli

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Human lymphocytes

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

according to the Hazardous Products Regulations



# Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018
1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test

Species: Mouse

Application Route: Oral

Method: OECD Test Guideline 474

Result: negative

GLP: yes

Germ cell mutagenicity -

Assessment

Tests on bacterial or mammalian cell cultures did not show

mutagenic effects.

propane-1,2-diol:

Genotoxicity in vitro : Test Type: reverse mutation assay

Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test

Species: Mouse Result: negative

calcium dodecylbenzenesulphonate:

Genotoxicity in vitro : Test Type: reverse mutation assay

Method: OECD Test Guideline 471

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: chromosome aberration assay

Species: Rat (male and female)

Application Route: Oral Exposure time: 90 d Result: negative

Remarks: Based on data from similar materials

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:** 

**Cyantraniliprole:** 

Species : Rat, male and female

Application Route : Ingestion Exposure time : 2 Years

NOAEL : 200 - 2,000 ppm

Method : OECD Test Guideline 453

Result : negative

according to the Hazardous Products Regulations



# Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018 1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

Species : Mouse, male and female

Application Route : Ingestion
Exposure time : 18 month(s)
NOAEL : 7,000 ppm

Method : OECD Test Guideline 451

Result : negative

Carcinogenicity - Assess-

ment

Weight of evidence does not support classification as a car-

cinogen

Fatty acids, soya, Me esters:

Carcinogenicity - Assess-

ment

Weight of evidence does not support classification as a car-

cinogen

propane-1,2-diol:

Species : Rat
Application Route : Oral
Exposure time : 2 Years
Result : negative

calcium dodecylbenzenesulphonate:

Species : Rat, male and female

Application Route : Oral Exposure time : 720 d

NOAEL : 250 mg/kg body weight

Result : negative

Remarks : Based on data from similar materials

Carcinogenicity - Assess-

ment

Weight of evidence does not support classification as a car-

cinogen

Reproductive toxicity

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

**Components:** 

Cyantraniliprole:

Effects on fetal development : Test Type: Pre-natal

Species: Rat

**Application Route: Oral** 

General Toxicity Maternal: NOAEL: 1,000 mg/kg bw/day Embryo-fetal toxicity.: NOAEL: 1,000 mg/kg bw/day

Method: OECD Test Guideline 414

Result: negative

Test Type: Pre-natal Species: Rabbit Application Route: Oral

General Toxicity Maternal: NOAEL: 25 mg/kg bw/day Embryo-fetal toxicity.: NOAEL: 100 mg/kg bw/day

according to the Hazardous Products Regulations



## Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018 1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

> Symptoms: Maternal effects. Method: OECD Test Guideline 414

Result: negative

Reproductive toxicity - As-

sessment

Weight of evidence does not support classification for repro-

ductive toxicity

propane-1,2-diol:

Effects on fertility : Test Type: reproductive and developmental toxicity study

Species: Mouse
Application Route: Oral

Result: negative

Effects on fetal development : Test Type: Embryo-fetal development

Species: Mouse Application Route: Oral

Method: OECD Test Guideline 414

Result: Animal testing did not show any effects on fertility.

Remarks: Based on data from similar materials

calcium dodecylbenzenesulphonate:

Effects on fertility : Test Type: Fertility/early embryonic development

Species: Rat, male and female Application Route: Ingestion

General Toxicity Parent: NOAEL: 400 mg/kg body weight

Method: OECD Test Guideline 422

Result: negative

Effects on fetal development : Test Type: reproductive and developmental toxicity study

Species: Rat

Application Route: Ingestion

General Toxicity Maternal: NOAEL: 300 mg/kg body weight Developmental Toxicity: NOAEL: 600 mg/kg body weight

Method: OECD Test Guideline 422

Result: negative

Reproductive toxicity - As-

sessment

Weight of evidence does not support classification for repro-

ductive 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.

**Components:** 

Cyantraniliprole:

Assessment : The substance or mixture is not classified as specific target

according to the Hazardous Products Regulations



## Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018 1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

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.

**Components:** 

Cyantraniliprole:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

Repeated dose toxicity

**Components:** 

Cyantraniliprole:

Species : Rat

NOAEL : > 1,000 mg/kg

Application Route : Oral Exposure time : 28 Days

Method : OECD Test Guideline 407
Symptoms : increased liver weight

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

Species : Rat, male and female NOAEL : 6.9 - 168 mg/kg bw/day

Application Route : Ingestion Exposure time : 90 Days

Method : OPPTS 870.3100

Remarks : Effects are of limited toxicological significance.

Species : Mouse, male and female NOAEL : 1091.8 mg/kg bw/day

Application Route : Ingestion Exposure time : 90 Days

Method : OPPTS 870.3100

Remarks : Effects are of limited toxicological significance.

Species : Dog, male and female NOAEL : 3.08 - 3.48 mg/kg bw/day

Application Route : Ingestion Exposure time : 90 Days

Method : OPPTS 870.3150

Remarks : Effects are of limited toxicological significance.

Species : Rat, male and female NOAEL : 8.3 - 106.6 mg/kg bw/day

according to the Hazardous Products Regulations



# Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018 1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

Application Route : Ingestion Exposure time : 2 yr

Method : OPPTS 870.4300

Remarks : Effects are of limited toxicological significance.

Species : Mouse, male and female NOAEL : 768.8 - 903.8 mg/kg bw/day

Application Route : Ingestion
Exposure time : 18 Months
Method : OPPTS 870.4200

Remarks : Effects are of limited toxicological significance.

Species : Dog, male and female NOAEL : 5.67 - 6 mg/kg bw/day

Application Route : Ingestion Exposure time : 1 yr

Method : OPPTS 870,4100

Remarks : Effects are of limited toxicological significance.

Species : Rat, male and female

NOAEL : 1000 mg/kg Application Route : Dermal Exposure time : 28 Days

Method : OECD Test Guideline 410

GLP : yes Symptoms : Irritation

Remarks : Effects are of limited toxicological significance.

propane-1,2-diol:

Species : Rat, male and female

NOAEL : 1,700 mg/kg
Application Route : Oral
Exposure time : 2 Years

Species : Rat, male and female

NOAEL : 1,000 mg/kg LOAEL : 160 mg/kg Application Route : Inhalation Exposure time : 90 Days

calcium dodecylbenzenesulphonate:

Species : Rat, male and female

NOAEL : 85 mg/kg LOAEL : 145 mg/kg Application Route : Oral Exposure time : 9 Months

Remarks : Based on data from similar materials

Species : Rat, male LOAEL : 286 mg/kg Application Route : Skin contact

according to the Hazardous Products Regulations



# Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018
1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

Exposure time : 15 Days

Remarks : Based on data from similar materials

Species : Rat, male and female NOAEL : 100 mg/kg bw/day LOAEL : 200 mg/kg bw/day Application Route : Oral - gavage Exposure time : 28 - 54 Days

Method : OECD Test Guideline 422

Remarks : Based on data from similar materials

### **Aspiration toxicity**

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

### **Components:**

# Cyantraniliprole:

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

### **Neurological effects**

### **Components:**

### **Cyantraniliprole:**

No neurotoxicity observed in animal studies.

# **Further information**

**Product:** 

Remarks : No data available

### **SECTION 12. ECOLOGICAL INFORMATION**

### **Ecotoxicity**

### **Product:**

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.232 mg/l

Exposure time: 48 h Test Type: static test

Method: OECD Test Guideline 202

GLP: yes

Remarks: (Data on the product itself)
Information source: Internal study report

Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): 3.39

mg/l Exposure time: 72 h

Method: OECD Test Guideline 201

GLP: yes

Remarks: (Data on the product itself)

according to the Hazardous Products Regulations



## Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018
1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

Information source: Internal study report

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 0.00969 mg/l

Exposure time: 21 d

Toxicity to terrestrial organ-

isms

LD50 (Bumblebees (Bombus terrestris L.)): > 0.47 µg a.i./bee

Exposure time: 48 h

End point: Acute oral toxicity Method: OECD Test Guideline 213

LD50 (Bumblebees (Bombus terrestris L.)): > 100 µg a.i./bee

Exposure time: 48 h

End point: Acute contact toxicity Method: OECD Test Guideline 214

**Ecotoxicology Assessment** 

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

**Components:** 

Cyantraniliprole:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 12.6 mg/l

Exposure time: 96 h

Method: US EPA Test Guideline OPP 72-1

GLP: yes

LC50 (Ictalurus punctatus (channel catfish)): > 10 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.0204 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 13

mg/l

Exposure time: 72 h

ErC50 (Lemna gibba (duckweed)): 0.278 mg/l

Exposure time: 7 d

EyC50 (Lemna gibba (duckweed)): 0.060 mg/l

Exposure time: 7 d

Toxicity to fish (Chronic tox-

icity)

NOEC (Cyprinodon variegatus (sheepshead minnow)): 2.9

mg/l

Exposure time: 28 d

NOEC (Oncorhynchus mykiss (rainbow trout)): 0.11 mg/l

Exposure time: 21 d

NOEC (Oncorhynchus mykiss (rainbow trout)): 1.01 mg/l

according to the Hazardous Products Regulations



## Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018 03/06/2025 50000098 Date of first issue: 03/01/2018 1.2

> Exposure time: 90 d Test Type: Early Life-Stage

Method: US EPA Test Guideline OPP 72-4

GLP: yes

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 0.00656 mg/l

End point: Growth Exposure time: 21 d Test Type: Static-Renewal

Method: US EPA Test Guideline OPPTS 850.1300

GLP: yes

LOEC (Daphnia magna (Water flea)): 0.00969 mg/l

End point: Growth Exposure time: 21 d Test Type: Static-Renewal

Method: US EPA Test Guideline OPPTS 850.1300

GLP: yes

NOEC (Daphnia magna (Water flea)): 0.00447 mg/l

Exposure time: 21 d

NOEC (Americamysis bahia (mysid shrimp)): 0.72 mg/l

End point: reproduction Exposure time: 35 d Test Type: flow-through test

Method: US EPA Test Guideline OPP 72-4

GLP: yes

Toxicity to soil dwelling or-

ganisms

NOEC (Eisenia fetida (earthworms)): 1,000 mg/kg

Exposure time: 14 d

Method: OECD Test Guideline 222

GLP: ves

Method: OECD Test Guideline 216

Remarks: No significant adverse effect on Nitrogen minerali-

zation.

Method: OECD Test Guideline 217

Remarks: No significant adverse effect on Carbon mineraliza-

Toxicity to terrestrial organ-

isms

LD50 (Apis mellifera (bees)): > 0.0934 µg/bee

Exposure time: 72 h

End point: Acute contact toxicity Method: OECD Test Guideline 214

GLP: yes

LD50 (Apis mellifera (bees)): > 0.1055 µg/bee

Exposure time: 48 h

End point: Acute oral toxicity Method: OECD Test Guideline 213

GLP: yes

according to the Hazardous Products Regulations



# Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018
1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

LD50 (Colinius virginianus): > 2,250 mg/kg

End point: Acute oral toxicity

Method: US EPA Test Guideline OPPTS 850.2100

GLP: yes

NOEC (Anas platyrhynchos (Mallard duck)): 1,000 ppm

End point: Reproduction Test Method: OECD Test Guideline 206

GLP: yes

Fatty acids, soya, Me esters:

Toxicity to fish : LC50 (Fish): > 1,000 mg/l

Exposure time: 96 h

LC50 (Leuciscus idus (Golden orfe)): > 100 mg/l

Exposure time: 48 h Method: ISO 7346/2

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Crustaceans): 800 - 5,243 mg/l

Exposure time: 48 h

propane-1,2-diol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

(Mysidopsis bahia (opossum shrimp)): 18,800 mg/l

Exposure time: 96 h

Toxicity to algae/aquatic

plants

EC50 (Pseudokirchneriella subcapitata (green algae)): 34,100

mg/l

Exposure time: 48 h

Method: OECD Test Guideline 201

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC: 13,020 mg/l Exposure time: 7 d

Toxicity to microorganisms : EC50 (Pseudomonas putida): > 20,000 mg/l

Exposure time: 18 h

calcium dodecylbenzenesulphonate:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 10 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Remarks: Based on data from similar materials

LC50 (Pimephales promelas (fathead minnow)): 4.6 mg/l

Exposure time: 96 h

Remarks: Based on data from similar materials

according to the Hazardous Products Regulations



## Exirel® Insecticide

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 03/01/2018

 1.2
 03/06/2025
 50000098
 Date of first issue: 03/01/2018

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 3.5 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

NOEC (Pseudokirchneriella subcapitata (green algae)): 7.9

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

EC50 (Pseudokirchneriella subcapitata (green algae)): 65.4

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Toxicity to daphnia and other

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 1.65 mg/l

Exposure time: 21 d

Remarks: Based on data from similar materials

NOEC (Daphnia magna (Water flea)): 1.18 mg/l

Exposure time: 21 d

Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (activated sludge): 500 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Toxicity to soil dwelling or-

ganisms

LC50 (Eisenia fetida (earthworms)): 1,000 mg/kg

Exposure time: 14 d

Method: OECD Test Guideline 207

Toxicity to terrestrial organ-

isms

LD50 (Colinus virginianus (Bobwhite quail)): 1,356 mg/kg

Exposure time: 14 d

Method: OECD Test Guideline 223

### Persistence and degradability

## **Components:**

Cyantraniliprole:

Biodegradability : Remarks: Not readily biodegradable.

Stability in water : Degradation half life (DT50): 9.09 - 37.7 d

Remarks: Fresh water

Degradation half life (DT50): 76.6 - 119 d

Remarks: Soil

Degradation half life (DT50): 22.8 - 25.1 d

according to the Hazardous Products Regulations



# Exirel® Insecticide

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 03/01/2018

 1.2
 03/06/2025
 50000098
 Date of first issue: 03/01/2018

Remarks: total system

Fatty acids, soya, Me esters:

Biodegradability : Result: Readily biodegradable.

propane-1,2-diol:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 23.6 % Exposure time: 64 d

Method: OECD Test Guideline 306

calcium dodecylbenzenesulphonate:

Biodegradability : Result: Readily biodegradable.

Method: OECD Test Guideline 301E

**Bioaccumulative potential** 

**Components:** 

**Cyantraniliprole:** 

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)

Bioconcentration factor (BCF): < 1 Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-

octanol/water

log Pow: 1.97 (22 °C)

pH: 4

log Pow: 2.07 (22 °C)

pH: 7

log Pow: 1.74 (22 °C)

pH: 9

Fatty acids, soya, Me esters:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

propane-1,2-diol:

Partition coefficient: n-

octanol/water

log Pow: -1.07

calcium dodecylbenzenesulphonate:

Bioaccumulation : Species: Fish

Bioconcentration factor (BCF): 70.79

Method: QSAR

Partition coefficient: n-

octanol/water

: log Pow: 4.77 (25 °C)

according to the Hazardous Products Regulations



# Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018 1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

### Mobility in soil

### **Components:**

# Cyantraniliprole:

Distribution among environ-

mental compartments

Koc: 241 ml/g, log Koc: 2.38

Kd: 3.73 ml/g

Remarks: Mobile in soils

#### Other adverse effects

### **Product:**

Additional ecological infor-

mation

This product is toxic to non-target plants.

Environmental hazards

Do not apply directly to water.

Drift and runoff may be hazardous to aquatic organisms in

water adjacent to treated areas.

Toxic to bees.

Do not apply this product if bees are visiting the treatment

area.

See product label for additional application instructions relat-

ing to environmental precautions.

An environmental hazard cannot be excluded in the event of

unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

### **SECTION 13. DISPOSAL CONSIDERATIONS**

### Disposal methods

Waste from residues : The product should not be allowed to enter drains, water

courses or the soil.

Do not contaminate ponds, waterways or ditches with chemi-

cal or used container.

Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.

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 han-

dling site for recycling or disposal.

### **SECTION 14. TRANSPORT INFORMATION**

### International Regulations

according to the Hazardous Products Regulations



## Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018 1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

**UNRTDG** 

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Cyantraniliprole)

Class : 9
Packing group : III
Labels : 9
Environmentally hazardous : yes

IATA-DGR

UN/ID No. : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.

(Cyantraniliprole)

Class : 9 Packing group : III

Labels : Miscellaneous

Packing instruction (cargo

aircraft)

Packing instruction (passen- : 964

ger aircraft)

Environmentally hazardous : yes

**IMDG-Code** 

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

964

(Cyantraniliprole)

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**Domestic regulation** 

**TDG** 

Not regulated as a dangerous good

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### **SECTION 15. REGULATORY INFORMATION**

NPRI Components : methanol

Distillates (petroleum), hydro- treated light; Kerosine — un-

specified ethylbenzene

according to the Hazardous Products Regulations



# Exirel® Insecticide

Version Revision Date: SDS Number: Date of last issue: 03/01/2018
1.2 03/06/2025 50000098 Date of first issue: 03/01/2018

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

TCSI : On the inventory, or in compliance with the inventory

TSCA : Product contains substance(s) not listed on TSCA inventory.

AIIC : Not in compliance with the inventory

DSL : This product contains chemical substance(s) exempt from

CEPA DSL Inventory requirements. It is regulated as a pesticide subject to Pest Control Products Act (PCPA) requirements. Read the PCPA label, authorized under the Pest Control Products Act, prior to using or handling this pest control

product.

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

### **Canadian lists**

No substances are subject to a Significant New Activity Notification.

#### **PMRA/PCPA Information**

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label:, Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product

### **WARNING**

Harmful if absorbed through the skin., Avoid contact with skin, eyes and clothing., Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals., Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

according to the Hazardous Products Regulations



## Exirel® Insecticide

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 03/01/2018

 1.2
 03/06/2025
 50000098
 Date of first issue: 03/01/2018

#### **SECTION 16. OTHER INFORMATION**

### Full text of other abbreviations

CA ON OEL : Ontario Table of Occupational Exposure Limits made under

the Occupational Health and Safety Act.

CA ON OEL / TWA : Time-Weighted Average Limit (TWA)

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate: NOM - Official Mexican Norm: NTP - National Toxicology Program: NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

#### **Disclaimer**

FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. You can contact FMC Corporation to insure that this document is the most current available from FMC Corporation. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the information provided herein. The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. The user is responsible for determining whether the product is fit for a particular purpose and suitable for the user's conditions and methods of use. Since the conditions and methods of use are beyond the control of FMC

according to the Hazardous Products Regulations



# **Exirel® Insecticide**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 03/01/2018

 1.2
 03/06/2025
 50000098
 Date of first issue: 03/01/2018

Corporation, FMC Corporation expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

CA / EN

# Prepared by:

**FMC** Corporation

FMC and the FMC Logo are trademarks of FMC Corporation and/or an affiliate.

© 2021-2025 FMC Corporation. All Rights Reserved.

End of Material Safety Data Sheet