

SAFETY DATA SHEET

STEWARD® EC



Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	23.01.2024	50000122	Date of first issue: 01.03.2018

SECTION 1: Identification of the hazardous chemical and of the supplier

Product identifier

Product name : STEWARD® EC

Recommended use of the chemical and restrictions on use

Recommended use : Insecticide

Restrictions on use : Use as recommended by the label.

Manufacturer or supplier's details

Principal Supplier : FMC Corporation
2929 WALNUT ST
PHILADELPHIA PA 19104
USA
(215) 299-6000
SDS-Info@fmc.com

Local registrant : FMC Chemicals (Malaysia) Sdn Bhd
Level 16, 1 Sentral, Jalan Stesen Sentral 5, Kuala Lumpur Sen-
tral
50470, Kuala Lumpur, Malaysia
Phone No: +60320929423
Fax No: +603-2092 9201

Emergency telephone : For leak, fire, spill or accident emergencies, call:
CHEMTREC (Asia-Pacific Regional Number): +65 3163 8374

Medical emergency:
All other countries: +1 651 / 632-6793 (Collect)
1 703 / 741-5970 (CHEMTREC - International)

SECTION 2: Hazards identification

Classification of the hazardous chemical

Acute toxicity (Oral) : Category 4

Specific target organ toxicity - : Category 2 (Central nervous system)
single exposure

Specific target organ toxicity - : Category 1 (Blood, Nervous system)
repeated exposure

Hazardous to the aquatic : Category 2
environment - chronic hazard

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Label elements

Hazard pictograms



Signal Word

: Danger

Hazard Statements

: H302 Harmful if swallowed.
H371 May cause damage to organs (Central nervous system).
H372 Causes damage to organs (Blood, Nervous system) through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention:

P260 Do not breathe mist or vapors.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.
P314 Get medical advice/ attention if you feel unwell.
P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

SECTION 3: Composition and information of the ingredients of the hazardous chemical

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
indoxacarb (ISO)	173584-44-6	15.84
calcium dodecylbenzenesulphonate	26264-06-2	>= 5 -< 10
Fatty acids, soya, Me esters	68919-53-9	>= 3 -< 5
2-ethylhexan-1-ol	104-76-7	>= 1 -< 3
Fatty acids, C6-10, Me esters	68937-83-7	>= 1 -< 3

SECTION 4: First aid measures

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- | | |
|---|---|
| General advice | : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended. |
| If inhaled | : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician. |
| In case of skin contact | : Take off all contaminated clothing immediately.
Wash off with soap and water.
If symptoms persist, call a physician.
Wash contaminated clothing before re-use. |
| In case of eye contact | : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist. |
| If swallowed | : 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.
Take victim immediately to hospital. |
| Most important symptoms and effects, both acute and delayed | : Exposure may result in loss of coordination and tremors.
Harmful if swallowed.
May cause damage to organs.
Causes damage to organs through prolonged or repeated exposure. |
| Protection of first-aiders | : Avoid inhalation, ingestion and contact with skin and eyes. |
| Notes to physician | : Treat symptomatically. |

SECTION 5: Firefighting measures

Extinguishing media

- | | |
|------------------------------|--|
| Suitable extinguishing media | : Dry chemical
Carbon dioxide (CO ₂)
Water spray
Regular foam |
|------------------------------|--|

- | | |
|--------------------------------|-------------------------|
| Unsuitable extinguishing media | : High volume water jet |
|--------------------------------|-------------------------|

Physicochemical hazards arising from the chemical

- | | |
|---------------------------------------|---|
| Specific hazards during fire fighting | : Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion products | : Fire may produce irritating, corrosive and/or toxic gases.
Chlorinated compounds |

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Fluorinated compounds
Nitrogen oxides (NO_x)
Carbon oxides
Hydrogen cyanide
Hydrogen chloride
Hydrogen fluoride
Sulfur oxides

Special protective equipment and precautions for fire-fighters

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

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

Hazchem Code : •3Z

SECTION 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.
Keep people away from and upwind of spill/leak.
Remove all sources of ignition.
Immediately evacuate personnel to safe areas.
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.
For disposal considerations see section 13.

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

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SECTION 7: Handling and storage**Handling****Precautions for safe handling**

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

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.

Storage**Conditions for safe storage, including any incompatibilities**

Conditions for safe storage : Keep tightly closed in a dry, cool and well-ventilated place.
Observe label precautions.
Keep container closed when not in use.
Keep locked up or in an area accessible only to qualified or authorized persons.
Keep in properly labeled containers.
No smoking.
Electrical installations / working materials must comply with the technological safety standards.

Recommended storage temperature : > 0 °C

Further information on storage stability : Do not freeze.

No decomposition if stored and applied as directed.

SECTION 8: Exposure controls and personal protection**Control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-ethylhexan-1-ol	104-76-7	TWA	5 ppm	ACGIH

Individual protection measures, such as personal protective equipment

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

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Wear face-shield and protective suit for abnormal processing problems.

Skin protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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.

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

Hygiene measures : 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.

SECTION 9: Physical and chemical properties

Physical state : liquid

Color : amber

Odor : faint burn smell

Odor Threshold : No data available

pH : 6.6 (20 - 25 °C)
Concentration: 10 g/l 1 %

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : 69 °C

Evaporation rate : No data available

Flammability (liquids) : Not highly flammable

Self-ignition : 255 °C

Upper explosion limit / Upper : No data available

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flammability limit

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Density : No data available

Solubility(ies)
Water solubility : No data available

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

Autoignition temperature : No data available

Viscosity
Viscosity, dynamic : 5.6 mPa.s (25 °C)

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : Non-oxidizing

Molecular weight : 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 reactions : Vapors may form explosive mixture with air.
No decomposition if stored and applied as directed.

Conditions to avoid : Avoid extreme temperatures.
Avoid formation of aerosol.
Heat, flames and sparks.

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

Hazardous decomposition products : Stable under recommended storage conditions.

SECTION 11: Toxicological information

Information on likely routes of exposure : Skin contact

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Acute toxicity

Harmful if swallowed.

Product:

- Acute oral toxicity : LD50 (Rat, female): 977 mg/kg
Method: OECD Test Guideline 425
Assessment: The component/mixture is moderately toxic after single ingestion.
- Acute inhalation toxicity : LC50 (Rat): > 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 inhalation toxicity
- Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

Components:**indoxacarb (ISO):**

- Acute oral toxicity : LD50 (Rat, male and female): 281 - 291 mg/kg
Method: OECD Test Guideline 420
Symptoms: ataxia, Tremors, Diarrhea, clonic convulsions
GLP: yes
- LD50 (Rat, female): 179 mg/kg
Method: OECD Test Guideline 401
Target Organs: Nervous system
Symptoms: hypoactivity, Tremors, ataxia, Fatality
GLP: yes
- Acute inhalation toxicity : LC50 (Rat, female): 4.2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Symptoms: nasal discharge, lethargy
GLP: yes
- Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
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

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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

Fatty acids, soya, Me esters:

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

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

2-ethylhexan-1-ol:

Acute oral toxicity : LD50 (Rat, male): 2,047 mg/kg

Acute inhalation toxicity : LC50 (Rat): 4.3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, male and female): > 3,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Fatty acids, C6-10, Me esters:

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

Skin corrosion/irritation

Not classified based on available information.

Product:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Mild skin irritation

Remarks : May cause skin irritation and/or dermatitis.

Components:

indoxacarb (ISO):

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

calcium dodecylbenzenesulphonate:

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

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Fatty acids, soya, Me esters:

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

2-ethylhexan-1-ol:

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

Fatty acids, C6-10, Me esters:

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

Serious eye damage/eye irritation

Not classified based on available information.

Product:

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

Remarks	: Vapors may cause irritation to the eyes, respiratory system and the skin.
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Components:**indoxacarb (ISO):**

Species	: Rabbit
Result	: slight irritation
Assessment	: Not classified as irritant
Method	: OECD Test Guideline 405
GLP	: yes
Remarks	: Product dust may be irritating to eyes, skin and respiratory system.

calcium dodecylbenzenesulphonate:

Species	: Rabbit
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

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Fatty acids, soya, Me esters:

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

2-ethylhexan-1-ol:

Species	:	Rabbit
Result	:	Irritation to eyes, reversing within 21 days
Method	:	OECD Test Guideline 405

Fatty acids, C6-10, Me esters:

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

Respiratory or skin sensitization**Skin sensitization**

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Species	:	Guinea pig
Result	:	Did not cause sensitization on laboratory animals.

Components:**indoxacarb (ISO):**

Species	:	Guinea pig
Result	:	May cause sensitization by skin contact.
Test Type	:	Maximization Test
Species	:	Guinea pig
Assessment	:	May cause sensitization by skin contact.
Method	:	US EPA Test Guideline OPPTS 870.2600
Result	:	May cause sensitization by skin contact.
GLP	:	yes

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

Fatty acids, soya, Me esters:

Result	:	Does not cause skin sensitization.
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Fatty acids, C6-10, Me esters:

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Routes of exposure : Skin contact
Species : Guinea pig
Result : Not a skin sensitizer.

Germ cell mutagenicity

Not classified based on available information.

Product:

Germ cell mutagenicity - : Test on bacterial cultures did not show mutagenic effects.,
Assessment : Animal testing did not show any mutagenic effects.

Components:**indoxacarb (ISO):**

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

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

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

Germ cell mutagenicity - : Tests on bacterial or mammalian cell cultures did not show
Assessment : mutagenic effects.

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

2-ethylhexan-1-ol:

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

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Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

Fatty acids, C6-10, Me esters:

Genotoxicity in vitro : Test Type: Ames test
Result: negative

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects

Carcinogenicity

Not classified based on available information.

Product:

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

Components:

indoxacarb (ISO):

Species : Rat, female
Application Route : Oral
Exposure time : 24 m
: 2.13 mg/kg bw/day
Result : negative

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

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

Fatty acids, soya, Me esters:

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

2-ethylhexan-1-ol:

Species : Rat
Application Route : Oral
Exposure time : 24 month(s)

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Result : negative

Reproductive toxicity

Not classified based on available information.

Product:

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

Components:**indoxacarb (ISO):**

Effects on fertility : Test Type: Two-generation study
Species: Rat
Result: Animal testing did not show any effects on fertility.

Effects on fetal development : Species: Rabbit
General Toxicity Maternal: NOEL: 500 mg/kg bw/day
Developmental Toxicity: NOEL: 500 mg/kg bw/day
Method: EPA OPP 83-3

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.
Animal testing did not show any effects on fetal development.

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

2-ethylhexan-1-ol:

Effects on fetal development : Test Type: Embryo-fetal development
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 414
Result: negative

STOT-single exposure

May cause damage to organs (Central nervous system).

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Components:**indoxacarb (ISO):**

Target Organs	:	Central nervous system
Assessment	:	The substance or mixture is classified as specific target organ toxicant, single exposure, category 2.

2-ethylhexan-1-ol:

Assessment	:	May cause respiratory irritation.
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STOT-repeated exposure

Causes damage to organs (Blood, Nervous system) through prolonged or repeated exposure.

Components:**indoxacarb (ISO):**

Target Organs	:	Blood, Nervous system
Assessment	:	Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity**Components:****indoxacarb (ISO):**

Species	:	Rat, female
NOAEL	:	1.7 mg/kg
LOAEL	:	4.1 mg/kg
Application Route	:	Oral
Exposure time	:	90 d
Method	:	OECD Test Guideline 408
GLP	:	yes
Target Organs	:	Blood

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
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

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Method : OECD Test Guideline 422
Remarks : Based on data from similar materials

2-ethylhexan-1-ol:

Species : Rat
: 250 mg/kg
Application Route : Oral
Exposure time : 13 weeks
Method : OECD Test Guideline 408

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

Ecotoxicity

Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 7.0 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1.67 mg/l
aquatic invertebrates
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 16
plants
mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

Components:

indoxacarb (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.65 mg/l
Exposure time: 96 h

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		Test Type: flow-through test Method: OECD Test Guideline 203 GLP: yes
		LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.17 mg/l Exposure time: 96 h Test Type: flow-through test Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.6 mg/l Exposure time: 48 h
		EC50 (Daphnia magna (Water flea)): > 0.17 mg/l Exposure time: 48 h Test Type: flow-through test Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	NOEC (Pseudokirchneriella subcapitata (algae)): 0.0793 mg/l Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201 GLP: yes
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): 0.15 mg/l Exposure time: 90 d Test Type: Early Life-Stage Method: OECD Test Guideline 210 GLP: yes
		NOEC (Pimephales promelas (fathead minnow)): 0.0675 mg/l Exposure time: 28 d Test Type: Early Life-Stage Method: OECD Test Guideline 210 GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.09 mg/l Exposure time: 21 d Method: OECD Test Guideline 202 GLP: yes
		NOEC (Daphnia magna (Water flea)): 0.0351 mg/l Exposure time: 21 d Test Type: Static renewal test Method: OECD Test Guideline 211 GLP: yes
M-Factor (Chronic aquatic toxicity)	:	1
Toxicity to soil dwelling or-	:	LC50 (Eisenia fetida (earthworms)): > 1,250 mg/kg

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Exposure time: 14 d
Method: OECD Test Guideline 207
GLP: yes

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

Method: OECD Test Guideline 217
Remarks: No significant adverse effect on Carbon mineralization.

Toxicity to terrestrial organisms

: LD50 (*Apis mellifera* (bees)): 0.232 µg/bee
Exposure time: 48 d
End point: Acute oral toxicity
Method: OECD Test Guideline 213

LD50 (*Apis mellifera* (bees)): 0.068 µg/bee
Exposure time: 48 d
End point: Acute contact toxicity
Method: OECD Test Guideline 214

LD50 (*Colinus virginianus* (Bobwhite quail)): 98 mg/kg
Method: US EPA Test Guideline OPP 71-1
GLP: yes

NOEC (*Anas platyrhynchos* (Mallard duck)): 720 ppm
Exposure time: 147 d
End point: Reproduction Test
Method: OECD Test Guideline 206
GLP: yes

NOEC (*Colinus virginianus* (Bobwhite quail)): 144 ppm
Exposure time: 147 d
End point: Reproduction Test

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

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

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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 (Chronic 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 organisms : LC50 (*Eisenia fetida* (earthworms)): 1,000 mg/kg
Exposure time: 14 d
Method: OECD Test Guideline 207

Toxicity to terrestrial organisms : LD50 (*Colinus virginianus* (Bobwhite quail)): 1,356 mg/kg
Exposure time: 14 d
Method: OECD Test Guideline 223

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

2-ethylhexan-1-ol:

Toxicity to fish : LC50 (*Leuciscus idus* (Golden orfe)): 17.1 - 28.2 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 39 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC10 (*Desmodesmus subspicatus* (green algae)): 3.2 mg/l
Exposure time: 72 h

EC50 (*Desmodesmus subspicatus* (green algae)): 11.5 mg/l

Exposure time: 72 h

Toxicity to microorganisms : EC50 (*Anabaena flos-aquae* (cyanobacterium)): 16.6 mg/l

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Exposure time: 72 h

Fatty acids, C6-10, Me esters:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 95 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other : EC50 (Gammarus fasciatus (freshwater shrimp)): 14.7 mg/l
aquatic invertebrates
Remarks: Based on data from similar materials

Persistence and degradability

Components:

indoxacarb (ISO):

Biodegradability : Result: Not readily biodegradable.

calcium dodecylbenzenesulphonate:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301E

Fatty acids, soya, Me esters:

Biodegradability : Result: Readily biodegradable.

2-ethylhexan-1-ol:

Biodegradability : Result: Readily biodegradable.

Fatty acids, C6-10, Me esters:

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

indoxacarb (ISO):

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 77.3
Exposure time: 21 d
Method: OECD Test Guideline 305

Partition coefficient: n- : log Pow: 4.52 (20 °C)
octanol/water
Method: OECD Test Guideline 107
GLP: yes

calcium dodecylbenzenesulphonate:

Bioaccumulation : Species: Fish

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Bioconcentration factor (BCF): 70.79
Method: QSAR

Partition coefficient: n-octanol/water : log Pow: 4.77 (25 °C)

Fatty acids, soya, Me esters:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

2-ethylhexan-1-ol:

Partition coefficient: n-octanol/water : log Pow: 2.9 (25 °C)

Mobility in soil

Components:

indoxacarb (ISO):

Distribution among environmental compartments : Koc: 4483 ml/g, log Koc: 3.65
Remarks: Low mobility in soil.

Kd: 46 - 150

Other adverse effects

Product:

Additional ecological information : See product label for additional application instructions relating to environmental precautions.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal information

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

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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. (Indoxacarb)
Class	: 9
Packing group	: III
Labels	: 9

IATA-DGR

UN/ID No.	: UN 3082
Proper shipping name	: Environmentally hazardous substance, liquid, n.o.s. (Indoxacarb)
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. (Indoxacarb)
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.

Hazchem Code	: •3Z
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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

Safety, health, and environmental regulations specific for the hazardous chemical

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.

Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

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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 the following components that are not on the Canadian DSL nor NDSL. METHYL (S)-7-CHLORO-2,3,4A,5-TETRAHYDRO-2- {(METHOXYCARBONYL)[4- (TRIFLUOROMETHOXY)PHENYL]CARBAMOYL}INDENO[1, 2-E][1,3,4]OXADIAZINE-4A-CARBOXYLATE Fatty acids, C8-10, Me esters Fatty acids, C6-10, Me esters
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

SECTION 16: Other information

Revision Date	: 23.01.2024
Date format	: dd.mm.yyyy

Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
ACGIH / TWA	: 8-hour, time-weighted average

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

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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

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