

Deltamethrin Pour-On Formulation

Version Revision Date: SDS Number: Date of last issue: 2024/04/06 10.0 2024/09/28 657089-00024 Date of first issue: 2016/05/02

1. PRODUCT AND COMPANY IDENTIFICATION

Chemical product name : Deltamethrin Pour-On Formulation

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

E-mail address : EHSDATASTEWARD@msd.com

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

Skin sensitisation : Category 1

Short-term (acute) aquatic

hazard

Category 1

Long-term (chronic) aquatic

hazard

Category 1

GHS label elements

Hazard pictograms :





Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : Prevention:

P261 Avoid breathing mist or vapours.

P272 Contaminated work clothing should not be allowed out of

the workplace.



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P273 Avoid release to the environment.

P280 Wear protective gloves.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.

P333 + P313 If skin irritation or rash occurs: Get medical ad-

vice/ attention.

P362 + P364 Take off contaminated clothing and wash it before

P391 Collect spillage.

Disposal:

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

Other hazards which do not result in classification

lines of the emergency assumed

Important symptoms and out: Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)	ENCS No.
Propylene glycol	57-55-6	>= 10 - < 20	2-234
	50040.00.5	0.05	
deltamethrin (ISO)	52918-63-5	>= 0.25 - < 1	
Formaldehyde	50-00-0	>= 0.0025 - < 0.025	2-482

4. FIRST AID MEASURES

In case of eye contact

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. Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed If swallowed, DO NOT induce vomiting.

Get medical attention.



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Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and

delayed

May cause an allergic skin reaction. This product contains a pyrethroid.

Pyrethroid poisoning should not be confused with carbamate

or organophosphate poisoning.

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).

Notes to physician : Treat symptomatically and supportively.

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

None known.

Specific hazards during fire-

fighting

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod- :

ucts

Carbon oxides

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

SO.

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, protective equipment and emer-

gency procedures

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.

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 : Soak up with inert absorbent material.



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containment and cleaning up For large spills, provide dyking or other appropriate contain-

ment 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.

Local/Total ventilation Advice on safe handling Use only with adequate ventilation. Do not get on skin or clothing.

Avoid breathing mist or vapours.

Do not swallow.

Avoid contact with eyes.

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

sessment

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

environment.

Avoidance of contact Hygiene measures

Oxidizing agents

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

flushing systems and safety showers close to the working

place.

When using do not eat, drink or smoke.

Contaminated work clothing should not be allowed out of the

workplace.

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 in accordance with the particular national regulations.

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

Strong oxidizing agents

Packaging material : Unsuitable material: None known.



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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
deltamethrin (ISO)	52918-63-5	TWA	15 μg/m3 (OEB 3)	Internal
	Further information: DSEN, Skin			
		Wipe limit	100 μg/100 cm ²	Internal
Formaldehyde	50-00-0	ACL	0.1 ppm	JP OEL ISHL
		OEL-M	0.1 ppm 0.12 mg/m3	JP OEL JSOH
	Further information: Airway sensitizing agent; Group 2 substances which probably induce allergic reactions in humans., Skin sensitizing agent; Group 1 substances which induce allergic reactions in humans, Group 2A: probably carcinogenic to humans			
		OEL-C	0.2 ppm 0.24 mg/m3	JP OEL JSOH
	Further information: Airway sensitizing agent; Group 2 substances which probably induce allergic reactions in humans., Skin sensitizing agent; Group 1 substances which induce allergic reactions in humans, Group 2A: probably carcinogenic to humans			
		TWA	0.1 ppm	ACGIH
		STEL	0.3 ppm	ACGIH

Engineering measures : Use appropriate engineering controls and manufacturing

technologies to control airborne concentrations (e.g., drip-

less 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.

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

: Particulates type

Material : Chemical-resistant gloves

Remarks : Consider double gloving.



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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 googles.

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 Aqueous solution, suspension

Colour white

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) No data available

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 No data available

Decomposition temperature No data available

No data available pΗ

Evaporation rate No data available

Auto-ignition temperature No data available

Viscosity

Viscosity, kinematic No data available

Solubility(ies)



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Water solubility : completely miscible

Partition coefficient: n-

octanol/water

No data available

Vapour pressure : No data available

Density and / or relative density

Relative density : No data available

Density : No data available

Relative vapour density : No data available

Explosive properties : Not explosive

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

Molecular weight : Not applicable

Particle characteristics

Particle size : Not applicable

10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard. Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

Can react with strong oxidizing agents.

Conditions to avoid : None known.
Incompatible materials : Oxidizing agents

Hazardous decomposition : No haza

products

No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of:

exposure

Inhalation
Skin contact

Ingestion Eye contact

Acute toxicity

Not classified based on available information.

Product:

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

Method: Calculation method

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



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Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

Components:

Propylene glycol:

Acute oral toxicity : LD50 (Rat): 22,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 44.9 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

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

Assessment: The substance or mixture has no acute dermal

toxicity

deltamethrin (ISO):

Acute oral toxicity : LD50 (Rat): 66.7 mg/kg

LD50 (Rat): 9 - 139 mg/kg

LD50 (Mouse): 19 - 34 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.8 mg/l

Exposure time: 2 h

Test atmosphere: dust/mist

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

LD50 (Rat): > 800 mg/kg

Acute toxicity (other routes of :

administration)

LD50 (Rat): 2.5 mg/kg

Application Route: Intravenous

LD50 (Mouse): 10 mg/kg

Application Route: Intraperitoneal

Formaldehyde:

Acute oral toxicity : Acute toxicity estimate: 100 mg/kg

Method: Expert judgement

Remarks: Based on national or regional regulation.

Acute inhalation toxicity : Acute toxicity estimate (Rat): 100 ppm

Exposure time: 4 h
Test atmosphere: gas
Method: Expert judgement

Acute dermal toxicity : LD50 (Rabbit): 270 mg/kg



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Skin corrosion/irritation

Not classified based on available information.

Components:

Propylene glycol:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

deltamethrin (ISO):

Species : Rabbit

Result No skin irritation

Formaldehyde:

Result Corrosive after 3 minutes to 1 hour of exposure

Remarks Based on national or regional regulation.

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Propylene glycol:

Species : Rabbit

Result : No eye irritation

Method : OECD Test Guideline 405

deltamethrin (ISO):

Rabbit

Species Result Moderate eye irritation

Formaldehyde:

Result Irreversible effects on the eye Remarks Based on skin corrosivity.

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:

Propylene glycol:

Test Type **Maximisation Test** Exposure routes Skin contact



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Species : Guinea pig Result : negative

deltamethrin (ISO):

Test Type : Maximisation Test

Exposure routes : Dermal
Species : Guinea pig
Result : negative

Test Type : Human repeat insult patch test (HRIPT)

Exposure routes : Dermal Species : Humans Result : positive

Formaldehyde:

Test Type : Human repeat insult patch test (HRIPT)

Exposure routes : Skin contact
Species : Humans
Result : positive

Assessment : Probability or evidence of high skin sensitisation rate in hu-

mans

Germ cell mutagenicity

Not classified based on available information.

Components:

Propylene glycol:

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

Result: negative

Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

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

cytogenetic assay) Species: Mouse

Application Route: Intraperitoneal injection

Result: negative

deltamethrin (ISO):

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

Result: negative

Test Type: DNA Repair Test system: Escherichia coli

Result: negative



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Test Type: Chromosomal aberration
Test system: Chinese hamster ovary cells

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster lung cells

Concentration: LOAEL: 20 mg/kg

Result: positive

Genotoxicity in vivo : Test Type: Micronucleus test

Species: Mouse Application Route: Oral Result: negative

Test Type: dominant lethal test

Species: Mouse Application Route: Oral Result: negative

Test Type: sister chromatid exchange assay

Species: Mouse

Cell type: Bone marrow Application Route: Oral

Result: negative

Formaldehyde:

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

Result: positive

Test Type: In vitro mammalian cell gene mutation test

Result: positive

Test Type: Chromosome aberration test in vitro

Result: positive

Genotoxicity in vivo : Test Type: In vivo mammalian alkaline comet assay

Species: Mouse

Application Route: Inhalation

Result: positive

Germ cell mutagenicity -

Assessment

Positive result(s) from in vivo mammalian somatic cell muta-

genicity tests.

Carcinogenicity

Not classified based on available information.

Components:

Propylene glycol:

Species : Rat Application Route : Ingestion



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Exposure time : 2 Years
Result : negative

deltamethrin (ISO):

Species : Mouse, male and female

Application Route : oral (feed)
Exposure time : 104 weeks

NOAEL : 8 mg/kg body weight LOAEL : 4 mg/kg body weight

Result : positive Target Organs : Lymph nodes

Species : Rat, male and female

Application Route : oral (feed)
Exposure time : 2 Years
Result : negative

Species : Dog, male and female

Application Route : oral (feed)
Exposure time : 2 Years

NOAEL : 1 mg/kg body weight

Result : negative

Formaldehyde:

Species : Rat

Application Route : inhalation (gas)
Exposure time : 28 Months
Result : positive

Carcinogenicity - Assess-

ment

: Sufficient evidence of carcinogenicity in animal experiments

Reproductive toxicity

Not classified based on available information.

Components:

Propylene glycol:

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

Species: Mouse

Application Route: Ingestion

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Mouse

Application Route: Ingestion

Result: negative

deltamethrin (ISO):

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

Species: Rat



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Application Route: oral (feed)

Early Embryonic Development: NOAEL: 50 mg/kg body

weiaht

Symptoms: No effects on fertility, Embryo-foetal toxicity

Remarks: Significant toxicity observed in testing

Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Oral

Early Embryonic Development: LOAEL: 84 - 149 mg/kg body

weiaht

Symptoms: No effects on fertility, Embryo-foetal toxicity

Test Type: Fertility Species: Rat, male Application Route: Oral

Fertility: LOAEL: 1 mg/kg body weight

Symptoms: Effects on fertility

Target Organs: Testes

Effects on foetal develop-

ment

Test Type: Development

Species: Mouse

Application Route: oral (gavage)

Developmental Toxicity: LOAEL: 1 mg/kg body weight

Result: Skeletal malformations Remarks: Maternal toxicity observed.

Test Type: Development Species: Rat, female

Developmental Toxicity: NOAEL: 10 mg/kg body weight

Symptoms: No effects on foetal development

Test Type: Development Species: Rabbit, female

Application Route: oral (gavage)

Developmental Toxicity: NOAEL: 16 mg/kg body weight

Symptoms: No effects on foetal development

Reproductive toxicity - As-

sessment

Some evidence of adverse effects on sexual function and

fertility, and/or on development, based on animal experiments.

Formaldehyde:

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: inhalation (gas)

Result: negative

STOT - single exposure

Not classified based on available information.



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Components:

deltamethrin (ISO):

Assessment : May cause respiratory irritation.

Formaldehyde:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Components:

deltamethrin (ISO):

Exposure routes : Ingestion

Target Organs : Central nervous system, Immune system

Assessment : Causes damage to organs through prolonged or repeated

exposure.

Exposure routes : inhalation (dust/mist/fume)
Target Organs : Central nervous system

Assessment : Causes damage to organs through prolonged or repeated

exposure.

Repeated dose toxicity

Components:

Propylene glycol:

Species : Rat, male

NOAEL : >= 1,700 mg/kg

Application Route : Ingestion

Exposure time : 2 yr

deltamethrin (ISO):

Species : Rat, male and female

NOAEL : 1 mg/kg
LOAEL : 2.5 mg/kg
Application Route : Oral
Exposure time : 13 Weeks
Target Organs : Nervous system
Symptoms : hyperexcitability

Species : Rat LOAEL : 3 mg/m3

Application Route : inhalation (dust/mist/fume)
Exposure time : 2 wk / 5 d/wk / 6 h/d

Symptoms : Local irritation, respiratory tract irritation

Species : Dog



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NOAEL : 0.1 mg/kg
LOAEL : 1 mg/kg
Application Route : Oral
Exposure time : 13 Weeks
Target Organs : Nervous system

Symptoms : Dilatation of the pupil, Vomiting, Tremors, Diarrhoea, Saliva-

tion

Species : Rat

NOAEL : 14 mg/kg

LOAEL : 54 mg/kg

Application Route : Oral

Exposure time : 91 d

Target Organs : Nervous system

Species : Mouse
LOAEL : 6 mg/kg
Application Route : Oral
Exposure time : 12 Weeks
Target Organs : Immune system

Symptoms : immune system effects

Aspiration toxicity

Not classified based on available information.

Experience with human exposure

Components:

deltamethrin (ISO):

Inhalation : Symptoms: respiratory tract irritation, Dizziness, Sweating,

Headache, Nausea, Vomiting, anorexia, Fatigue, tingling,

Palpitation, Blurred vision, muscle twitching

Skin contact : Symptoms: Skin irritation, Erythema, pruritis, Headache, Nau-

sea, Vomiting, Dizziness, tingling, Sweating, muscle twitching,

Blurred vision, Fatigue, anorexia, Allergic reactions

Ingestion : Symptoms: muscle pain, Small pupils

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Propylene glycol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l

Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l



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aquatic invertebrates Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Skeletonema costatum (marine diatom)): 19,300 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Ceriodaphnia dubia (water flea)): 13,020 mg/l

Exposure time: 7 d

Toxicity to microorganisms : NOEC (Pseudomonas putida): > 20,000 mg/l

Exposure time: 18 h

deltamethrin (ISO):

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 0.00048

mg/l

Exposure time: 96 h

LC50 (Oncorhynchus mykiss (rainbow trout)): 0.00039 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Mysidopsis bahia (opossum shrimp)): 0.0037 μg/l

Exposure time: 48 h

EC50 (Daphnia magna (Water flea)): 0.0035 mg/l

Exposure time: 48 h

LC50 (Gammarus fasciatus (freshwater shrimp)): 0.0003 µg/l

Exposure time: 96 h

Toxicity to algae/aquatic

plants

EC50 (Pseudokirchneriella subcapitata (green algae)): > 9.1

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: No toxicity at the limit of solubility

M-Factor (Acute aquatic tox- :

city)

1,000,000

Toxicity to fish (Chronic tox-

icity)

NOEC (Pimephales promelas (fathead minnow)): 0.000022

mg/l

Exposure time: 36 d

NOEC (Pimephales promelas (fathead minnow)): 0.000017

mg/l

Exposure time: 260 d

Toxicity to daphnia and other aquatic invertebrates (Chron-

ic toxicity)

Toxicity to daphnia and other : NOEC (Daphnia magna (Water flea)): 0.0041 μg/l

Exposure time: 21 d

M-Factor (Chronic aquatic

toxicity)

: 1,000,000

Formaldehyde:



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Toxicity to fish : LC50 (Morone saxatilis (striped bass)): 6.7 mg/l

Exposure time: 96 h

aquatic invertebrates

Toxicity to daphnia and other : EC50 (Daphnia pulex (Water flea)): 5.8 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

: ErC50 (Desmodesmus subspicatus (green algae)): 4.89 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to daphnia and other: aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 1.04 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

: EC50 (activated sludge): 19 mg/l Toxicity to microorganisms

Exposure time: 3 h

Method: OECD Test Guideline 209

Persistence and degradability

Components:

Propylene glycol:

Biodegradability : Result: Readily biodegradable.

> Biodegradation: 98.3 % Exposure time: 28 d

Method: OECD Test Guideline 301F

deltamethrin (ISO):

Stability in water Hydrolysis: 0 %(30 d)

Formaldehyde:

Biodegradability Result: Readily biodegradable.

> Biodegradation: 99 % Exposure time: 28 d

Method: OECD Test Guideline 301A

Bioaccumulative potential

Components:

Propylene glycol:

Partition coefficient: nlog Pow: -1.07

octanol/water Method: Regulation (EC) No. 440/2008, Annex, A.8

deltamethrin (ISO):

Bioaccumulation Species: Lepomis macrochirus (Bluegill sunfish)

Bioconcentration factor (BCF): 1,800



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Partition coefficient: n-

octanol/water

log Pow: 4.6

Formaldehyde:

Partition coefficient: nlog Pow: 0.35

octanol/water Remarks: Calculation

Mobility in soil

Components:

deltamethrin (ISO):

Distribution among environ- : log Koc: 7.2

mental compartments

Hazardous to the ozone layer

Not applicable

Other adverse effects

No data available

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-

dling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number UN 3082

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(deltamethrin (ISO))

Class 9 Packing group Ш Labels 9 Environmentally hazardous yes

IATA-DGR

UN/ID No. UN 3082

Environmentally hazardous substance, liquid, n.o.s. Proper shipping name

(deltamethrin (ISO))

Class 9 Ш Packing group

Miscellaneous Labels

Packing instruction (cargo 964



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aircraft)

Packing instruction (passen- : 964

ger aircraft)

Environmentally hazardous : yes

IMDG-Code

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(deltamethrin (ISO))

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.

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 : 171

15. REGULATORY INFORMATION

Related Regulations

Fire Service Law

Not applicable to dangerous materials / designated flammables.

Chemical Substance Control Law

Priority Assessment Chemical Substance

Chemical name	Number
Propane-1,2-diol	106
Formaldehyde	25

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

Not applicable



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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
Propylene glycol	>=10 - <20	From April 1st, 2025

Substances Subject to be Indicated Names

Article 57 (Enforcement Order Article 18)

	name	Remarks
Propylene	glycol	From April 1st, 2025

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

Not applicable

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

Not applicable

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

Not applicable

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

Not applicable

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

Not applicable

High Pressure Gas Safety Act

Not applicable

Explosive Control Law

Not applicable



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Vessel Safety Law

Miscellaneous dangerous substances and articles (Article 2 and 3 of rules on shipping and storage of dangerous goods and its Attached Table 1)

Aviation Law

Miscellaneous dangerous substances and articles (Article 194 of The Enforcement Rules of Aviation Law and its Attached Table 1)

Marine Pollution and Sea Disaster Prevention etc Law

Bulk transportation : Not classified as noxious liquid substance

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

Waste Disposal and Public Cleansing Law

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/

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : yyyy/mm/dd

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
JP OEL ISHL : Japan. Administrative Control Levels

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

mendation of Occupational Exposure Limits

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



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JP OEL ISHL / ACL : Administrative Control level

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

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

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