

Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 656884-00026 14.1 2024/09/28 Date of first issue: 2016/05/02

1. PRODUCT AND COMPANY IDENTIFICATION

Chemical product name Fluralaner / Moxidectin Liquid Formulation

Other means of identification Bravecto Plus (A011446)

BRAVECTO PLUS FLEA, TICK AND WORM 112.5 MG FLURALANER AND 5.6 MG MOXIDECTIN SPOT-ON SOLUTION FOR KITTENS AND SMALL CATS (85418) BRAVECTO PLUS FLEA, TICK AND WORM 250 MG FLURALANER AND 12.5 MG MOXIDECTIN SPOT-ON

SOLUTION FOR MEDIUM CATS (85416)

BRAVECTO PLUS FLEA, TICK AND WORM 500 MG FLURALANER AND 25 MG MOXIDECTIN SPOT-ON

SOLUTION FOR LARGE CATS (85413)

Supplier's company name, address and phone number

Company name of supplier **MSD**

Address Kumagaya, Saitama Prefecture, Xicheng 810 MSD Co., Ltd.

Menuma factory

Telephone 048-588-8411

EHSDATASTEWARD@msd.com E-mail address

Emergency telephone number: +1-908-423-6000

Recommended use of the chemical and restrictions on use

Recommended use Veterinary product Restrictions on use Not applicable

2. HAZARDS IDENTIFICATION

GHS classification of chemical product

Flammable liquids Category 2

Serious eye damage/eye irri-

tation

Category 2

Reproductive toxicity Category 1B

repeated exposure

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

Short-term (acute) aquatic

hazard

Category 1



Fluralaner / Moxidectin Liquid Formulation

SDS Number: Date of last issue: 2024/07/06 Version Revision Date: 656884-00026 14.1 2024/09/28 Date of first issue: 2016/05/02

Long-term (chronic) aquatic

hazard

Category 1

GHS label elements

Hazard pictograms









Signal word Danger

Hazard statements H225 Highly flammable liquid and vapour.

> H319 Causes serious eye irritation. H360D May damage the unborn child.

H373 May cause damage to organs (Central nervous system)

through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

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.

P233 Keep container tightly closed.

P241 Use explosion-proof electrical/ ventilating/ lighting equip-

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P260 Do not breathe mist or vapours.

P264 Wash skin thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediate-

ly all contaminated clothing. Rinse skin with water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

P337 + P313 If eye irritation persists: Get medical advice/ at-

tention.

P391 Collect spillage.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal:



Fluralaner / Moxidectin Liquid Formulation

Version **Revision Date:** SDS Number: Date of last issue: 2024/07/06 656884-00026 14.1 2024/09/28 Date of first issue: 2016/05/02

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

Other hazards which do not result in classification

Important symptoms and out- : Vapours may form explosive mixture with air.

lines of the emergency as-

sumed

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)	ENCS No.
N,N-Dimethylacetamide	127-19-5	35	2-723
Fluralaner	864731-61-3	>= 25 - < 30	
Poly(oxy-1,2-ethanediyl), .alpha [(tetrahydro-2-furanyl)methyl]- .omegahydroxy-	31692-85-0	>= 20 - < 30	-
Acetone	67-64-1	>= 10 - <= 15	2-542
N,N-Diethyl-m-toluamide	134-62-3	>= 10 - <= 15	3-1321
Moxidectin	113507-06-5	>= 1 - < 2.5	-
2,6-Di-tert-butyl-p-cresol	128-37-0	>= 0.1 - < 1	3-540, 9-1805

4. FIRST AID MEASURES

General advice In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact In case of contact, immediately flush skin with soap and plenty

of water.

Remove contaminated clothing and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact In case of contact, immediately flush eyes with plenty of water

for at least 15 minutes.

If easy to do, remove contact lens, if worn.

Get medical attention.

If swallowed If swallowed, DO NOT induce vomiting.

If vomiting occurs have person lean forward.

Call a physician or poison control centre immediately.



Fluralaner / Moxidectin Liquid Formulation

SDS Number: Date of last issue: 2024/07/06 Version Revision Date: 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Rinse mouth thoroughly with water.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and

delayed

Causes serious eve irritation. May damage the unborn child.

May cause damage to organs through prolonged or repeated

exposure.

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

> and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Treat symptomatically and supportively.

5. FIREFIGHTING MEASURES

Notes to physician

Suitable extinguishing media Water spray

> Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

Specific hazards during fire-

fighting

Do not use a solid water stream as it may scatter and spread

fire.

Flash back possible over considerable distance. Vapours may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod-

ucts

Carbon oxides

Chlorine compounds Fluorine compounds Nitrogen oxides (NOx)

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

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

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

Evacuate area.

Special protective equipment :

for firefighters

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

Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- :

tive equipment and emer-

gency procedures

Remove all sources of ignition.

Ventilate the area.

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal pro-

tective equipment recommendations (see section 8).

Environmental precautions Avoid release to the environment.

Prevent further leakage or spillage if safe to do so.



Fluralaner / Moxidectin Liquid Formulation

Revision Date: SDS Number: Date of last issue: 2024/07/06 Version 656884-00026 14.1 2024/09/28 Date of first issue: 2016/05/02

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

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Methods and materials for containment and cleaning up Non-sparking tools should be used. Soak up with inert absorbent material.

Suppress (knock down) gases/vapours/mists with a water

spray jet.

For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absor-

bent.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to deter-

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

7. HANDLING AND STORAGE

Handling

Technical measures See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

If sufficient ventilation is unavailable, use with local exhaust Local/Total ventilation

ventilation.

Use explosion-proof electrical, ventilating and lighting equip-

ment.

Advice on safe handling Do not get on skin or clothing.

Do not breathe mist or vapours.

Do not swallow. Do not get in eyes.

Wash skin thoroughly after handling.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment

Non-sparking tools should be used. Keep container tightly closed.

Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking.

Take precautionary measures against static discharges. Do not eat, drink or smoke when using this product.

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

environment.

Oxidizing agents

Avoidance of contact

Hygiene measures If exposure to chemical is likely during typical use, provide eye

flushing systems and safety showers close to the working



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

place.

When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the

use of administrative controls.

Storage

Conditions for safe storage : Keep in properly labelled containers.

Store locked up. Keep tightly closed.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.

Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:

Oxidizing solids Oxidizing liquids

Packaging material : Unsuitable material: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Threshold limit value and permissible exposure limits for each component in the work environment

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Concentration standard / Permissible concentration	Basis
N,N-Dimethylacetamide	127-19-5	ACL	10 ppm	JP OEL ISHL
		OEL-M	10 ppm 36 mg/m3	JP OEL JSOH
			Substances presumeds, Skin absorption, Gr	
		enic to humans	,, - , - , - , - , - , - , - , - , - ,	r r
		8h-OEL-M	5 ppm	JP ISHL OEL 577-2(2)
		TWA	10 ppm	ACGIH
Fluralaner	864731-61-3	TWA	100 μg/m3 (OEB 2)	Internal
	Further information: Skin			
		Wipe limit	1000 µg/100 cm ²	Internal
Acetone	67-64-1	ACL	500 ppm	JP OEL ISHL
		OEL-M	200 ppm	JP OEL
			475 mg/m3	JSOH
		TWA	250 ppm	ACGIH
		STEL	500 ppm	ACGIH
Moxidectin	113507-06-5	TWA	10 μg/m3 (OEB 3)	Internal
		Wipe limit	100 µg/100 cm ²	Internal



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

2,6-Di-tert-butyl-p-cresol	128-37-0	8h-OEL-M	10 mg/m3	JP ISHL OEL
				577-2(2)
		TWA (Inhal-	2 mg/m3	ACGIH
		able fraction		
		and vapor)		

Biological occupational exposure limits

Components	CAS-No.	Target sub- stance	Biological specimen	Sam- pling time	Permissible concentration	Basis
N,N-Dimethylacetamide	127-19-5	N- Methyla- cetamide	Urine	End of shift at end of work- week	30 mg/g creatinine	ACGIH BEI
Acetone	67-64-1	Acetone	Urine	Within 2 h prior to end of shift	40 mg/l	JSOH
		Acetone	Urine	End of shift (As soon as possible after exposure ceases)	25 mg/l	ACGIH BEI

Engineering measures

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., dripless quick connections).

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face con-

tainment devices). Minimize open handling.

Use explosion-proof electrical, ventilating and lighting equipment.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection.

Filter type
Hand protection

Self-contained breathing apparatus

Material : Chemical-resistant gloves



Fluralaner / Moxidectin Liquid Formulation

SDS Number: Date of last issue: 2024/07/06 Version Revision Date: 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Consider double gloving. Take note that the product is flam-Remarks

mable, which may impact the selection of hand protection.

Impermeable protective gloves

Eye protection Wear safety glasses with side shields or goggles.

If the work environment or activity involves dusty conditions,

mists or aerosols, wear the appropriate goggles.

Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or

aerosols.

Skin and body protection Work uniform or laboratory coat.

> Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, dis-

posable suits) to avoid exposed skin surfaces.

Use appropriate degowning techniques to remove potentially

contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid

Colour Colorless to pale yellow

Odour No data available

Odour Threshold No data available

Melting point/freezing point No data available

Boiling point, initial boiling point and boiling range

No data available

Flammability (solid, gas) Not applicable

Flammability (liquids) Not applicable

Lower explosion limit and upper explosion limit / flammability limit

Upper explosion limit / Up- : No data available

per flammability limit

Lower explosion limit / Lower flammability limit No data available

Flash point 2°C

Method: closed cup

Decomposition temperature No data available

pΗ No data available

Evaporation rate No data available

No data available Auto-ignition temperature



Fluralaner / Moxidectin Liquid Formulation

Revision Date: SDS Number: Date of last issue: 2024/07/06 Version 656884-00026 14.1 2024/09/28 Date of first issue: 2016/05/02

Viscosity

Viscosity, kinematic : 7.5 mm2/s

Solubility(ies)

Water solubility No data available

Partition coefficient: n-

octanol/water

Not applicable

Vapour pressure No data available

Density and / or relative density

Relative density 1.06

Density 1.08 g/cm³

No data available Relative vapour density

Explosive properties Not explosive

Oxidizing properties The substance or mixture is not classified as oxidizing.

Particle characteristics

Not applicable Particle size

10. STABILITY AND REACTIVITY

Reactivity Not classified as a reactivity hazard. Chemical stability Stable under normal conditions. Possibility of hazardous reac-

tions

Highly flammable liquid and vapour.

Vapours may form explosive mixture with air. Can react with strong oxidizing agents.

Conditions to avoid Heat, flames and sparks.

Incompatible materials Oxidizing agents

Hazardous decomposition

products

No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of:

exposure

Inhalation Skin contact Inaestion Eye contact

Acute toxicity

Not classified based on available information.



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Product:

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg

Method: Calculation method

Components:

N,N-Dimethylacetamide:

Acute oral toxicity : LD50 (Rat): 4,800 mg/kg

Acute inhalation toxicity : LC50 (Rat): 2.2 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : Acute toxicity estimate: 1,100 mg/kg

Method: Expert judgement

Remarks: Based on national or regional regulation.

Fluralaner:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Remarks: No mortality observed at this dose. No significant adverse effects were reported

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

Remarks: No significant adverse effects were reported

Poly(oxy-1,2-ethanediyl), .alpha.-[(tetrahydro-2-furanyl)methyl]-.omega.-hydroxy-:

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

Method: OECD Test Guideline 423

Remarks: Based on data from similar materials

Acetone:

Acute oral toxicity : LD50 (Rat): 5,800 mg/kg

Acute inhalation toxicity : LC50 (Rat): 76 mg/l

Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): 7,426 mg/kg

N,N-Diethyl-m-toluamide:

Acute oral toxicity : LD50 (Rat): 1,892 mg/kg



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Acute inhalation toxicity : LC50 (Rat): 5.95 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

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

Moxidectin:

Acute oral toxicity : LD50 (Rat): 106 mg/kg

LD50 (Mouse): 42 - 84 mg/kg

Acute inhalation toxicity : LC50 (Rat): 3.28 mg/l

Exposure time: 5 h

Test atmosphere: dust/mist

LC50 (Rat): 2.87 - 4.06 mg/l Test atmosphere: dust/mist

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

Remarks: No significant adverse effects were reported

Acute toxicity (other routes of:

administration)

LD50 (Rat): 394 mg/kg

Application Route: Intraperitoneal

LD50 (Mouse): 84 mg/kg

Application Route: Intraperitoneal

LD50 (Rat): > 640 mg/kg

Application Route: Subcutaneous

LD50 (Mouse): 263 mg/kg

Application Route: Subcutaneous

2,6-Di-tert-butyl-p-cresol:

Acute oral toxicity : LD50 (Rat): > 6,000 mg/kg

Method: OECD Test Guideline 401

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

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

Skin corrosion/irritation

Not classified based on available information.

Components:

N,N-Dimethylacetamide:

Species : Rabbit

Result : No skin irritation



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Fluralaner:

Species : Rabbit

Result : No skin irritation

Poly(oxy-1,2-ethanediyl), .alpha.-[(tetrahydro-2-furanyl)methyl]-.omega.-hydroxy-:

Species : reconstructed human epidermis (RhE)

Method : OECD Test Guideline 439

Remarks : Based on data from similar materials

Result : No skin irritation

Acetone:

Assessment : Repeated exposure may cause skin dryness or cracking.

N,N-Diethyl-m-toluamide:

Species : Rabbit

Result : No skin irritation

Moxidectin:

Species : Rabbit

Result : Mild skin irritation

2,6-Di-tert-butyl-p-cresol:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

Remarks : Based on data from similar materials

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

N,N-Dimethylacetamide:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

Fluralaner:

Species : Rabbit

Result : Mild eye irritation

Poly(oxy-1,2-ethanediyl), .alpha.-[(tetrahydro-2-furanyl)methyl]-.omega.-hydroxy-:

Species : Tissue Culture

Method : OECD Test Guideline 492

Remarks : Based on data from similar materials



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Species : Bovine cornea

Method : OECD Test Guideline 437

Remarks : Based on data from similar materials

Result : Irritation to eyes, reversing within 21 days

Acetone:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

Method : OECD Test Guideline 405

N,N-Diethyl-m-toluamide:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days Remarks : Based on national or regional regulation.

Moxidectin:

Species : Rabbit

Result : Moderate eye irritation

2,6-Di-tert-butyl-p-cresol:

Species : Rabbit

Result : No eye irritation

Method : OECD Test Guideline 405

Remarks : Based on data from similar materials

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

N,N-Dimethylacetamide:

Exposure routes : Skin contact Species : Guinea pig Result : negative

Fluralaner:

Test Type : Maximisation Test

Exposure routes : Dermal Species : Guinea pig

Result : Not a skin sensitizer.



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Poly(oxy-1,2-ethanediyl), .alpha.-[(tetrahydro-2-furanyl)methyl]-.omega.-hydroxy-:

Test Type : KeratinoSens assay

Method : OECD Test Guideline 442D

Result : negative

Remarks : Based on data from similar materials

Test Type : Direct Peptide Reactivity Assay (DPRA)

Method : OECD Test Guideline 442C

Result : positive

Remarks : Based on data from similar materials

Test Type : Dendritic cell activation test Method : OECD Test Guideline 442E

Result : negative

Remarks : Based on data from similar materials

Acetone:

Test Type : Maximisation Test
Exposure routes : Skin contact
Species : Guinea pig
Result : negative

Moxidectin:

Test Type : Buehler Test Exposure routes : Dermal Species : Guinea pig

Result : Not a skin sensitizer.

2,6-Di-tert-butyl-p-cresol:

Test Type : Human repeat insult patch test (HRIPT)

Exposure routes : Skin contact Species : Humans Result : negative

Germ cell mutagenicity

Not classified based on available information.

Components:

N,N-Dimethylacetamide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)

Species: Rat

Application Route: Inhalation Method: OECD Test Guideline 478

Result: negative



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Fluralaner:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Test Type: Mouse Lymphoma

Result: negative

Test Type: Chromosomal aberration

Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test

Species: Mouse

Cell type: Bone marrow Application Route: Oral Result: negative

Poly(oxy-1,2-ethanediyl), .alpha.-[(tetrahydro-2-furanyl)methyl]-.omega.-hydroxy-:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative

Remarks: Based on data from similar materials

Acetone:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test

Result: negative

Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Test Type: Chromosome aberration test in vitro

Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse

Application Route: Ingestion

Result: negative

N,N-Diethyl-m-toluamide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Moxidectin:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

Result: negative



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Test Type: in vitro assay
Test system: Escherichia coli

Result: negative

Genotoxicity in vivo : Test Type: Chromosomal aberration

Species: Rat

Cell type: Bone marrow

Result: negative

Test Type: Unscheduled DNA synthesis (UDS) test with

mammalian liver cells in vivo

Species: Rat Cell type: Liver cells Result: negative

2,6-Di-tert-butyl-p-cresol:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Test Type: Chromosome aberration test in vitro

Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow

cytogenetic test, chromosomal analysis)

Species: Rat

Application Route: Ingestion

Result: negative

Carcinogenicity

Not classified based on available information.

Components:

N,N-Dimethylacetamide:

Species : Rat

Application Route : inhalation (vapour)
Exposure time : 18 month(s)
Result : negative

Fluralaner:

Carcinogenicity - Assess-

ment

No data available

Acetone:

Species : Mouse Application Route : Skin contact



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Exposure time : 424 days Result : negative

N,N-Diethyl-m-toluamide:

Species : Rat
Application Route : Ingestion
Exposure time : 104 weeks
Result : negative

Moxidectin:

Species : Mouse
Application Route : Oral
Exposure time : 2 Years

NOAEL : 4.5 mg/kg body weight

Result : negative

Species : Rat
Application Route : Oral
Exposure time : 2 Years

NOAEL : 4.5 mg/kg body weight

Result : negative

Species : Dog Application Route : Oral Exposure time : 1 Years

NOAEL : 0.5 mg/kg body weight

Result : negative

2,6-Di-tert-butyl-p-cresol:

Species : Rat
Application Route : Ingestion
Exposure time : 22 Months
Result : negative

Reproductive toxicity

May damage the unborn child.

Components:

N,N-Dimethylacetamide:

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: Inhalation

Result: negative

Effects on foetal develop-

ment

: Test Type: Embryo-foetal development

Species: Rat

Application Route: Inhalation

Result: positive



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Reproductive toxicity - As-

sessment

Clear evidence of adverse effects on development, based on

animal experiments.

Fluralaner:

Effects on fertility : Test Type: Two-generation study

Species: Rat

Application Route: Oral

General Toxicity - Parent: NOAEL: 50 mg/kg body weight General Toxicity F1: LOAEL: 100 mg/kg body weight Result: No effects on fertility, Postimplantation loss., Adverse

neonatal effects.

Test Type: One-generation reproduction toxicity study

Species: Dog

Application Route: Oral

Fertility: NOAEL: 75 mg/kg body weight

Result: No effects on fertility and early embryonic develop-

ment were detected.

Remarks: No significant adverse effects were reported

Effects on foetal develop-

ment

Test Type: Development

Species: Rat

Application Route: Oral

Developmental Toxicity: NOAEL: 100 mg/kg body weight Result: Embryotoxic effects and adverse effects on the offspring were detected only at high maternally toxic doses, No

teratogenic effects

Test Type: Development

Species: Rabbit Application Route: Oral

Developmental Toxicity: NOAEL: 10 mg/kg body weight Result: Skeletal malformations, Visceral malformations

Remarks: Maternal toxicity observed.

Test Type: Development

Species: Rabbit

Application Route: Dermal

Developmental Toxicity: NOAEL: 100 mg/kg body weight

Result: Skeletal malformations

Reproductive toxicity - As-

sessment

Suspected of damaging the unborn child.

Acetone:

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Application Route: inhalation (vapour)

Result: negative

N,N-Diethyl-m-toluamide:

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion

Result: negative

Moxidectin:

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Oral

General Toxicity F1: LOAEL: 0.8 mg/kg body weight Symptoms: Reduced foetal weight, foetal mortality Result: No effects on fertility, Some evidence of adverse ef-

fects on development, based on animal experiments.

Test Type: Three-generation reproduction toxicity study

Species: Rat

Application Route: Oral

General Toxicity F1: LOAEL: 0.8 mg/kg body weight Symptoms: Reduced foetal weight, foetal mortality

Result: No effects on fertility, Some evidence of adverse effects on development, based on animal experiments.

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Oral

General Toxicity Maternal: LOAEL: 10 mg/kg body weight Embryo-foetal toxicity: LOAEL: 10 mg/kg body weight

Result: Skeletal malformations

Remarks: The effects were seen only at maternally toxic dos-

es.

Test Type: Embryo-foetal development

Species: Rabbit Application Route: Oral

General Toxicity Maternal: LOAEL: 5 mg/kg body weight Developmental Toxicity: NOAEL: 10 mg/kg body weight

Result: No teratogenic effects, No embryotoxic effects

Reproductive toxicity - As-

sessment

Some evidence of adverse effects on development, based on

animal experiments.

2,6-Di-tert-butyl-p-cresol:

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: negative



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Effects on foetal develop- : Test Type: Embryo-foetal development

ment Species: Rat

Application Route: Ingestion

Result: negative

STOT - single exposure

Not classified based on available information.

Components:

Acetone:

Assessment : May cause drowsiness or dizziness.

STOT - repeated exposure

May cause damage to organs (Central nervous system) through prolonged or repeated exposure.

Components:

Moxidectin:

Target Organs : Central nervous system

Assessment : Causes damage to organs through prolonged or repeated

exposure.

2,6-Di-tert-butyl-p-cresol:

Assessment : No significant health effects observed in animals at concentra-

tions of 100 mg/kg bw or less.

Repeated dose toxicity

Components:

N,N-Dimethylacetamide:

Species : Rat NOAEL : 90 mg/m3 LOAEL : 360 mg/m3

Application Route : inhalation (vapour)

Exposure time : 24 Months

Fluralaner:

Species : Dog
NOAEL : 1 mg/kg
Application Route : Oral
Exposure time : 52 Weeks
Target Organs : Liver

Remarks : No significant adverse effects were reported

Species : Juvenile dog LOAEL : 56 - 280 mg/kg

Application Route : Oral



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Exposure time : 24 Weeks Symptoms : Diarrhoea

Species : Rat

LOAEL : 400 mg/kg Application Route : Oral Exposure time : 90 Days

Target Organs : Liver, thymus gland

Species : Rat

NOAEL : 500 mg/kg
Application Route : Dermal
Exposure time : 90 Days
Target Organs : Liver

Remarks : No significant adverse effects were reported

Acetone:

Species : Rat

NOAEL : 900 mg/kg

LOAEL : 1,700 mg/kg

Application Route : Ingestion

Exposure time : 90 Days

Species : Rat NOAEL : 45 mg/l

Application Route : inhalation (vapour)

Exposure time : 8 Weeks

Moxidectin:

Species : Mouse
NOAEL : 3.9 mg/kg
LOAEL : 15.4 mg/kg
Application Route : Oral
Exposure time : 4 Weeks
Symptoms : Tremors

Species : Rat
NOAEL : 3.9 mg/kg
LOAEL : 7.9 mg/kg
Application Route : Oral
Exposure time : 13 Weeks

Target Organs : Central nervous system Symptoms : Tremors, Salivation

Species : Dog
NOAEL : 0.3 mg/kg
LOAEL : 0.9 mg/kg
Application Route : Oral
Exposure time : 90 Days

Target Organs : Central nervous system

Symptoms : Tremors, Lachrymation, Salivation



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Species : Dog

NOAEL : 1.15 mg/kg

Application Route : Oral Exposure time : 52 Weeks

Target Organs : Central nervous system Symptoms : Tremors, Lachrymation

2,6-Di-tert-butyl-p-cresol:

Species : Rat
NOAEL : 25 mg/kg
Application Route : Ingestion
Exposure time : 22 Months

Aspiration toxicity

Not classified based on available information.

Components:

Fluralaner:

Not applicable

Acetone:

The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.

Experience with human exposure

Components:

Fluralaner:

Skin contact : Remarks: May irritate skin.

Eye contact : Remarks: May cause eye irritation.

Moxidectin:

Inhalation : Remarks: No human information is available.

Skin contact : Remarks: No human information is available.

Eye contact : Remarks: No human information is available.

Ingestion : Remarks: No human information is available.



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

N,N-Dimethylacetamide:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 500 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 500 mg/l

Exposure time: 48 h

Method: Directive 67/548/EEC, Annex V, C.2.

Toxicity to algae/aquatic

plants

EC50 (Desmodesmus subspicatus (green algae)): > 500 mg/l

Exposure time: 72 h

EC10 (Desmodesmus subspicatus (green algae)): > 500 mg/l

Exposure time: 72 h

Toxicity to microorganisms : EC10: > 1,995 mg/l

Exposure time: 30 min

Fluralaner:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.0488 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 0.015 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Remarks: No toxicity at the limit of solubility

Toxicity to algae/aquatic

plants

NOEC (Pseudokirchneriella subcapitata (green algae)): >=

0.08 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: No toxicity at the limit of solubility

Toxicity to fish (Chronic tox-

icity)

NOEC (Zebrafish): >= 0.049 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 204

Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 0.0736 µg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

M-Factor (Chronic aquatic

toxicity)

1,000



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Poly(oxy-1,2-ethanediyl), .alpha.-[(tetrahydro-2-furanyl)methyl]-.omega.-hydroxy-:

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

EC50 (Pseudokirchneriella subcapitata (green algae)): > 100

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

EC10 (Pseudokirchneriella subcapitata (green algae)): > 100

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Acetone:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 5,540 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia pulex (Water flea)): 8,800 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

NOEC (Pseudokirchneriella subcapitata (green algae)): 7,000

mg/l

Exposure time: 96 h

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): >= 79 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

Toxicity to microorganisms : EC50: 61,150 mg/l

Exposure time: 30 min Method: ISO 8192

N,N-Diethyl-m-toluamide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 97 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 75 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

Exposure time: 72 h

Method: OECD Test Guideline 201

NOEC (Selenastrum capricornutum (green algae)): 7.6 mg/l

ErC50 (Selenastrum capricornutum (green algae)): 41 mg/l

Exposure time: 72 h



Fluralaner / Moxidectin Liquid Formulation

SDS Number: Date of last issue: 2024/07/06 Version Revision Date: 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Method: OECD Test Guideline 201

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 3.7 mg/l

Exposure time: 21 d

Moxidectin:

Toxicity to fish LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.0006 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

LC50 (Oncorhynchus mykiss (rainbow trout)): 0.0002 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.00003 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

EC50 (Pseudokirchneriella subcapitata (green algae)): 0.087

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

M-Factor (Acute aquatic tox-

icity)

10,000

M-Factor (Chronic aquatic

toxicity)

10,000

2,6-Di-tert-butyl-p-cresol:

LC50 (Danio rerio (zebra fish)): > 0.57 mg/l Toxicity to fish

Exposure time: 96 h

Method: Directive 67/548/EEC, Annex V, C.1.

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.48 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0.24

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.24

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

M-Factor (Acute aquatic tox-

Toxicity to fish (Chronic tox-

icity)

NOEC (Oryzias latipes (Japanese medaka)): 0.053 mg/l

Exposure time: 30 d

Method: OECD Test Guideline 210



Fluralaner / Moxidectin Liquid Formulation

SDS Number: Date of last issue: 2024/07/06 Version **Revision Date:** 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Toxicity to daphnia and other : NOEC (Daphnia magna (Water flea)): 0.316 mg/l

aquatic invertebrates (Chron-

ic toxicity)

M-Factor (Chronic aquatic

toxicity)

Toxicity to microorganisms

: 1

EC50: > 10,000 mg/l

Exposure time: 21 d

Exposure time: 3 h

Method: OECD Test Guideline 209

Persistence and degradability

Components:

N,N-Dimethylacetamide:

Biodegradability Result: Not readily biodegradable.

> Biodegradation: 70 % Exposure time: 28 d

Remarks: The 10 day time window criterion is not fulfilled.

Poly(oxy-1,2-ethanediyl), .alpha.-[(tetrahydro-2-furanyl)methyl]-.omega.-hydroxy-:

Biodegradability Result: Not readily biodegradable.

Method: OECD Test Guideline 301F

Remarks: Based on data from similar materials

Acetone:

Result: Readily biodegradable. Biodegradability

> Biodegradation: 91 % Exposure time: 28 d

N,N-Diethyl-m-toluamide:

Biodegradability Result: Readily biodegradable.

> Biodegradation: 83.8 % Exposure time: 28 d

Method: OECD Test Guideline 301B

2,6-Di-tert-butyl-p-cresol:

Result: Not readily biodegradable. Biodegradability

> Biodegradation: 4.5 % Exposure time: 28 d

Method: OECD Test Guideline 301C

Bioaccumulative potential

Components:

Fluralaner:

Bioaccumulation Species: Zebrafish

Bioconcentration factor (BCF): 79.4



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Method: OECD Test Guideline 305

Partition coefficient: n-

octanol/water

log Pow: 4.5

Poly(oxy-1,2-ethanediyl), .alpha.-[(tetrahydro-2-furanyl)methyl]-.omega.-hydroxy-:

Partition coefficient: n- : log Pow: < 4

octanol/water Remarks: Calculation

Acetone:

Partition coefficient: n-

octanol/water

log Pow: -0.27 - -0.23

N,N-Diethyl-m-toluamide:

Partition coefficient: n-

octanol/water

log Pow: 2.02

Moxidectin:

Partition coefficient: n-

octanol/water

log Pow: 4.7

2,6-Di-tert-butyl-p-cresol:

Bioaccumulation : Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 330 - 1,800

Partition coefficient: n-

octanol/water

log Pow: 5.1

Mobility in soil

Components:

Fluralaner:

Distribution among environ-

mental compartments

log Koc: 4.1

Hazardous to the ozone layer

Not applicable

Other adverse effects

Components:

Fluralaner:

Results of PBT and vPvB

Substance is not persistent, bioaccumulative, and toxic (PBT).

assessment

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste han-



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

dling site for recycling or disposal.

Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 1090

Proper shipping name : ACETONE SOLUTION

Class : 3
Packing group : II
Labels : 3
Environmentally hazardous : no

IATA-DGR

UN/ID No. : UN 1090

Proper shipping name : Acetone solution

Class : 3 Packing group : II

Labels : Flammable Liquids

Packing instruction (cargo : 364

aircraft)

Class

Packing instruction (passen- : 353

ger aircraft)

IMDG-Code

UN number : UN 1090

Proper shipping name : ACETONE SOLUTION (Fluralaner, Moxidectin)

: 3 : II

Packing group : II
Labels : 3
EmS Code : F-E, S-D
Marine pollutant : yes

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

Not applicable for product as supplied.

National Regulations

Refer to section 15 for specific national regulation.

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.

ERG Code : 127



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

15. REGULATORY INFORMATION

Related Regulations

Fire Service Law

Group 4, Type 1 petroleums, Water insoluble liquid, (200 litre), Hazardous rank II

Chemical Substance Control Law

Priority Assessment Chemical Substance

Chemical name	Number
N,N-Dimethylacetamide	277
2,6-Di-tert-butyl-4-methylphenol	64

Industrial Safety and Health Law

Harmful Substances Prohibited from Manufacture

Not applicable

Harmful Substances Required Permission for Manufacture

Not applicable

Substances Prevented From Impairment of Health

Chemical name
N,N-dimethylacetamide

Circular concerning Information on Chemicals having Mutagenicity - Annex 2: Information on Existing Chemicals having Mutagenicity

Not applicable

Circular concerning Information on Chemicals having Mutagenicity - Annex 1: Information on Notified Substances having Mutagenicity

Not applicable

Substances Subject to be Notified Names

Article 57-2 (Enforcement Order Table 9)

Chemical name	Concentration (%)	Remarks
N,N-Dimethylacetamide	>=30 - <=35	-
N,N-diethyl-m-toluamide	>=10 - <=15	From April 1st, 2026
Acetone	>=10 - <=15	-
2,6-Di-tert-butyl-4-cresol	>=0.1 - <1	-

Substances Subject to be Indicated Names

Article 57 (Enforcement Order Article 18)

Titlete of (Emercement Graci Titlete 19)	
Chemical name	Remarks
N,N-Dimethylacetamide	-
N,N-diethyl-m-toluamide	From April 1st, 2026
acetone	-

Skin and Eye Damage Substances for PPE Requirements (ISHL MO Art. 594-2)

	-	-
Chemical name		
N,N-Dimethylacetamide		



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Carcinogenic Substances (Article 577-2 of the Occupational Health and Safety Regulations)

Chemical name
N,N-dimethylacetamide

Ordinance on Prevention of Hazards Due to Specified Chemical Substances

Not applicable

Ordinance on Prevention of Lead Poisoning

Not applicable

Ordinance on Prevention of Tetraalkyl Lead Poisoning

Not applicable

Ordinance on Prevention of Organic Solvent Poisoning

Organic Solvents Class 2

Enforcement Order of the Industrial Safety and Health Law - Attached table 1 (Dangerous Substances)

Inflammable Substance

Poisonous and Deleterious Substances Control Law

Not applicable

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

Class I Designated Chemical Substances

Chemical name	Administration number	Concentration (%)
N,N-Dimethylacetamide	213	35

High Pressure Gas Safety Act

Not applicable

Explosive Control Law

Not applicable

Vessel Safety Law

Flammable liquids (Article 2 and 3 of rules on shipping and storage of dangerous goods and its Attached Table 1)

Aviation Law

Flammable liquid (Article 194 of The Enforcement Rules of Aviation Law and its Attached Table 1)

Marine Pollution and Sea Disaster Prevention etc Law

Bulk transportation : Noxious liquid substance(Category Z)

Pack transportation : Classified as marine pollutant

Narcotics and Psychotropics Control Act

Narcotic or Psychotropic Raw Material (Export / Import Permission)

Not applicable

Specific Narcotic or Psychotropic Raw Material (Export / Import permission)

Not applicable



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

Waste Disposal and Public Cleansing Law

Specially Controlled Industrial Waste

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

AICS : not determined

DSL : not determined

IECSC : not determined

16. OTHER INFORMATION

In this SDS, if the concentration of substances subject to notification under the Industrial Safety and Health Law is indicated as a range, it includes cases where it is a trade secret.

Further information

Sources of key data used to

compile the Safety Data

Sheet

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

cy, http://echa.europa.eu/

Date format : yyyy/mm/dd

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)

JP ISHL OEL 577-2(2) : Concentration standard (Value set by the Minister of Health,

Labour and Welfare stipulated under the Ministerial Ordinance

Article 577-2(2))

JP OEL ISHL : Japan. Administrative Control Levels

JP OEL JSOH : Japan. The Japan Society for Occupational Health. Recom-

mendation of Occupational Exposure Limits

JSOH : Occupational exposure limits based on biological monitoring

(JSOH).

ACGIH / TWA : 8-hour, time-weighted average ACGIH / STEL : Short-term exposure limit

JP ISHL OEL 577-2(2) / 8h- : 8-hour Occupational Exposure Limit-Mean

OEL-M

JP OEL ISHL / ACL : Administrative Control level

JP OEL JSOH / OEL-M : Occupational Exposure Limit-Mean

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 con-



Fluralaner / Moxidectin Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 14.1 2024/09/28 656884-00026 Date of first issue: 2016/05/02

centration; 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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

JP / EN