SAFETY DATA SHEET

MASSADA MAX® 32 EC

Version	Revision Date:	SDS Number:	Date of last issue: -
3.0	18.08.2025	50001644	Date of first issue: 10.06.2021

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product name MASSADA MAX® 32 EC

Other means of identification

Product code 50001644

Product Registration Number RSCO-MEZC-INAC-0106-0679-009-31.72

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

Manufacturer

FMC AGROQUÍMICA DE MÉXICO,
S. DE R.L. DE C.V AV. VALLARTA NO.
6503, LOCAL A1-6, COL. CD. GRANJA,
45010 ZAPOPAN, JALISCO, MÉXICO
TEL.: 800 FMC AGRO (362 2476)
CONTACTOMEXICO@FMC.COM
SDS-Info@fmc.com

Emergency telephone

For leak, fire, spill or accident emergencies, call:
800-681-9531 (CHEMTREC - Mexico)
1 703 / 741-5970 (CHEMTREC - International)

Medical emergency:
911
SINTOX (Toxicological Information Service): 800 009 2800; 55 5611 2634 and 55 5598 6659, service 24 hours a day, 365 days a year.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids	:	Category 4
Acute toxicity (Oral)	:	Category 4
Acute toxicity (Inhalation)	:	Category 4
Acute toxicity (Dermal)	:	Category 5
Skin corrosion/irritation	:	Category 2

Serious eye damage/eye irritation	:	Category 1
Skin sensitization	:	Category 1
Carcinogenicity	:	Category 2
Specific target organ toxicity - single exposure	:	Category 2 (Nervous system)
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)
Specific target organ toxicity - repeated exposure	:	Category 1 (Liver, Blood)
Specific target organ toxicity - repeated exposure	:	Category 2 (Nervous system)
Aspiration hazard	:	Category 1

GHS label elements

Hazard pictograms :

Signal Word : DANGER

Hazard Statements :
H227 Combustible liquid.
H302 + H332 Harmful if swallowed or if inhaled.
H304 May be fatal if swallowed and enters airways.
H313 May be harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H371 May cause damage to organs (Nervous system).
H372 Causes damage to organs (Liver, Blood) through prolonged or repeated exposure.
H373 May cause damage to organs (Nervous system) through prolonged or repeated exposure.

Precautionary Statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe mist or vapors.

P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
P331 Do NOT induce vomiting.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

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

Other hazards

Very toxic to aquatic life with long lasting effects.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
N,N-dimethyloctanamide	1118-92-9	>= 20 -< 30
Zeta cypermethrin	52315-07-8	>= 20 -< 30
N,N-dimethyldecan-1-amide	14433-76-2	>= 10 -< 20
Solvent naphtha (petroleum), light arom.	64742-95-6	>= 10 -< 20
1-butylpyrrolidin-2-one	3470-98-2	>= 10 -< 20

Novaluron	116714-46-6	>= 5 -< 10
Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched	68412-54-4	>= 3 -< 5
nonylphenol, branched and linear, ethoxylated (with average molecular weight ≤ 1 540 g/mol) [includes ortho-, meta-, para-isomers or any combination thereof]	127087-87-0	>= 1 -< 3
methanol	67-56-1	>= 0.1 -< 1

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
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 : Wash off with soap and water.
If symptoms persist, call a physician.
Wash contaminated clothing before re-use.

If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
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 : Harmful if swallowed or if inhaled.
May be fatal if swallowed and enters airways.
May be harmful in contact with skin.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.

May cause respiratory irritation.
Suspected of causing cancer.
May cause damage to organs.
Causes damage to organs through prolonged or repeated exposure.
Exposure may result in tremors, decreased motor activity, and or impaired gait.

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

Notes to physician : In case of poisoning, call the emergency numbers SINTOX (control center of intoxications): 800-00-928-00; (55) 5611 2634 and (55) 5598 6659, 24-hour service on 365 days of the year. For emergencies: 911.
Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

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

Unsuitable extinguishing media : Do not spread spilled material with high-pressure water streams.

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Nitrogen oxides (NOx)
Carbon oxides
Fire may produce irritating, corrosive and/or toxic gases.
Chlorinated compounds
Hydrogen chloride
Hydrogen cyanide
Hazardous combustion products
Hydrogen fluoride
Fluorinated 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.
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.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- : Use personal protective equipment.

tive equipment and emergency procedures		Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. 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	:	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. For further cleaning instructions call CHEMTREC, 800-681-9531.

SECTION 7. HANDLING AND STORAGE

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	:	For incompatible materials see section 10. 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. To avoid spills during handling keep bottle on a metal tray. 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.
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.
Conditions for safe storage	:	No smoking.

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.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
methanol	67-56-1	VLE-PPT	200 ppm	NOM-010-STPS-2014
		VLE-CT	250 ppm	NOM-010-STPS-2014
		TWA STEL	200 ppm 250 ppm	ACGIH ACGIH

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
methanol	67-56-1	Methanol	Urine	End of shift	15 mg/l	MX BEI
		Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI

Personal protective equipment

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

Hand protection
Material : Protective gloves

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid (20.9 °C)
Color	:	brown
Odor	:	Aromatic
Odor Threshold	:	No data available
pH	:	5.08 (22.3 °C) Concentration: 10.2 Method: CIPAC MT 75.3
Melting point/ range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	> 60 - 62 °C Method: CIPAC MT 12.3
Evaporation rate	:	No data available
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 vapor density	:	No data available
Relative density	:	1.0242 No data available
Density	:	1.0216 g/cm3 No data available

Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	40.3 mPa.s (22.1 °C) 27 mPa.s (42.1 °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	:	No decomposition if stored and applied as directed. Vapors may form explosive mixture with air.
Conditions to avoid	:	Avoid extreme temperatures. Avoid formation of aerosol. Heat, flames and sparks. Heat, flames and sparks.
Incompatible materials	:	Avoid strong acids, bases, and oxidizers. Not applicable
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed or if inhaled.
May be harmful in contact with skin.

Product:

Acute oral toxicity	:	LD50 (Rat, female): ca. 1,098 mg/kg Method: OECD Test Guideline 425 Symptoms: Fatality, Breathing difficulties, abnormal gait, ataxia, hypoactivity GLP: yes
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 2.06 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Symptoms: hypoactivity, Breathing difficulties, ataxia, Fatality GLP: yes
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 Symptoms: abnormal posture, runny nose, abnormal gait, Irritation, Fatality GLP: yes Assessment: The component/mixture is minimally toxic after single contact with skin.

Components:

N,N-dimethyloctanamide:

Acute oral toxicity	:	LD50 (Rat, male and female): > 2,000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 3.55 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Based on data from similar materials
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

Zeta cypermethrin:

Acute oral toxicity	:	LD50 (Rat, female): 810 - 2,000 mg/kg Method: OECD Test Guideline 425 Symptoms: abnormal posture, hypoactivity, ataxia, Tremors GLP: yes LD50 (Rat, male and female): 69.2 - 142.3 mg/kg Method: FIFRA 81.01 GLP: yes
Acute inhalation toxicity	:	LC50 (Rat, male and female): 0.52 - 2.06 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 GLP: yes
Acute dermal toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 402 Symptoms: Irritation Assessment: The substance or mixture has no acute dermal toxicity Remarks: no mortality

N,N-dimethyldecan-1-amide:

Acute oral toxicity	:	LD50 (Rat, male and female): > 2,000 mg/kg Method: OECD Test Guideline 420
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 3.55 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 402

Solvent naphtha (petroleum), light arom.:

Acute oral toxicity	:	LD50 (Rat, female): 3,492 mg/kg Method: OECD Test Guideline 401 LD50 (Rat, male): 6,984 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 6.193 mg/l Exposure time: 4 h Test atmosphere: vapor Assessment: The substance or mixture has no acute inhalation toxicity Remarks: no mortality
Acute dermal toxicity	:	LD50 (Rabbit, male and female): > 3,160 mg/kg Assessment: The component/mixture is minimally toxic after

single contact with skin.

1-butylpyrrolidin-2-one:

Acute oral toxicity : LD50 (Rat, female): 300 - 2,000 mg/kg
Method: OECD Test Guideline 423
Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : LC0 (Rat, male and female): > 5.1 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: OECD Test Guideline 403
Remarks: no mortality

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The component/mixture is minimally toxic after single contact with skin.

Novaluron:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): 5.604 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: The component/mixture is minimally toxic after single contact with skin.

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

Acute oral toxicity : LD50 (Rat, male and female): 1,980 mg/kg

nonylphenol, branched and linear, ethoxylated (with average molecular weight ≤ 1 540 g/mol) [includes ortho-, meta-, para-isomers or any combination thereof]**:**

Acute oral toxicity : Assessment: The component/mixture is moderately toxic after single ingestion.

Acute dermal toxicity : Assessment: The component/mixture is moderately toxic after single contact with skin.

methanol:

Acute oral toxicity : LD50 (Rat): 1,187 mg/kg

Acute toxicity estimate (Humans): 100 mg/kg
Method: Expert judgment

Acute inhalation toxicity : LC50 (Rat, female): 82.1 mg/l

Exposure time: 4 h
Test atmosphere: vapor

LC50 (Rat, male): 92.6 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute toxicity estimate: 5 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Expert judgment

Acute dermal toxicity : LD50 (Rabbit): 17,100 mg/kg

Acute toxicity estimate: 300 mg/kg
Method: Expert judgment

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks : Extremely corrosive and destructive to tissue.

Components:

N,N-dimethyloctanamide:

Species : Rabbit
Result : Skin irritation
Remarks : Based on data from similar materials

Zeta cypermethrin:

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

N,N-dimethyldecan-1-amide:

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

Solvent naphtha (petroleum), light arom.:

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

1-butylpyrrolidin-2-one:

Species : Rabbit
Method : OECD Test Guideline 404

Result : Skin irritation

Novaluron:

Remarks : No data available

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

Species : Rabbit
Method : Draize Test
Result : Skin irritation

nonylphenol, branched and linear, ethoxylated (with average molecular weight ≤ 1 540 g/mol) [includes ortho-, meta-, para-isomers or any combination thereof]**:**

Result : Severe skin irritation

methanol:

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Remarks : May cause irreversible eye damage.

Components:

N,N-dimethyloctanamide:

Species : Rabbit
Result : Irreversible effects on the eye
Remarks : Based on data from similar materials

Zeta cypermethrin:

Species : Rabbit
Result : slight irritation
Assessment : Not classified as irritant

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

N,N-dimethyldecan-1-amide:

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

Solvent naphtha (petroleum), light arom.:

Species	:	Rabbit
Result	:	No eye irritation

1-butylpyrrolidin-2-one:

Species	:	Rabbit
Result	:	Irritating to eyes.
Method	:	OECD Test Guideline 405

Novaluron:

Remarks	:	No data available

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

Species	:	Rabbit
Result	:	Irreversible effects on the eye
Method	:	Draize Test

nonylphenol, branched and linear, ethoxylated (with average molecular weight ≤ 1 540 g/mol) [includes ortho-, meta-, para-isomers or any combination thereof]**:**

Result	:	Irreversible effects on the eye

methanol:

Species	:	Rabbit
Result	:	No eye irritation

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

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

Product:

Remarks	:	Causes sensitization.

Components:

N,N-dimethyloctanamide:

Test Type	:	Buehler Test
Species	:	Guinea pig
Result	:	Does not cause skin sensitization.
Remarks	:	Based on data from similar materials

Zeta cypermethrin:

Test Type	:	Local lymph node assay (LLNA)
Routes of exposure	:	Dermal
Species	:	mice

Assessment	:	May cause sensitization by skin contact.
Method	:	OECD Test Guideline 429
Result	:	May cause sensitization by skin contact.

N,N-dimethyldecan-1-amide:

Test Type	:	Buehler Test
Species	:	Guinea pig
Result	:	Does not cause skin sensitization.

Solvent naphtha (petroleum), light arom.:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.

1-butylpyrrolidin-2-one:

Test Type	:	Local lymph node assay (LLNA)
Routes of exposure	:	Skin contact
Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitization.

Novaluron:

Remarks	:	No data available

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

Test Type	:	Magnussen-Kligman test
Species	:	Guinea pig
Result	:	Does not cause skin sensitization.

methanol:

Test Type	:	Maximization Test
Species	:	Guinea pig
Result	:	Not a skin sensitizer.

Germ cell mutagenicity

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

Components:

N,N-dimethyloctanamide:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Result: negative Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative

Remarks: Based on data from similar materials

Test Type: gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

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

Zeta cypermethrin:

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

Test Type: unscheduled DNA synthesis assay
Test system: rat hepatocytes
Result: negative

Test Type: Chromosome aberration test in vitro
Metabolic activation: with and without metabolic activation
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: chromosome aberration assay
Species: Chinese hamster
Cell type: Bone marrow
Application Route: Oral
Result: negative

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

N,N-dimethyldecan-1-amide:

Genotoxicity in vitro : Test Type: reverse mutation assay
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
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.

Solvent naphtha (petroleum), light arom.:

Genotoxicity in vitro : Test Type: in vitro DNA damage and/or repair study
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: reverse mutation assay
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: Bone marrow chromosome aberration.
Species: Rat (male and female)
Application Route: Inhalation
Result: negative

1-butylpyrrolidin-2-one:

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

Test Type: reverse mutation assay
Test system: Salmonella typhimurium
Method: Regulation (EC) No. 440/2008, Annex, B.13/14 (Ames test)
Result: negative

Test Type: Micronucleus test
Test system: lymphocytes
Result: negative

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

Test Type: gene mutation test
Test system: mouse lymphoma cells
Method: Regulation (EC) No. 440/2008, Annex, B.17
Result: negative

Test Type: gene mutation test
Test system: mouse lymphoma cells
Method: OPPTS 870.5300
Result: negative

Novaluron:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: equivocal

Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes

Result: negative

Test Type: gene mutation test
Test system: mouse lymphoma cells
Result: negative

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

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

Test Type: gene mutation test
Method: OECD Test Guideline 476
Result: negative

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

methanol:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster fibroblasts
Result: negative

Test Type: reverse mutation assay
Test system: Salmonella typhimurium
Method: OECD Test Guideline 471
Result: negative

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

Carcinogenicity

Suspected of causing cancer.

Components:

Zeta cypermethrin:

Species	:	Rat
Application Route	:	Oral
Exposure time	:	24 month(s)
NOAEL	:	7.5 mg/kg bw/day
Result	:	negative

Solvent naphtha (petroleum), light arom.:

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Novaluron:

Species	:	Rat
Exposure time	:	2 y
Result	:	negative

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

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

methanol:

Species	:	Mouse, male and female
Application Route	:	inhalation (vapor)
Exposure time	:	18 month(s)
NOAEC	:	1.3 mg/l
Result	:	negative

Species	:	Rat, male and female
Application Route	:	inhalation (vapor)
Exposure time	:	2 Years
NOAEC	:	1.3 mg/l
Result	:	negative

Reproductive toxicity

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

Components:

N,N-dimethyloctanamide:

Effects on fetal development	:	Species: Rat Application Route: Oral Dose: 50, 150, 450mg/kg bw Duration of Single Treatment: 21 d General Toxicity Maternal: NOAEL: 50 - < 150 mg/kg bw/day Embryo-fetal toxicity.: NOAEL F1: >= 450 mg/kg bw/day Symptoms: Maternal effects. Method: OECD Test Guideline 414 Remarks: Based on data from similar materials
Reproductive toxicity - Assessment	:	Weight of evidence does not support classification for reproductive toxicity

Zeta cypermethrin:

Effects on fertility	:	Test Type: Two-generation study Species: Rat Application Route: Oral General Toxicity F1: NOAEL: 22 mg/kg bw/day Method: OECD Test Guideline 416 Result: negative
Effects on fetal development	:	Test Type: Embryo-fetal development Species: Rat

Application Route: Oral
General Toxicity Maternal: NOAEL: 12.5 mg/kg bw/day
Developmental Toxicity: NOAEL: 35 mg/kg bw/day
Method: OECD Test Guideline 426
Result: negative
GLP: yes

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

N,N-dimethyldecan-1-amide:

Effects on fetal development : Species: Rat
Application Route: Ingestion
Dose: 50, 150, 450mg/kg/bw
General Toxicity Maternal: NOAEL: 50 - < 150 mg/kg bw/day
Teratogenicity: NOAEL: >= 450 mg/kg bw/day
Embryo-fetal toxicity.: NOAEL: 150 - < 450 mg/kg bw/day
Symptoms: Retardations., Skeletal malformations.
Method: OECD Test Guideline 414
Remarks: Based on data from similar materials

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

Solvent naphtha (petroleum), light arom.:

Effects on fertility : Test Type: Three-generation study
Species: Rat
Application Route: inhalation (vapor)
Fertility: NOAEC Mating/Fertility: 7.5 mg/l
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Species: Mouse
Application Route: inhalation (vapor)
General Toxicity Maternal: LOAEC: 500 part per million
Symptoms: Maternal effects.

Novaluron:

Effects on fertility : Test Type: Two-generation study
Species: Rat
General Toxicity Parent: LOAEL: 74 mg/kg bw/day
Fertility: LOAEL: 74 mg/kg bw/day
Early Embryonic Development: LOAEL: 74 mg/kg bw/day

Effects on fetal development : Species: Rat
Developmental Toxicity: LOAEL: 250 mg/kg bw/day

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

Effects on fetal development : Test Type: reproductive and developmental toxicity study
Species: Rat
Application Route: Oral

General Toxicity Maternal: NOEL: 50 mg/kg body weight
Developmental Toxicity: NOAEL: 50 mg/kg body weight
Symptoms: Fetal abnormalities.
Result: negative
Remarks: Based on data from similar materials

Test Type: reproductive and developmental toxicity study
Species: Rat
Application Route: Dermal
Developmental Toxicity: NOAEL: 500 mg/kg body weight
Symptoms: Fetal abnormalities.
Result: negative
Remarks: Based on data from similar materials

methanol:

Effects on fertility : Test Type: one-generation reproductive toxicity
Species: Monkey, female
Application Route: inhalation (vapor)
General Toxicity F1: NOAEC: 2.39 mg/l
Result: negative

Test Type: Two-generation study
Species: Rat, male and female
Application Route: inhalation (vapor)
General Toxicity F1: LOAEC: 1.3 mg/l
General Toxicity F2: LOAEC: 1.3 mg/l
Result: negative

Effects on fetal development : Test Type: Pre-natal
Species: Mouse
Application Route: inhalation (vapor)
Developmental Toxicity: NOAEC: 6.65 mg/L
Result: Embryotoxic effects and adverse effects on the off-spring were detected only at high maternally toxic doses

Test Type: Pre-natal
Species: Rat
Application Route: inhalation (vapor)
Developmental Toxicity: NOAEC: 1.33 mg/L
Result: Embryotoxic effects and adverse effects on the off-spring were detected only at high maternally toxic doses

STOT-single exposure

May cause respiratory irritation.
May cause damage to organs (Nervous system).

Components:

N,N-dimethyloctanamide:

Assessment : May cause respiratory irritation.

Zeta cypermethrin:

Target Organs	:	Nervous system
Assessment	:	The substance or mixture is classified as specific target organ toxicant, single exposure, category 2.
Assessment	:	May cause respiratory irritation.

N,N-dimethyldecan-1-amide:

Assessment	:	May cause respiratory irritation.

Solvent naphtha (petroleum), light arom.:

Assessment	:	May cause respiratory irritation., May cause drowsiness or dizziness.

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

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

methanol:

Target Organs	:	Central nervous system, Eyes
Assessment	:	The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.

STOT-repeated exposure

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

Components:

N,N-dimethyloctanamide:

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

Zeta cypermethrin:

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

N,N-dimethyldecan-1-amide:

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

Novaluron:

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

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

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

Repeated dose toxicity

Components:

N,N-dimethyloctanamide:

Species	:	Dog, male and female
LOAEL	:	>= 200 mg/kg bw/day
Application Route	:	Oral
Exposure time	:	13 weeks
Dose	:	40, 200, 1000mg/kg/bw
Method	:	OECD Test Guideline 409
Remarks	:	Based on data from similar materials

Zeta cypermethrin:

Species	:	Dog
NOAEL	:	5 mg/kg
LOAEL	:	15 mg/kg
Application Route	:	Oral
Exposure time	:	1 yr
Dose	:	1, 5, 15 mg/kg/d
Symptoms	:	Gastrointestinal disturbance, Neurological disorders

Species	:	Dog
NOAEL	:	6 mg/kg bw/day
LOAEL	:	18 mg/kg bw/day
Application Route	:	Oral
Exposure time	:	90 d
Target Organs	:	Nervous system

Species	:	Rat
NOAEL	:	16.7 mg/kg bw/day
LOAEL	:	33.7 mg/kg bw/day
Application Route	:	Oral
Exposure time	:	90 d
Target Organs	:	Nervous system

Species	:	Dog
NOAEL	:	6 mg/kg
LOAEL	:	18 mg/kg
Application Route	:	Oral
Exposure time	:	1 yr
Dose	:	3, 6, 18, 33 mg/kg/d
Method	:	EPA OPP 83-1
Symptoms	:	Tremors

Species	:	Rat
NOAEL	:	4.5 mg/kg
Application Route	:	Oral

Exposure time	:	2 yr
Dose	:	0.6, 4.5, 30, 45 mg/kg/d
Target Organs	:	Liver

N,N-dimethyldecan-1-amide:

Species	:	Dog, male and female
LOAEL	:	>=200 mg/kg bw/day
Application Route	:	Oral
Exposure time	:	13 weeks
Dose	:	40, 200, 1000mg/kg bw
Method	:	OECD Test Guideline 409
Remarks	:	Based on data from similar materials

Solvent naphtha (petroleum), light arom.:

Species	:	Rat, male and female
NOAEC	:	0.8 - 0.9 mg/l
Application Route	:	Inhalation
Test atmosphere	:	vapor
Remarks	:	Based on data from similar materials

Species	:	Rat, male
NOAEL	:	600 mg/kg
Application Route	:	Oral
Remarks	:	Based on data from similar materials

Novaluron:

Species	:	Rat
NOAEL	:	1.1 mg/kg
LOAEL	:	30.6 mg/kg
Exposure time	:	2 y
Target Organs	:	Liver, Blood

Species	:	Mouse
LOAEL	:	4.2 mg/kg
Application Route	:	Oral
Exposure time	:	90 d
Target Organs	:	Liver, Blood

methanol:

Species	:	Monkey
LOAEL	:	2,340 mg/kg
Application Route	:	Ingestion
Exposure time	:	3 days

Species	:	Rat
NOEC	:	0.13 mg/l
LOAEL	:	1.3 mg/l
Application Route	:	inhalation (vapor)
Exposure time	:	12 months
Remarks	:	No toxicologically significant effects were found.

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

Zeta cypermethrin:

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

Solvent naphtha (petroleum), light arom.:

May be fatal if swallowed and enters airways.

Experience with human exposure

Components:

Zeta cypermethrin:

General Information : Symptoms: May cause paraesthesia

methanol:

Ingestion : Target Organs: Eyes
Remarks: Based on Human Evidence

Further information

Product:

Remarks : Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

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

Components:

N,N-dimethyloctanamide:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 14.8 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 7.7 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 5.47 mg/l
Exposure time: 72 h

		Method: OECD Test Guideline 201
		LOEC (Pseudokirchneriella subcapitata (green algae)): 1.8 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC10 (Daphnia magna (Water flea)): 1.3 mg/l Exposure time: 21 d Method: OECD Test Guideline 211
Toxicity to microorganisms	:	EC50 (activated sludge): 212.3 mg/l Exposure time: 3 h Method: OECD Test Guideline 209
Toxicity to soil dwelling organisms	:	LC50 (Eisenia fetida (earthworms)): 1,032.1 mg/kg Exposure time: 14 d Method: OECD Test Guideline 207
		NOEC (Eisenia fetida (earthworms)): 562 mg/kg Exposure time: 14 d Method: OECD Test Guideline 207

Zeta cypermethrin:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.69 µg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.141 µg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (algae): > 1 mg/l Exposure time: 72 h
Toxicity to fish (Chronic toxicity)	:	NOEC (Fish): 0.015 µg/l Exposure time: 21 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Crustaceans): 0.01 µg/l Exposure time: 21 d
Toxicity to soil dwelling organisms	:	LC50 (worms): > 100 mg/kg Exposure time: 14 d
Toxicity to terrestrial organisms	:	LD50 (Colinus virginianus (Bobwhite quail)): > 2,025 mg/kg
		NOEC (Colinus virginianus (Bobwhite quail)): 150 mg/kg End point: Reproduction Test
		LD50 (Apis mellifera (bees)): 0.059 µg/bee
		LC50 (Apis mellifera (bees)): 0.033 µg/bee

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

N,N-dimethyldecan-1-amide:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 14.8 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)): 7.7 mg/l
Exposure time: 48 h
Test Type: static test
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 16.06 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

EC10 (Pseudokirchneriella subcapitata (green algae)): 4.17 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC (Danio rerio (zebra fish)): >= 0.71 mg/l
Exposure time: 35 d
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.866 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

Toxicity to microorganisms : EC50 (activated sludge): 212.3 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): 1,032.1 mg/kg
Exposure time: 14 d
Method: OECD Test Guideline 207

NOEC (Eisenia fetida (earthworms)): 562 mg/kg
Exposure time: 14 d
Method: OECD Test Guideline 207

Solvent naphtha (petroleum), light arom.:

Toxicity to fish : NOEC (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l
Exposure time: 96 h

Test Type: semi-static test
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

LL50 (Pimephales promelas (fathead minnow)): 8.2 mg/l
Exposure time: 96 h
Test Type: semi-static test
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 4.5 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (microalgae)): 3.1 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOELR (Pimephales promelas (fathead minnow)): 2.6 mg/l
Exposure time: 14 d
Method: OECD Test Guideline 204
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 2.6 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

Toxicity to microorganisms : EC50 (Tetrahymena pyriformis): 15.41 mg/l
Exposure time: 40 h
Test Type: Growth inhibition
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

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

1-butylpyrrolidin-2-one:

Toxicity to fish : NOEC (Oncorhynchus mykiss (rainbow trout)): 100 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203

LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 24 h Test Type: static test Method: OECD Test Guideline 202 NOEC (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 24 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	NOEC (Pseudokirchneriella subcapitata (green algae)): 40 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 EC50 (Pseudokirchneriella subcapitata (green algae)): > 160 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 82 mg/l Exposure time: 33 d Test Type: flow-through test Method: OECD Test Guideline 210
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 100 mg/l Exposure time: 21 d Test Type: semi-static test Method: OECD Test Guideline 211
Toxicity to microorganisms	:	NOEC (activated sludge): 306.2 mg/l Exposure time: 28 h EC10 (activated sludge): > 315 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209 NOEC (activated sludge): 315 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209

Novaluron:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 1.01 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia): 0.058 mg/l Exposure time: 48 h

Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (algae)): 9.68 mg/l Exposure time: 72 h EC50 (Lemna gibba (duckweed)): 0.075 mg/l Exposure time: 7 d
Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): 0.00616 mg/l Exposure time: 21 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Chironomus riparius (harlequin fly)): 0.00004 mg/l Exposure time: 28 d Test Type: static test
Toxicity to soil dwelling organisms	:	LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg NOEC (Eisenia fetida (earthworms)): 3 mg/kg End point: reproduction Remarks: No significant adverse effect on Nitrogen mineralization. No significant adverse effect on Carbon mineralization.
Toxicity to terrestrial organisms	:	LD50 (Anas platyrhynchos (Mallard duck)): > 2,000 mg/kg LD50 (Apis mellifera (bees)): > 100 µg/bee End point: Acute oral toxicity LD50 (Apis mellifera (bees)): 122 µg/bee End point: Acute contact toxicity

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 7.9 mg/l Exposure time: 96 h

nonylphenol, branched and linear, ethoxylated (with average molecular weight ≤ 1 540 g/mol) [includes ortho-, meta-, para-isomers or any combination thereof]**:**

Ecotoxicology Assessment

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

methanol:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 15,400 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 18,260 mg/l Exposure time: 96 h
Toxicity to algae/aquatic plants	:	EC50 (Selenastrum capricornutum (green algae)): ca. 22,000 mg/l Exposure time: 96 h

Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 450 mg/l Exposure time: 28 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 208 mg/l Exposure time: 21 d
Toxicity to microorganisms	:	EC50 (activated sludge): 19,800 mg/l Exposure time: 96 h

Persistence and degradability

Components:

N,N-dimethyloctanamide:

Biodegradability	:	Inoculum: activated sludge, non-adapted Result: Readily biodegradable. Method: OECD Test Guideline 301B

Zeta cypermethrin:

Biodegradability	:	Result: Not readily biodegradable.

N,N-dimethyldecan-1-amide:

Biodegradability	:	Inoculum: activated sludge, non-adapted Result: Readily biodegradable. Method: OECD Test Guideline 301B Remarks: Based on data from similar materials

Solvent naphtha (petroleum), light arom.:

Biodegradability	:	Concentration: 49.2 mg/l Result: Inherently biodegradable. Biodegradation: 77.05 % Exposure time: 28 d Method: OECD Test Guideline 301F

Novaluron:

Biodegradability	:	Remarks: No data available

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

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

nonylphenol, branched and linear, ethoxylated (with average molecular weight ≤ 1 540 g/mol) [includes ortho-, meta-, para-isomers or any combination thereof]**:**

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: < 60 % Exposure time: 28 d

methanol:

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

N,N-dimethyloctanamide:

Bioaccumulation : Remarks: No bioaccumulation is to be expected (log Pow <= 4).

Partition coefficient: n-octanol/water : log Pow: 2.59 (23 °C)

Zeta cypermethrin:

Bioaccumulation : Remarks: Accumulation in aquatic organisms is expected.

Partition coefficient: n-octanol/water : log Pow: 5 - 6 (24 °C)

N,N-dimethyldecan-1-amide:

Bioaccumulation : Remarks: No bioaccumulation is to be expected (log Pow <= 4).

Partition coefficient: n-octanol/water : log Pow: 3.44
Method: QSAR

1-butylpyrrolidin-2-one:

Bioaccumulation : Bioconcentration factor (BCF): 3.19
Method: QSAR

Partition coefficient: n-octanol/water : log Pow: 1.265 (20 °C)

Novaluron:

Bioaccumulation : Bioconcentration factor (BCF): 2,091

Partition coefficient: n-octanol/water : Pow: 2,000 (20 °C)
log Pow: 4.36 (20 °C)

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.
Based on data from similar materials

Partition coefficient: n- : log Pow: 5.39 (20 °C)

octanol/water

methanol:

Partition coefficient: n-octanol/water : log Pow: -0.77 (20 °C)

Mobility in soil

Components:

Zeta cypermethrin:

Distribution among environmental compartments : Remarks: immobile

N,N-dimethyldecan-1-amide:

Distribution among environmental compartments : Remarks: Slightly 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.

Components:

Zeta cypermethrin:

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.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Appropriate personal protective equipment, as described in Sections 7 and 8, should be worn when handling materials for waste disposal.

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 : Containers must be disposed of in accordance with local, state and federal regulations. It is prohibited to reuse, bury, burn or sell containers. Washable containers: Triple wash containers smaller than 20 liters and pressure wash contain-

ers of 20 liters or more. Triple wash: Add water up to ¼ of the container's capacity, close and shake for 30 seconds. Pour the wash water into the mixing tank, considering this volume of water within the recommended volume for mixing. Perform this procedure three times. Pressure washing: Activate the pressure washing device for 30 seconds, considering the volume of water used as part of the recommended volume for the mixture. For both procedures, make the container unusable by piercing it at the base without damaging the label. Non-washable containers: Containers that cannot be washed, make them unusable by perforating them without damaging the label. In all cases, deliver the containers to collection points indicated by the local container collection program. For more information on the Empty Pesticide Container Management Plan, visit http://campolimpio.org.mx/.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Zeta cypermethrin, Novaluron)
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. (Zeta cypermethrin, Novaluron)
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. (Zeta cypermethrin, Novaluron)
Class	:	9
Packing group	:	III
Labels	:	9

EmS Code	:	F-A, S-F
Marine pollutant	:	yes

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

Not applicable for product as supplied.

Domestic regulation

NOM-002-SCT

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Zeta cypermethrin, Novaluron)
Class	:	9
Packing group	:	III
Labels	:	9

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/legislation specific for the substance or mixture

This document has been prepared in accordance with the Globally Harmonized System (GHS). The document consists of 16 points that cover the Official Mexican STANDARD NOM-018-STPS-2015 Harmonized system for the identification and communication of hazards and risks due to dangerous chemical substances in the workplace. 271000

Federal Law for the control of chemical precursors, essential chemical products and machinery for producing capsules, tablets and pills. : 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. Zeta cypermethrin 1-butylpyrrolidin-2-one Novaluron

		Oxirane, methyl-, polymer with oxirane, monobutyl ether
		N,N-dimethyloctanamide
		N,N-dimethyldecan-1-amide
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	:	18.08.2025
Date format	:	dd.mm.yyyy

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
MX BEI	:	Official Mexican Norm NOM-047-SSA1-2011, Environmental Health - Biological exposure indices for workers occupationally exposed to chemical agents
NOM-010-STPS-2014	:	Mexico. Norm NOM-010-STPS-2014 on Chemicals Polluting the Work Environment - Identification, Assessment and Control - Appendix 1 Occupational Exposure Limits
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
NOM-010-STPS-2014 / VLE-PPT	:	Time weighted average limit value
NOM-010-STPS-2014 / VLE-CT	:	Short term exposure limit value

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and

Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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End of Safety Data Sheet