

SAFETY DATA SHEET



STEWARD(R) 150 EC

Version	Revision Date:	SDS Number:	Date of last issue: -
2.1	16.02.2022	50000122	Date of first issue: 19.02.2019

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

1.1 Product identifier

Product name STEWARD(R) 150 EC

Other means of identification

Product code 50000122

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

Use of the Sub-
stance/Mixture : Insecticide

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

1.3 Details of the supplier of the safety data sheet

Supplier Address

FMC Chemicals (Pty) Ltd
Company Registration Number: 1988/001451/07
West End Office Park, Building C
Cnr. West Ave & Hall Street
Centurion, 0014

E-mail address: SDS-Info@fmc.com (E-Mail General Information)

1.4 Emergency telephone

For leak, fire, spill or accident emergencies, call:
South Africa: 0-800-983-611 (CHEMTREC)

Medical emergency:
For any emergency or poisoning contact: Griffon Poison Information Centre (24 hrs) - +27-(0)-82-446-8946

SECTION 2: Hazards identification

2.1 **Classification of the substance or mixture**

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4 H302: Harmful if swallowed.

Skin irritation, Category 2 H315: Causes skin irritation.

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Specific target organ toxicity - single exposure, Category 2, Nervous system

H371: May cause damage to organs.

Specific target organ toxicity - repeated exposure, Category 2, Blood

H373: May cause damage to organs through prolonged or repeated exposure.

Long-term (chronic) aquatic hazard, Category 2

H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Warning

Hazard Statements :
H302 Harmful if swallowed.
H315 Causes skin irritation.
H371 May cause damage to organs (Nervous system).
H373 May cause damage to organs (Blood) 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.
P273 Avoid release to the environment.
P280 Wear protective gloves.
Response:
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
P391 Collect spillage.

Hazardous ingredients which must be listed on the label:

indoxacarb (ISO)
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts
methanol

Additional Labeling

EUH208 Contains indoxacarb (ISO). May produce an allergic reaction.

2.3 Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).
This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Fatty acids, C8-10, Me esters	85566-26-3 287-636-4	Aquatic Chronic 2; H411	>= 50 - < 70
indoxacarb (ISO)	173584-44-6 607-700-00-0	Acute Tox. 3; H301 Acute Tox. 4; H332 Skin Sens. 1B; H317 STOT SE 2; H371 (Central nervous system, Blood) STOT RE 1; H372 (Heart, Nervous system, Blood) Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 10 - < 20
Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts	84989-14-0 284-903-7	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 2; H411	>= 3 - < 10
2-ethylhexan-1-ol	104-76-7 203-234-3	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 (Respiratory system)	>= 1 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

- General advice : Move out of dangerous area.
Show this 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 : If on skin, rinse well with water.
If on clothes, remove clothes.

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- If skin irritation persists, call a physician.
- 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.
Never give anything by mouth to an unconscious person.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Keep respiratory tract clear.
Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

- Risks : Harmful if swallowed.
May be harmful if inhaled.
Causes mild skin irritation.
May cause damage to organs.
May cause damage to organs through prolonged or repeated exposure.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.
-

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Dry chemical, CO₂, water spray or regular foam.
- Unsuitable extinguishing media : Do not spread spilled material with high-pressure water streams.

5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Thermal decomposition can lead to release of irritating gases and vapors.
Halogenated compounds
Fluorinated compounds
Nitrogen oxides (NO_x)
Carbon oxides
Sulfur oxides
Hazardous combustion products

5.3 Advice for firefighters

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

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Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.
Ensure adequate ventilation.
Use personal protective equipment.
Wear respiratory protection when its use is identified for certain contributing scenario.
If it can be safely done, stop the leak.
Do not touch or walk through the spilled material.
Never return spills in original containers for re-use.
For disposal considerations see section 13.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Collect as much of the spill as possible with a suitable absorbent material.
Sweep up and shovel into suitable containers for disposal.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapors/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.

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Provide sufficient air exchange and/or exhaust in work rooms. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations.

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.

Normal measures for preventive fire protection.

Hygiene measures : General industrial hygiene practice. Do not inhale aerosol.

Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : 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. Keep in a well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. 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.

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
2-methylpropan-1-	78-83-1	OEL-RL	100 ppm	ZA OEL

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Further information	Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			
2-ethylhexan-1-ol	104-76-7	TWA	1 ppm 5.4 mg/m ³	2017/164/EU
methanol	67-56-1	OEL-RL	400 ppm	ZA OEL
Further information	danger of cutaneous absorption, Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			
		OEL- RL STEL/C	500 ppm	ZA OEL
Further information	danger of cutaneous absorption, Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			
		TWA	200 ppm 260 mg/m ³	2006/15/EC
2-ethylhexan-1-ol	104-76-7	TWA	1 ppm 5.4 mg/m ³	2017/164/EU

8.2 Exposure controls

Personal protective equipment

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection
Material : Protective gloves

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Wear appropriate chemical resistant clothing to prevent skin contact depending on the extent of exposure. During most normal work situations where exposure to the material cannot be avoided for a limited time span, waterproof pants and apron of chemical resistant material or coveralls of polyethylene (PE) will be sufficient. Coveralls of PE must be discarded after use if contaminated. In cases of excessive or prolonged exposure, coveralls of barrier laminate may be required.

Protective suit

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

Protective measures : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
Plan first aid action before beginning work with this product.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

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Appearance : liquid

Color : amber

Odor : faint burn smell

Odor Threshold : No data available

pH : 6.6 (20 °C)
Concentration: 10 g/l
(1% solution in water)

5.4 (25 °C)
Concentration: 10 g/l
(1% solution in water)

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : 69 °C

Evaporation rate : Not available for this mixture.

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

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 : Not available for this mixture.

Relative density : 0.9494 (20 °C)

Density : No data available

Solubility(ies)
Solubility in other solvents : 160 g/l
Solvent: ethyl acetate

1.72 g/l
Solvent: Heptane

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

Autoignition temperature : No data available

Decomposition temperature : Hazardous decomposition products formed under fire conditions.

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Viscosity
Viscosity, dynamic : 5.6 mPa.s (25 °C)
Viscosity, kinematic : 4.68 mm²/s (20 °C)
Explosive properties : Not explosive
Oxidizing properties : The product is not oxidizing.

9.2 Other information

Self-ignition : 255 °C

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : No decomposition if stored and applied as directed.

Vapors may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid : Avoid extreme temperatures
Avoid formation of aerosol.

10.5 Incompatible materials

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

10.6 Hazardous decomposition products

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

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

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GLP: yes
Assessment: The component/mixture is minimally toxic after short term inhalation.

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

Components:

Fatty acids, C8-10, Me esters:

Acute oral toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: EC Directive 92/69/EEC B.1 Acute Toxicity (Oral)
Remarks: no mortality
Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat, male and female): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
Remarks: no mortality
Based on data from similar materials

indoxacarb (ISO):

Acute oral toxicity : LD50 (Rat, female): 179 mg/kg
Remarks: nervous system effects such as
Hypoactivity
Tremors
Incoordination
Abnormal tearing
mortality
Motor Activity effects

Acute inhalation toxicity : LC50 (Rat): 4.2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

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

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts:

Acute oral toxicity : LD50 (Rat, male and female): 1,080 - 1,630 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

2-ethylhexan-1-ol:

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

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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

Skin corrosion/irritation

Product:

Species : Rabbit
Assessment : Irritating to skin.
Method : OECD Test Guideline 404
Result : Skin irritation

Components:

Fatty acids, C8-10, Me esters:

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

indoxacarb (ISO):

Species : Rabbit
Result : Mild skin irritant

Remarks : May cause skin irritation and/or dermatitis.

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts:

Species : reconstructed human epidermis (RhE)
Method : OECD Test Guideline 439
Result : Skin irritation

2-ethylhexan-1-ol:

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

Serious eye damage/eye irritation

Product:

Species : Rabbit
Assessment : Not classified as irritant
Method : OECD Test Guideline 405
Result : No eye irritation
GLP : yes

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Components:

Fatty acids, C8-10, Me esters:

Species : Rabbit
Method : Regulation (EC) No. 440/2008, Annex, B.5
Result : No eye irritation

indoxacarb (ISO):

Species : Rabbit
Result : slight irritation

Remarks : Product dust may be irritating to eyes, skin and respiratory system.

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts:

Species : Bovine cornea
Method : OECD Test Guideline 437
Result : Irreversible effects on the eye

2-ethylhexan-1-ol:

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

Respiratory or skin sensitization

Product:

Test Type : Maximization Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitization.
GLP : yes

Components:

Fatty acids, C8-10, Me esters:

Test Type : Maximization Test
Routes of exposure : Intradermal
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitization.
Remarks : Based on data from similar materials

indoxacarb (ISO):

Result : May cause sensitization by skin contact.

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts:

Test Type : Maximization Test
Species : Guinea pig
Method : OECD Test Guideline 406

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Result : Does not cause skin sensitization.
Remarks : Based on data from similar materials

Germ cell mutagenicity

Product:

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

Test Type: Ames test
Method: OECD Test Guideline 472
Result: negative

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

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

Components:

Fatty acids, C8-10, Me esters:

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

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Method: OECD Test Guideline 476
Result: negative

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

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

indoxacarb (ISO):

Genotoxicity in vitro : Result: negative

Genotoxicity in vivo : Result: negative

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

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts:

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Genotoxicity in vitro : Test Type: reverse mutation assay
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Bone marrow chromosome aberration
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 475
Result: negative
Remarks: Based on data from similar materials

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

2-ethylhexan-1-ol:

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

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

Carcinogenicity

Product:

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

Components:

indoxacarb (ISO):

Result : negative

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

2-ethylhexan-1-ol:

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

Reproductive toxicity

Product:

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

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Components:

Fatty acids, C8-10, Me esters:

Effects on fertility : Species: Rat
Application Route: Oral
Dose: 0, 250, 500 and 1000 mg/kg bw
General Toxicity Parent: NOAEL: 1,000 mg/kg body weight
Method: OECD Test Guideline 422
Remarks: Based on data from similar materials
No significant adverse effects were reported

Effects on fetal development : Species: Rat
Application Route: Oral
Teratogenicity: NOAEL: 1,000 mg/kg body weight
Method: OECD Test Guideline 422
Remarks: Based on data from similar materials
No significant adverse effects were reported

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

indoxacarb (ISO):

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility., No toxicity to reproduction
Animal testing did not show any effects on fetal development.

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts:

Effects on fertility : Test Type: Two-generation study
General Toxicity Parent: NOAEL: > 350 mg/kg body weight
General Toxicity F1: NOAEL: > 350 mg/kg body weight
Method: OECD Test Guideline 416
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: reproductive and developmental toxicity study
Species: Rat
Developmental Toxicity: NOAEL: > 350 mg/kg body weight
Result: negative
Remarks: Based on data from similar materials

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

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STOT-single exposure

Components:

indoxacarb (ISO):

Target Organs : Central nervous system, Blood
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.

STOT-repeated exposure

Components:

Fatty acids, C8-10, Me esters:

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

indoxacarb (ISO):

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

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts:

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

Repeated dose toxicity

Components:

Fatty acids, C8-10, Me esters:

Species : Rat
NOAEL : 1,000 mg/kg
Application Route : Oral
Dose : 0, 250, 500 and 1000 mg/kg bw/
Method : OECD Test Guideline 422
Remarks : Based on data from similar materials
No significant adverse effects were reported

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts:

Species : Rat, male and female
NOAEL : 85 mg/kg
LOAEL : 145 mg/kg
Application Route : Oral
Exposure time : 9 months
Target Organs : Kidney, Liver
Remarks : Based on data from similar materials

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2-ethylhexan-1-ol:

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

Aspiration toxicity

Product:

No aspiration toxicity classification

Further information

Product:

Remarks : No data available

Components:

indoxacarb (ISO):

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

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

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

EbC50 (Pseudokirchneriella subcapitata (green algae)): 12.5 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

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Components:

Fatty acids, C8-10, Me esters:

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.1 mg/l
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials
- Toxicity to algae/aquatic plants : EC50 (green algae): 1.35 mg/l
Exposure time: 96 h
Method: QSAR
Remarks: Based on data from similar materials

indoxacarb (ISO):

- Toxicity to fish (Chronic toxicity) : NOEC: 0.15 mg/l
Exposure time: 90 d
Species: Oncorhynchus mykiss (rainbow trout)
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.9 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
- Toxicity to terrestrial organisms : LD50: .0039
Species: Apis mellifera (bees)
- LD50: 152 mg/kg
Species: Colinus virginianus (Bobwhite quail)

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts:

- Toxicity to fish : LC50 : 1.7 - 7.7 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 : EL50 (Daphnia magna (Water flea)): 5.7 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: water accommodated fractions (WAF)
- Toxicity to algae/aquatic plants : NOELR (Pseudokirchneriella subcapitata (green algae)): 10 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: water accommodated fractions (WAF)
- EL50 (Pseudokirchneriella subcapitata (algae)): > 100 mg/l

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Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: water accommodated fractions (WAF)

Toxicity to microorganisms : EC50 (activated sludge): 162 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

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 : EC50 (Daphnia magna (Water flea)): 39 mg/l
aquatic invertebrates Exposure time: 48 h

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

12.2 Persistence and degradability

Components:

Fatty acids, C8-10, Me esters:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 7.84 mg/l
Result: Readily biodegradable.
Biodegradation: 77 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts:

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

2-ethylhexan-1-ol:

Biodegradability : Result: Readily biodegradable.

12.3 Bioaccumulative potential

Components:

Fatty acids, C8-10, Me esters:

Partition coefficient: n- : log Pow: 4.41
octanol/water

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indoxacarb (ISO):

Partition coefficient: n-octanol/water : log Pow: 0.57 (20 °C)

Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., calcium salts:

Partition coefficient: n-octanol/water : log Pow: 4.3 - 5.8 (25 °C)
pH: 7
Method: OECD Test Guideline 117

2-ethylhexan-1-ol:

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

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Not relevant

12.6 Other adverse effects

Product:

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

Components:

indoxacarb (ISO):

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.
Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of wastes in an approved waste disposal facility.
Waste must be classified and labeled prior to recycling or disposal.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.

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 han-

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ding site for recycling or disposal.
Dispose of contents/ container to an approved waste disposal plant.

SECTION 14: Transport information

14.1 UN number

IMDG : UN 3082
IATA : UN 3082

14.2 UN proper shipping name

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

14.3 Transport hazard class(es)

IMDG : 9
IATA : 9

14.4 Packing group

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

IATA (Cargo)
Packing instruction (cargo aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

IATA (Passenger)
Packing instruction (passenger aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

14.5 Environmental hazards

IMDG
Marine pollutant : yes

IATA (Cargo)
Environmentally hazardous : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data

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Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

15.2 Chemical Safety Assessment

SECTION 16: Other information

Full text of H-Statements

H301 : Toxic if swallowed.
H302 : Harmful if swallowed.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H319 : Causes serious eye irritation.
H332 : Harmful if inhaled.
H335 : May cause respiratory irritation.
H371 : May cause damage to organs.
H372 : Causes damage to organs through prolonged or repeated exposure.

H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
H411 : Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard
Eye Dam. : Serious eye damage
Eye Irrit. : Eye irritation
Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitization
STOT RE : Specific target organ toxicity - repeated exposure
STOT SE : Specific target organ toxicity - single exposure
2006/15/EC : Europe. Indicative occupational exposure limit values
2017/164/EU : Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values

ZA OEL : South Africa. The Regulations for Hazardous Chemical Agents, Occupational Exposure Limits

2006/15/EC / TWA : Limit Value - eight hours
2017/164/EU / TWA : Limit Value - eight hours
ZA OEL / OEL-RL : Occupational Exposure Limit Restricted limit - 8- hour exposure or equivalent (12 hour shifts)
ZA OEL / OEL- RL STEL/C : Occupational Exposure Limit Restricted limit - Short term occupational exposure limits / ceiling limits

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ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; 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

Classification of the mixture:

Acute Tox. 4	H302
Skin Irrit. 2	H315
STOT SE 2	H371
STOT RE 2	H373
Aquatic Chronic 2	H411

Classification procedure:

Based on product data or assessment
Based on product data or assessment
Based on product data or assessment
Based on product data or assessment
Calculation method

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