SAFETY DATA SHEET

Fluindapyr 24% w/v+Azoxystrobin 24% w/v SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	2024/08/08	50002543	Date of first issue: 2024/08/08

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Fluindapyr 24% w/v+Azoxystrobin 24% w/v SC

Recommended use of the chemical and restrictions on use

Recommended use : Fungicide

Restrictions on use : Use as recommended by the label.

Manufacturer or supplier's details

Company : FMC Corporation

Address : 2929 Walnut Street
Philadelphia PA 19104
USA

Telephone : (215) 299-6000

E-mail address : SDS-Info@fmc.com

Emergency telephone : For leak, fire, spill or accident emergencies, call:
001-803-017-9114 (CHEMTREC)
1 703 / 741-5970 (CHEMTREC - International)

Medical emergency:
0800 140 1447

2. HAZARDS IDENTIFICATION

GHS Classification

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

GHS label elements

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 to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Fluindapyr	1383809-87-7	>= 10 -< 25
azoxystrobin (ISO)	131860-33-8	>= 10 -< 25
Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, phosphate, potassium salt	68186-36-7	>= 1 -< 2,5
Residues, petroleum, catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts	68425-94-5	>= 0,25 -< 2,5
1,2-benzisothiazol-3(2H)-one	2634-33-5	>= 0,0025 -< 0,025

4. 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.

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

In case of skin contact : Wash off with soap and water.
Get medical attention if irritation develops and persists.

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 : Rinse mouth with water.
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 delayed	:	None known.
Protection of first-aiders	:	Avoid inhalation, ingestion and contact with skin and eyes.
Notes to physician	:	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Dry chemical, CO2, water spray or regular foam.
Unsuitable extinguishing media	:	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 products	:	Carbon oxides Sulfur oxides Nitrogen oxides (NOx) Fluorine compounds
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. Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	Firefighters should wear protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Evacuate personnel to safe areas. Use personal protective equipment. If it can be safely done, stop the leak. Do not touch or walk through the spilled material.
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.

Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Never return spills in original containers for re-use.

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 application 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 storage stability	:	No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection	:	In the case of dust or aerosol formation use respirator with an approved filter.
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.
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	suspension
Form	:	suspension
Color	:	beige
Odor	:	characteristic
Odor Threshold	:	No data available
pH	:	6,51 (ca. 20 °C) Concentration: 10 g/l
Melting point/ range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	Decomposition
Self-ignition	:	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 density	:	1,14 - 1,15 (20 °C)
Density	:	1,1347 g/cm3 (ca. 20 °C)
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	669,3 mPa.s (20 °C)
		348 mPa.s (40 °C)
Viscosity, kinematic	:	not determined
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing
Surface tension	:	42,65 mN/m, ca. 25 °C

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 reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	Protect from frost, heat and sunlight.
Incompatible materials	:	Avoid strong acids, bases, and oxidizers.
Hazardous decomposition products	:	Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	LD50 (Rat, female): > 2.000 mg/kg Method: OECD Test Guideline 425 Assessment: The substance or mixture has no acute oral tox-

icity

Acute inhalation toxicity : LC50 (Rat, male and female): > 5,15 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Components:

Fluindapyr:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 425
GLP: yes

LD50 (Rat, female): > 300 - 2.000 mg/kg
Method: OECD Test Guideline 423
Symptoms: ataxia, Breathing difficulties, Fatality
GLP: yes
Assessment: The component/mixture is minimally toxic after single ingestion.

Acute inhalation toxicity : LC50 (Rat): > 5,19 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Symptoms: ataxia, Breathing difficulties
GLP: yes
Remarks: no mortality

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The component/mixture is minimally toxic after single contact with skin.

azoxystrobin (ISO):

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, female): 0,69 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

LC50 (Rat, male): 0,96 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg

Method: OECD Test Guideline 402
GLP: yes
Assessment: The component/mixture is minimally toxic after single contact with skin.
Remarks: no mortality

Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, phosphate, potassium salt:

Acute oral toxicity : Assessment: Toxic effects cannot be excluded

Residues, petroleum, catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

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

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

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Not classified based on available information.

Product:

Species : Rabbit
Method : OECD Test Guideline 404
Result : slight irritation

Components:

Fluindapyr:

Species : Rabbit
Assessment : Not classified as irritant
Method : OECD Test Guideline 404
GLP : yes

Assessment : Not classified as irritant
Method : OECD Test Guideline 439
GLP : yes

azoxystrobin (ISO):

Species : Rabbit
Assessment : Not classified as irritant
Method : OECD Test Guideline 404
Remarks : Minimal effects that do not meet the threshold for classification.

Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, phosphate, potassium salt:

Result : Skin irritation

Residues, petroleum, catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Remarks : No data available

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

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

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Species : Rabbit
Result : slight irritation
Method : OECD Test Guideline 405

Components:

Fluindapyr:

Species : Rat
Result : No eye irritation
Method : OECD Test Guideline 405
GLP : yes

Result : not corrosive
Method : Bovine cornea (BCOP)
GLP : yes

azoxystrobin (ISO):

Species : Rabbit
Assessment : Not classified as irritant
Method : OECD Test Guideline 405
Remarks : Minimal effects that do not meet the threshold for classification.

Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, phosphate, potassium salt:

Result : Irreversible effects on the eye

Residues, petroleum, catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Result : Eye irritation

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

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

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

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Test Type	:	Local lymph node assay (LLNA)
Species	:	mice
Method	:	OECD Test Guideline 429
Result	:	Did not cause sensitization on laboratory animals.

Components:

Fluindapyr:

Test Type	:	Local lymph node assay (LLNA)
Routes of exposure	:	Skin contact
Method	:	OECD Test Guideline 429
Result	:	May cause sensitization by skin contact.
GLP	:	yes

azoxystrobin (ISO):

Species	:	Guinea pig
Assessment	:	Not a skin sensitizer.
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitization.

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

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

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

Germ cell mutagenicity

Not classified based on available information.

Product:

Genotoxicity in vitro : Test Type: reverse mutation assay
Test system: WP2 uvrA
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: reverse mutation assay
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Rat (male and female)
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

Components:

Fluindapyr:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Test system: lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Test Type: gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 490
Result: negative

Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Mammalian bone marrow sister chromatid exchange
Species: Mouse
Result: negative

Test Type: Micronucleus test
Species: Mouse

Method: OECD Test Guideline 474
Result: negative

azoxystrobin (ISO):

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

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

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

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

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

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

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

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

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

Carcinogenicity

Not classified based on available information.

Components:

Fluindapyr:

Species	:	Mouse
Application Route	:	Oral
Exposure time	:	18 month(s)
Method	:	OECD Test Guideline 451
Result	:	Not a carcinogenic hazard

Species	:	Rat
Application Route	:	Oral
Exposure time	:	2 Years
Method	:	OECD Test Guideline 453
Result	:	Not a carcinogenic hazard
GLP	:	yes

azoxystrobin (ISO):

Method	:	OECD Test Guideline 451
Result	:	negative
Remarks	:	No significant adverse effects were reported

Method	:	OECD Test Guideline 453
Result	:	negative
Remarks	:	No significant adverse effects were reported

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

Reproductive toxicity

Not classified based on available information.

Components:

Fluindapyr:

Effects on fertility	:	Test Type: Two-generation study General Toxicity Parent: NOAEL: ca. 30 Method: OECD Test Guideline 416 GLP: yes Remarks: Changes seen in the female reproductive tract resulted in no effects to reproduction or fertility.

azoxystrobin (ISO):

Reproductive toxicity - Assessment	:	Weight of evidence does not support classification for reproductive toxicity Did not show teratogenic effects in animal experiments.

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

Effects on fertility	:	Species: Rat, male Application Route: Ingestion General Toxicity Parent: NOAEL: 18,5 mg/kg body weight General Toxicity F1: NOAEL: 48 mg/kg body weight

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

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

STOT-single exposure

Not classified based on available information.

Components:

azoxystrobin (ISO):

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

STOT-repeated exposure

Not classified based on available information.

Components:

azoxystrobin (ISO):

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

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

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

Repeated dose toxicity

Components:

Fluindapyr:

Species	:	Rat
NOAEL	:	1.000 mg/kg
Application Route	:	Dermal
Exposure time	:	21 d
Number of exposures	:	5 d/w for 6 hr
Dose	:	0,100,300,1000 mg/kg bw/d
Method	:	OECD Test Guideline 410
GLP	:	yes
Symptoms	:	Skin irritation

azoxystrobin (ISO):

Species	:	Rat
NOAEL	:	21 mg/kg bw/day
Application Route	:	Oral
Exposure time	:	90 d
Remarks	:	No significant adverse effects were reported

Species	:	Dog
NOAEL	:	50 mg/kg bw/day
Application Route	:	Oral
Exposure time	:	90 d
Remarks	:	No significant adverse effects were reported

Species	:	Dog
NOAEL	:	25 mg/kg bw/day
Application Route	:	Oral
Exposure time	:	1 yr
Remarks	:	No significant adverse effects were reported

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

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

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

Aspiration toxicity

Not classified based on available information.

Components:

azoxystrobin (ISO):

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

Further information

Product:

Remarks	:	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 2,7 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 42,25 µg/l Exposure time: 48 h Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants	:	EyC50 (Pseudokirchneriella subcapitata (algae)): 0,23 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 ErC50 (Pseudokirchneriella subcapitata (algae)): 2,03 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Pseudokirchneriella subcapitata (algae)): 0,01 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to soil dwelling organisms	:	LD50 (Eisenia fetida (earthworms)): > 1.000 mg/kg Method: OECD Test Guideline 207
Toxicity to terrestrial organisms	:	LD50 (Apis mellifera (bees)): 520 µg/bee Exposure time: 48 h End point: Acute contact toxicity Method: OECD Test Guideline 214 LD50 (Apis mellifera (bees)): 466 µg/bee Exposure time: 48 h End point: Acute oral toxicity Method: OECD Test Guideline 213 LD50 (Coturnix japonica (Japanese quail)): > 2.000 mg/kg End point: Acute oral toxicity Method: US EPA Test Guideline OPPTS 850.2100

Components:

Fluindapyr:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0,121 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 GLP: yes LC50 (Oryzias latipes (Japanese medaka)): > 1,8 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 GLP: yes LC50 (Danio rerio (zebra fish)): 0,424 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 GLP: yes LC50 (Cyprinodon variegatus (sheepshead minnow)): 0,43 mg/l Exposure time: 96 h

Test Type: static test
Method: OPPTS 850.1075
GLP: yes

LC50 (Cyprinus carpio (Carp)): 0,11 mg/l
Exposure time: 96 h
Test Type: Static renewal test
Method: OECD Test Guideline 203
GLP: yes

LC50 (Lepomis macrochirus (Bluegill sunfish)): 0,286 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

LC50 (Pimephales promelas (fathead minnow)): 0,19 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,141 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

LC50 (Americamysis bahia (mysid shrimp)): 0,33 mg/l
Exposure time: 96 h
Test Type: static test
Method: OCSPP 850.1035
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 4,83 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

NOEC (Lemna gibba (duckweed)): 2 mg/l
Exposure time: 7 d
Method: OECD Test Guideline 221
GLP: yes

EC50 (Skeletonema costatum (Diatom)): > 2 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0,031 mg/l
Exposure time: 32 d
Test Type: Early-life Stage

Method: OECD Test Guideline 210
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Americamysis bahia (mysid shrimp)): 0,062 mg/l
Exposure time: 28 d
Test Type: flow-through test
Method: OPPTS 850.1350
GLP: yes

NOEC (Daphnia magna (Water flea)): 0,12 mg/l
Exposure time: 21 d
Test substance: yes
Method: OECD Test Guideline 211
GLP: yes
Remarks: Information refers to the main ingredient.

M-Factor (Chronic aquatic toxicity) : 1

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 1.000 mg/kg

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.

Toxicity to terrestrial organisms : LD50 (Colinus virginianus (Bobwhite quail)): > 2.250 mg/kg

LD50 (Apis mellifera (bees)): > 300 µg/bee
Exposure time: 48 h
Method: OECD Test Guideline 214
GLP: yes
Remarks: Contact

LD50 (Apis mellifera (bees)): > 32,8 µg/bee
Exposure time: 48 h
Method: OECD Test Guideline 213
GLP: yes
Remarks: Oral

azoxystrobin (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,47 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,259 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

EC50 (Americamysis bahia (mysid shrimp)): 0,055 mg/l
Exposure time: 96 h

Toxicity to algae/aquatic plants : EC50 (Lemna gibba (duckweed)): 3,2 mg/l
Exposure time: 14 d

EC50 (Navicula pelliculosa (Diatom)): 0,146 mg/l
Exposure time: 72 h

NOEC (Navicula pelliculosa (Diatom)): 0,02 mg/l
Exposure time: 72 h

NOEC (Lemna gibba (duckweed)): 0,8 mg/l
Exposure time: 14 d

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0,16 mg/l
Exposure time: 28 d
Method: OECD Test Guideline 204

NOEC (Pimephales promelas (fathead minnow)): 0,147 mg/l
Exposure time: 28 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0,044 mg/l
Exposure time: 21 d

NOEC (Americamysis bahia (mysid shrimp)): 0,00954 mg/l
Exposure time: 28 d

M-Factor (Chronic aquatic toxicity) : 10

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): 283 mg/kg
Exposure time: 14 d

Toxicity to terrestrial organisms : LD50 (Anas platyrhynchos (Mallard duck)): > 1.000 mg/kg

LD50 (Colinus virginianus (Bobwhite quail)): > 1.000 mg/kg

LD50 (Colinus virginianus (Bobwhite quail)): > 5.200 ppm
Remarks: Dietary

LD50 (Apis mellifera (bees)): > 200 µg/bee
Exposure time: 48 h
End point: Acute contact toxicity

LD50 (Apis mellifera (bees)): > 25 µg/bee
Exposure time: 48 h
End point: Acute oral toxicity

Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, phosphate, potassium salt:

Ecotoxicology Assessment

Acute aquatic toxicity : Harmful to aquatic life.

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Residues, petroleum, catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Toxicity to fish : LC50 (Zebra fish): > 10 - 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

EC10 (Pseudokirchneriella subcapitata (green algae)): > 100 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 (Chronic toxicity) : EC10 (Daphnia magna (Water flea)): > 10 - 100 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

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

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 16,7 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Oncorhynchus mykiss (rainbow trout)): 2,15 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,9 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 0,070 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Pseudokirchneriella subcapitata (green algae)): 0,04 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to microorganisms	:	EC50 (activated sludge): 24 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209 EC50 (activated sludge): 12,8 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209

Persistence and degradability

Components:

Fluindapyr:

Biodegradability	:	Result: Not readily biodegradable.

azoxystrobin (ISO):

Biodegradability	:	Result: Not readily biodegradable.
Stability in water	:	Degradation half life: 52,11 d (25 °C) pH: 9

Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, phosphate, potassium salt:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 80 % Exposure time: 28 d Method: OECD Test Guideline 301D Remarks: Based on data from similar materials

Residues, petroleum, catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Biodegradability	:	Result: Not readily biodegradable. Remarks: Based on data from similar materials

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

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

Bioaccumulative potential

Components:

Fluindapyr:

Bioaccumulation	:	Species: Lepomis macrochirus (Bluegill sunfish) Bioconcentration factor (BCF): < 500 Method: OECD Test Guideline 305 GLP: yes Remarks: Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water	:	log Pow: > 3

azoxystrobin (ISO):

Bioaccumulation	:	Remarks: Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water	:	log Pow: 2,5 (20 °C)

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

Bioaccumulation	:	Species: Lepomis macrochirus (Bluegill sunfish) Bioconcentration factor (BCF): 6,62 Exposure time: 56 d Method: OECD Test Guideline 305 Remarks: Substance is not persistent, bioaccumulative, and toxic (PBT).
Partition coefficient: n-octanol/water	:	log Pow: 0,7 (20 °C) pH: 7 log Pow: 0,99 (20 °C) pH: 5

Mobility in soil

Components:

Fluindapyr:

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

azoxystrobin (ISO):

Distribution among environmental compartments	:	Remarks: Under normal conditions the substance has low to moderate mobility in soil.

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

Distribution among environmental compartments	:	Koc: 9,33 ml/g, log Koc: 0,97 Method: OECD Test Guideline 121 Remarks: Highly mobile in soils

Other adverse effects

Product:

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.

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 chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluindapyr, Azoxystrobin)
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. (Fluindapyr, Azoxystrobin)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
Environmentally hazardous	:	yes

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

		N.O.S. (Fluindapyr, Azoxystrobin)
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.

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.

15. REGULATORY INFORMATION

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

Minister of Industry Regulation No. 23/M-IND/PER/4/2013 concerning the Revision of Minister of Industry Regulation No. 87/M-IND/PER/9/2009 concerning Globally Harmonized System of Classification and Labelling of Chemicals.

Regulation of the Minister of Health No. 472 of 1996 on the Safeguarding of Substances Hazardous to Health

Hazardous substances that must be registered : Not applicable

Government Regulation No. 74 of 2001 on the Management of Hazardous and Toxic Substances

Hazardous substances approved for use : Not applicable

Prohibited substances : Not applicable

Restricted substances : Not applicable

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

TCSI	:	Not in compliance with the inventory
TSCA	:	Product contains substance(s) not listed on TSCA inventory.
AIIC	:	Not in compliance with the inventory
DSL	:	This product contains the following components that are not on the Canadian DSL nor NDSL. 3-(Difluoromethyl)-N-(7-fluoro-1,1,3-trimethyl-2,3-dihydro-1H-inden-4-yl)-1-methyl-1H-pyrazole-4-carboxamide azoxystrobin (ISO) Smectite-group minerals

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

16. OTHER INFORMATION

Revision Date	:	2024/08/08
Date format	:	yyyy/mm/dd

Full text of other abbreviations

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 Recom-

mendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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