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Corteva Agriscience™ encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container. This Safety Data Sheet adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. IDENTIFICATION

Product name : LumiTreo™

Manufacturer or supplier's details

**COMPANY IDENTIFICATION** 

Manufacturer/importer : CORTEVA AGRISCIENCE LLC

9330 ZIONSVILLE RD

INDIANAPOLIS, IN, 46268-1053

**UNITED STATES** 

**Customer Information** 

Number

: 1-800-258-3033

E-mail address : customerinformation@corteva.com

Emergency telephone : INFOTRAC (CONTRACT 84224).

+1 800-992-5994 or +1 317-337-6009

Recommended use of the chemical and restrictions on use

Recommended use : End use fungicide product

**Fungicide** 

Restrictions on use : Do not use product for anything outside of the above specified

uses.

**SECTION 2. HAZARDS IDENTIFICATION** 

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR

1910.1200)

Reproductive toxicity : Category 2

Specific target organ toxicity

Category 2 (Liver, Eyes, Skin)

- repeated exposure (Oral)

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**GHS** label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to organs (Liver, Eyes, Skin) through

prolonged or repeated exposure if swallowed.

Precautionary Statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

Storage:

P405 Store locked up.

Disposal:

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

posal plant.

Other hazards

None known.

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

### Components

Chemical name	CAS-No.	Concentration (% w/w)
oxathiapiprolin (ISO)	1003318-67-9	20.63
Picoxystrobin	117428-22-5	6.82
ipconazole (ISO)	125225-28-7	6.82
Propanediol	57-55-6	>= 3 - < 10
Balance	Not Assigned	> 50

Actual concentration is withheld as a trade secret

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

If inhaled : Move person to fresh air; if effects occur, consult a physician.

In case of skin contact : Wash off with plenty of water.





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In case of eye contact : Flush eyes thoroughly with water for several minutes. Re-

move contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, con-

sult a physician, preferably an ophthalmologist.

If swallowed : No emergency medical treatment necessary.

Most important symptoms and effects, both acute and

delayed

None known.

Protection of first-aiders : First Aid responders should pay attention to self-protection

and use the recommended protective clothing (chemical re-

sistant gloves, splash protection).

If potential for exposure exists refer to Section 8 for specific

personal protective equipment.

Notes to physician : No specific antidote.

Treatment of exposure should be directed at the control of

symptoms and the clinical condition of the patient.

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

Suitable extinguishing media : Water spray

Alcohol-resistant foam

Unsuitable extinguishing

media

None known.

Specific hazards during fire

fighting

Exposure to combustion products may be a hazard to health. Do not allow run-off from fire fighting to enter drains or water

courses.

Hazardous combustion prod-

ucts

During a fire, smoke may contain the original material in addi-

tion to combustion products of varying composition which may

be toxic and/or irritating.

Combustion products may include and are not limited to:

Carbon oxides

Specific extinguishing meth-

ods

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

SO.

Evacuate area.

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment. Use water spray to cool unopened containers.

Further information : 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 : In the event of fire, wear self-contained breathing apparatus.





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for fire-fighters

Use personal protective equipment.

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

Personal precautions, protective equipment and emer-

gency procedures

Ensure adequate ventilation.

Use personal protective equipment.

Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions : If the product contaminates rivers and lakes or drains inform

respective authorities.

Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g., by containment or

oil barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Prevent from entering into soil, ditches, sewers, underwater.

See Section 12, Ecological Information.

Methods and materials for containment and cleaning up

Clean up remaining materials from spill with suitable absorb-

anı.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items

employed in.

For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can

be pumped,

Recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to over-

pressurization of the container.

Keep in suitable, closed containers for disposal. Wipe up with absorbent material (e.g. cloth, fleece).

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

acid binder, universal binder, sawdust).

See Section 13, Disposal Considerations, for additional infor-

mation.

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

Advice on safe handling : Avoid formation of aerosol.

Provide sufficient air exchange and/or exhaust in work rooms.

Do not breathe vapors/dust.

Do not smoke.

Handle in accordance with good industrial hygiene and safety

oractice.

Avoid exposure - obtain special instructions before use. Smoking, eating and drinking should be prohibited in the ap-

plication area.

Avoid inhalation of vapor or mist.

Do not swallow.





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Avoid contact with skin and eyes.

Avoid contact with eyes.

Avoid prolonged or repeated contact with skin.

Take care to prevent spills, waste and minimize release to the

environment.

Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Conditions for safe storage : Store in a closed container.

Containers which are opened must be carefully resealed and

kept upright to prevent leakage. Keep in properly labeled containers.

Store in accordance with the particular national regulations.

Materials to avoid : Strong oxidizing agents

Packaging material : Unsuitable material: None known.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Propanediol	57-55-6	TWA	10 mg/m3	US WEEL

**Engineering measures** 

: Use engineering controls to maintain airborne level below

exposure limit requirements or guidelines.

If there are no applicable exposure limit requirements or

guidelines, use only with adequate ventilation.

Local exhaust ventilation may be necessary for some opera-

tions.

### Personal protective equipment

Respiratory protection : Respiratory protection should be worn when there is a poten-

tial to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or

guidelines, use an approved respirator.

Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne

concentration of the material.

For emergency conditions, use an approved positive-

pressure self-contained breathing apparatus.

Hand protection

Remarks : Use gloves chemically resistant to this material. Examples of

preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account



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all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instruc-

tions/specifications provided by the glove supplier.

Eye protection : Use safety glasses (with side shields).

Skin and body protection : No precautions other than clean body-covering clothing

should be needed.

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

Appearance : liquid

Color : off-white

Odor : mild

Odor Threshold : No data available

pH : 7.52 (71.1 °F / 21.7 °C)

1% solution

Melting point/range : Not applicable

Freezing point No data available

Boiling point/boiling range : No data available

Flash point :  $> 212.2 \,^{\circ}\text{F} / > 100.1 \,^{\circ}\text{C}$ 

Method: Pensky-Martens Closed Cup ASTM D 93, closed cup

Evaporation rate : No data available

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapor pressure : No data available

Relative vapor density : No data available

Density : 1.1119 g/mL (68 °F / 20 °C)

Method: OECD Test Guideline 109

Solubility(ies)





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Water solubility : No data available

Autoignition temperature : No data available

Viscosity

Viscosity, dynamic : 760 cP (68 °F / 20 °C)

Method: (Brookfield Viscosity)

Explosive properties : No

Oxidizing properties : No significant increase (>5C) in temperature.

**SECTION 10. STABILITY AND REACTIVITY** 

Reactivity : Not classified as a reactivity hazard.

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

Stable under normal conditions.

Possibility of hazardous reac-

tions

Stable under recommended storage conditions.

No hazards to be specially mentioned.

None known.

Conditions to avoid : None known.

Incompatible materials : None.

Hazardous decomposition

products

Decomposition products depend upon temperature, air supply

and the presence of other materials.

Decomposition products can include and are not limited to:

Carbon oxides

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

### **Acute toxicity**

**Product:** 

Acute oral toxicity : LD50 (Rat, female): 2,000 - 5,000 mg/kg

Method: OECD Test Guideline 423

Symptoms: No deaths occurred at this concentration.

Assessment: The component/mixture is minimally toxic after

single ingestion.

Acute inhalation toxicity : LC50 (Rat, Male and female): > 5.84 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 436

Acute toxicity estimate: 31.09 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method





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

Method: OECD Test Guideline 402

Symptoms: No deaths occurred at this concentration.

**Components:** 

oxathiapiprolin (ISO):

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

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

icity

Acute inhalation toxicity : LC50 (Rat): > 5.1 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion toxicity

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

Picoxystrobin:

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

Method: OECD Test Guideline 425

Acute inhalation toxicity : LC50 (Rat, male): > 2.12 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Remarks: The particle size (MMAD) of unmilled picoxystrobin technical material is~228  $\mu$ m, with less than 3.3% of material <4  $\mu$ m, indicating unmilledpicoxystrobin is not respirable and that the study results with milledtechnical material are not

relevant to picoxystrobin in the supplychain.

Material milled to a particle size of 3.4 - 4.1 µm MMAD

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

Method: OECD Test Guideline 402

ipconazole (ISO):

Acute oral toxicity : LD50 (Rat, male): 1,338 mg/kg

LD50 (Rat, female): 888 mg/kg

Propanediol:

Acute oral toxicity : LD50 (Rat): > 20,000 mg/kg

Acute inhalation toxicity : LC50 (Rabbit): 317.042 mg/l

Exposure time: 2 h

Test atmosphere: dust/mist

Symptoms: No deaths occurred at this concentration.

Assessment: The substance or mixture has no acute inhala-

tion toxicity



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Remarks: Mist may cause irritation of upper respiratory tract

(nose and throat).

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

Symptoms: No deaths occurred at this concentration.

Assessment: The substance or mixture has no acute dermal

toxicity

Skin corrosion/irritation

Product:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

**Components:** 

oxathiapiprolin (ISO):

Species : Rabbit

Result : No skin irritation

Picoxystrobin:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

Propanediol:

Species : Rabbit

Result : No skin irritation

Serious eye damage/eye irritation

**Product:** 

Species : Rabbit

Result : No eye irritation

Method : OECD Test Guideline 405

**Components:** 

oxathiapiprolin (ISO):

Species : Rabbit

Result : No eye irritation

Picoxystrobin:

Species : Rabbit

Result : Mild eye irritation

Method : OECD Test Guideline 405

Propanediol:

Species : Rabbit



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Result : No eye irritation

## Respiratory or skin sensitization

**Product:** 

Test Type : Local lymph node assay (LLNA)

Species : Guinea pig

Assessment : Does not cause skin sensitization.

Method : OECD Test Guideline 429

**Components:** 

oxathiapiprolin (ISO):

Test Type : Maximization Test

Species : Guinea pig

Result : Does not cause skin sensitization.

Picoxystrobin:

Test Type : Maximization Test

Species : Guinea pig

Method : OECD Test Guideline 406

Result : Does not cause skin sensitization.

**Propanediol:** 

Species : human

Assessment : Does not cause skin sensitization.

Germ cell mutagenicity

**Components:** 

oxathiapiprolin (ISO):

Germ cell mutagenicity -

Assessment

: Animal genetic toxicity studies were negative.

Picoxystrobin:

Germ cell mutagenicity -

: Weight of evidence does not support classification as a germ

cell mutagen.

Propanediol:

Assessment

Germ cell mutagenicity -

Assessment

In vitro genetic toxicity studies were negative., Animal genetic

toxicity studies were negative.

Carcinogenicity

**Components:** 

oxathiapiprolin (ISO):

Carcinogenicity - Assess-

ment

Did not cause cancer in laboratory animals.





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Picoxystrobin:

Carcinogenicity - Assess-

ment

Animal testing did not show any carcinogenic effects.

Propanediol:

Carcinogenicity - Assess-

ment

Did not cause cancer in laboratory animals.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is

identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA**No component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Components:

oxathiapiprolin (ISO):

Reproductive toxicity - As-

sessment

In animal studies, did not interfere with reproduction.

Animal testing did not show any effects on fetal development.

Picoxystrobin:

Reproductive toxicity - As-

sessment

No toxicity to reproduction

Animal testing did not show any effects on fetal development.

ipconazole (ISO):

Reproductive toxicity - As-

sessment

Suspected human reproductive toxicant

Experimental studies in animals have provided evidence of

embryo/fetotoxicity and birth defects.

**Propanediol:** 

Reproductive toxicity - As-

sessment

In animal studies, did not interfere with reproduction., In ani-

mal studies, did not interfere with fertility.

Did not cause birth defects or any other fetal effects in labora-

tory animals.

STOT-single exposure

**Product:** 

Assessment : Evaluation of available data suggests that this material is not

an STOT-SE toxicant.





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**Components:** 

oxathiapiprolin (ISO):

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

organ toxicant, single exposure.

Picoxystrobin:

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

organ toxicant, single exposure.

ipconazole (ISO):

Assessment : Available data are inadequate to determine single exposure

specific target organ toxicity.

**Propanediol:** 

Assessment : Evaluation of available data suggests that this material is not

an STOT-SE toxicant.

STOT-repeated exposure

**Product:** 

Routes of exposure : Oral

Target Organs : Liver, Eyes, Skin

Assessment : May cause damage to organs through prolonged or repeated

exposure.

**Components:** 

oxathiapiprolin (ISO):

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

organ toxicant, repeated exposure.

Picoxystrobin:

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

organ toxicant, repeated exposure.

ipconazole (ISO):

Routes of exposure : Ingestion

Target Organs : Liver, Eyes, Skin

Assessment : May cause damage to organs through prolonged or repeated

exposure.

Repeated dose toxicity

**Components:** 

oxathiapiprolin (ISO):

Remarks : Based on available data, repeated exposures are not ex-

pected to cause significant adverse effects except at very high aerosol concentrations. Repeated excessive aerosol expo-





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sures may cause respiratory tract irritation and even death.

ipconazole (ISO):

Remarks In animals, effects have been reported on the following or-

> gans: Liver eye effects Skin effects

**Propanediol:** 

Remarks In rare cases, repeated excessive exposure to propylene gly-

col may cause central nervous system effects.

### **Aspiration toxicity**

### **Product:**

Based on physical properties, not likely to be an aspiration hazard.

## **Components:**

### oxathiapiprolin (ISO):

Based on available information, aspiration hazard could not be determined.

## Picoxystrobin:

Based on physical properties, not likely to be an aspiration hazard.

### ipconazole (ISO):

Based on physical properties, not likely to be an aspiration hazard.

### **Propanediol:**

Based on physical properties, not likely to be an aspiration hazard.

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

### **Ecotoxicity**

**Product:** 

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)): 0.42 mg/l

Method: OECD Test Guideline 203

Toxicity to microorganisms No data available (Natural microorganism): 0.130 mg/l

Exposure time: 28 d Method: OECD 216/217.

Toxicity to terrestrial organ-

oral LD50 (Colinus virginianus (Bobwhite quail)): > 2,000 isms mg/kg

Method: OECD Test Guideline 223

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Components:

oxathiapiprolin (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.69 mg/l

Exposure time: 96 h Test Type: Static

LC50 (Lepomis macrochirus (Bluegill sunfish)): > 0.74 mg/l

Exposure time: 96 h Test Type: Static

LC50 (Cyprinodon variegatus (sheepshead minnow)): > 0.65

mg/l

Exposure time: 96 h Test Type: static test Method: OPPTS 850.1075

GLP: yes

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.67 mg/l

Exposure time: 48 h Test Type: Static

Toxicity to algae/aquatic

plants

ErC50 (Skeletonema costatum (marine diatom)): 0.351 mg/l

Exposure time: 96 h

ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.142

mg/l

Exposure time: 96 h

M-Factor (Acute aquatic tox-

icity)

: 1

Toxicity to fish (Chronic tox-

icity)

NOEC (Oncorhynchus mykiss (rainbow trout)): 0.46 mg/l

Exposure time: 88 d

NOEC (Cyprinodon variegatus (sheepshead minnow)): 0.34

mg/l

Exposure time: 35 d

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 0.75 mg/l

Exposure time: 21 d Test Type: semi-static test

NOEC (Americamysis bahia (mysid shrimp)): 0.058 mg/l

Exposure time: 32 d

Test Type: flow-through test

M-Factor (Chronic aquatic

toxicity)

: 1

Toxicity to terrestrial organ-

isms

: LD50 (Colinus virginianus (Bobwhite quail)): > 2,250 mg/kg

Method: OPPTS 850.2100

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

Method: OPPTS 850.2100





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dietary LC50 (Colinus virginianus (Bobwhite quail)): > 5,620

mg/kg

Exposure time: 5 d

Method: OECD Test Guideline 205

dietary LC50 (Anas platyrhynchos (Mallard duck)): > 5,620

mg/kg

Exposure time: 5 d

Method: OECD Test Guideline 205

Picoxystrobin:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0.065 mg/l

End point: mortality Exposure time: 96 h Test Type: Static

Method: OECD Test Guideline 203

LC50 (Oncorhynchus mykiss (rainbow trout)): 0.075 mg/l

End point: mortality Exposure time: 96 h Test Type: Static

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.024 mg/l

End point: Immobilization Exposure time: 48 h Test Type: Static

Method: OECD Test Guideline 202

EC50 (eastern oyster (Crassostrea virginica)): 0.0057 mg/l

Exposure time: 96 h

Test Type: flow-through test

Method: US EPA Test Guideline OPPTS 850.1035

Toxicity to algae/aquatic

plants

EC50 (Selenastrum capricornutum (green algae)): 0.0063

mg/l

End point: Growth rate Exposure time: 96 h Test Type: Static

EyC50 (Lemna minor (duckweed)): 0.023 mg/l

Exposure time: 7 d Test Type: Static

NOEC (Lemna minor (duckweed)): 0.049 mg/l

Exposure time: 7 d Test Type: Static

EbC50 (Pseudokirchneriella subcapitata (green algae)): 0.26

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201





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M-Factor (Acute aquatic tox-

icity)

: 100

Toxicity to fish (Chronic tox-

icity)

NOEC (Oncorhynchus mykiss (rainbow trout)): 0.01 mg/l

Exposure time: 28 d Test Type: flow-through

Method: OECD Test Guideline 204

GLP: yes

NOEC (Cyprinodon variegatus (sheepshead minnow)): 0.021

ma/l

Exposure time: 33 d Test Type: flow-through

NOEC (Pimephales promelas (fathead minnow)): 0.040 mg/l

Exposure time: 32 d Test Type: flow-through

Toxicity to daphnia and other aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 0.008 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 202

GLP: yes

NOEC (Americamysis bahia (mysid shrimp)): 0.0036 mg/l

Exposure time: 28 d

Test Type: flow-through test

Method: OECD Test Guideline 202

GLP: yes

M-Factor (Chronic aquatic

toxicity)

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Toxicity to soil dwelling or-

ganisms

LC50 (Eisenia fetida (earthworms)): 6.7 mg/kg

Method: OECD Test Guideline 207

GLP: yes

Toxicity to terrestrial organ-

isms

LD50 (Colinus virginianus (Bobwhite quail)): > 2,250 mg/kg

Method: US EPA Test Guideline OPP 71-1

dietary LC50 (Colinus virginianus (Bobwhite quail)): > 5,200

mg/kg

Exposure time: 5 d

Method: OECD Test Guideline 205

GLP: yes

dietary LC50 (Anas platyrhynchos (Mallard duck)): > 5,200

mg/kg

Exposure time: 5 d

Method: OECD Test Guideline 205

GLP: yes

contact LD50 (Apis mellifera (bees)): > 200 µg/bee

Exposure time: 48 h

Method: OEPP/EPPO Test Guideline 170





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oral LD50 (Apis mellifera (bees)): > 200 µg/bee

Exposure time: 48 h

Method: OEPP/EPPO Test Guideline 170

ipconazole (ISO):

Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)): 1.53 mg/l

Exposure time: 96 h

LC50 (Lepomis macrochirus (Bluegill sunfish)): > 0.73 mg/l

Exposure time: 96 h

NOEC (Pimephales promelas (fathead minnow)): 0.18 mg/l

Exposure time: 32 d

Toxicity to daphnia and other :

aquatic invertebrates

LC50 (Daphnia magna (Water flea)): 1.70 mg/l

Exposure time: 48 h

M-Factor (Acute aquatic tox- : 1

icity)

M-Factor (Chronic aquatic

toxicity)

: 1

**Propanediol:** 

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

> Exposure time: 96 h Test Type: static test

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

LC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l

Exposure time: 48 h Test Type: static test

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)):

19,000 mg/l

End point: Growth rate inhibition

Exposure time: 96 h

Method: OECD Test Guideline 201

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Ceriodaphnia dubia (water flea)): 13,020 mg/l

End point: number of offspring

Exposure time: 7 d

Test Type: semi-static test

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

Exposure time: 18 h





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Persistence and degradability

**Components:** 

oxathiapiprolin (ISO):

Biodegradability : Result: Not readily biodegradable.

Picoxystrobin:

Biodegradability : Result: Not readily biodegradable.

Propanediol:

Biodegradability : aerobic

Result: Readily biodegradable.

Biodegradation: 81 % Exposure time: 28 d

Method: OECD Test Guideline 301F or Equivalent

Remarks: 10-day Window: Pass

Biodegradation: 96 % Exposure time: 64 d

Method: OECD Test Guideline 306 or Equivalent Remarks: 10-day Window: Not applicable

Biochemical Oxygen De-

mand (BOD)

69.000 %

Incubation time: 5 d

70.000 %

Incubation time: 10 d

86.000 %

Incubation time: 20 d

Chemical Oxygen Demand

(COD)

1.53 kg/kg

ThOD : 1.68 kg/kg

Photodegradation : Rate constant: 1.28E-11 cm3/s

Method: Estimated.

Bioaccumulative potential

**Components:** 

oxathiapiprolin (ISO):

Bioaccumulation : Bioconcentration factor (BCF): 62

Picoxystrobin:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)

Bioconcentration factor (BCF): 290

Exposure time: 28 d Temperature: 72 °F / 22 °C Concentration: 0.05 mg/l





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Partition coefficient: n-

octanol/water

log Pow: 3.68 (68 °F / 20 °C)

ipconazole (ISO):

Partition coefficient: n-

octanol/water

Remarks: No relevant data found.

Propanediol:

Bioaccumulation : Bioconcentration factor (BCF): 0.09

Method: Estimated.

Partition coefficient: n-

octanol/water

log Pow: -1.07

Method: Measured

Remarks: Bioconcentration potential is low (BCF < 100 or Log

Pow < 3).

Balance:

Partition coefficient: n-

octanol/water

Remarks: No relevant data found.

Mobility in soil

**Components:** 

Picoxystrobin:

Distribution among environ-

mental compartments

Koc: 898

Remarks: Under actual use conditions the product has a low

potential of mobility in soil.

ipconazole (ISO):

Distribution among environ-

mental compartments

Remarks: No relevant data found.

**Propanediol:** 

Distribution among environ-

mental compartments

Koc: < 1

Method: Estimated.

Remarks: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be

an important fate process.

Potential for mobility in soil is very high (Koc between 0 and

50).

Balance:

Distribution among environ-

mental compartments

Remarks: No relevant data found.





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### Other adverse effects

## **Components:**

## Picoxystrobin:

Results of PBT and vPvB

assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

### ipconazole (ISO):

Results of PBT and vPvB

assessment

: This substance has not been assessed for persistence, bioac-

cumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list

of substances that deplete the ozone layer.

## Propanediol:

Results of PBT and vPvB

assessment

: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list

of substances that deplete the ozone layer.

### Balance:

Results of PBT and vPvB

assessment

: This substance has not been assessed for persistence, bioac-

cumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list

of substances that deplete the ozone layer.

## **SECTION 13. DISPOSAL CONSIDERATIONS**

## **Disposal methods**

Waste from residues

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

If the material as supplied becomes a waste, follow all appli-

cable regional, national and local laws.





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

## International Regulations

**UNRTDG** 

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Picoxystrobin, Oxathiapiprolin)

Class : 9
Packing group : III
Labels : 9

**IATA-DGR** 

UN/ID No. : UN 3082

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

(Picoxystrobin, Oxathiapiprolin)

Class : 9 Packing group : III

Labels : Miscellaneous

Packing instruction (cargo : 964

aircraft)

Packing instruction (passen- : 964

ger aircraft)

IMDG-Code

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Picoxystrobin, Oxathiapiprolin)

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

Marine pollutant : yes

Remarks : Stowage category A

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

Not applicable for product as supplied.

### **Domestic regulation**

#### **49 CFR**

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**

SARA 311/312 Hazards : Reproductive toxicity

Specific target organ toxicity (single or repeated exposure)





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SARA 313 : This material does not contain any chemical components with

known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### **US State Regulations**

## Pennsylvania Right To Know

Propanediol 57-55-6

### California Prop. 65

WARNING: This product can expose you to chemicals including 1,4-dioxane, propylene oxide, ethylene oxide, acetaldehyde, formaldehyde, which is/are known to the State of California to cause cancer, and

ethylene oxide, ethanediol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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

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

#### **TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

### Federal Insecticide, Fungicide and Rodenticide Act

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

**CAUTION** 

Harmful if swallowed

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

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

### Full text of other abbreviations

US WEEL : USA. Workplace Environmental Exposure Levels (WEEL)

US WEEL / TWA : 8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic



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Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ -Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; 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

Revision Date : 12/13/2022

Product code: GF-4426

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN