SAFETY DATA SHEET

BORI AQUA IMPREGNATION WITH BIOCIDES

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	17.05.2024	MAT000400654 LB/EN	Date of first issue: 17.05.2024

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

1.1 Product identifier

Trade name : BORI AQUA IMPREGNATION WITH BIOCIDES

Product code : 40065402

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

Use of the Substance/Mixture : Consumer uses, Widespread use by professional workers
Roller application or brushing, Dipping
Wood preservatives, Biocidal product

1.3 Details of the supplier of the safety data sheet

Company : KANSAI HELIOS Slovenija d.o.o.
Količevo 65
1230 Domžale
Slovenia

Telephone Company : 386 (1) 722 4383

Telefax Company : 386 (1) 722 4310

Responsible/issuing person : 386 (1) 722 4383
productsafety@kansai-helios.si

1.4 Emergency telephone number

Ambulance & Emergency Emergency telephone number: 140

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements : H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read carefully and follow all instructions.

Prevention:

P273 Avoid release to the environment.

Response:

P391 Collect spillage.

Disposal:

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

Additional Labelling

EUH208 Contains 1,2-benzisothiazol-3(2H)-one, reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one and 2-methyl-2H -isothiazol-3- one (3:1), 3-iodo-2-propynyl butylcarbamate, permethrin (ISO). May produce an allergic reaction.

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Biocides

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
3-iodo-2-propynyl butylcarbamate	55406-53-6 259-627-5 616-212-00-7 01-2120762115-60	Acute Tox. 4; H302 Acute Tox. 3; H331 Eye Dam. 1; H318 Skin Sens. 1; H317 STOT RE 1; H372 (larynx)	>= 0.25 - < 1

		Aquatic Acute 1; H400 Aquatic Chronic 1; H410 ——————— M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 1	
tebuconazole	107534-96-3 403-640-2 603-197-00-7 01-0000015329-67	Acute Tox. 4; H302 Repr. 2; H361d Aquatic Acute 1; H400 Aquatic Chronic 1; H410 ——————— M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 10	>= 0.1 - < 0.25
Fatty alcohol polyglycol ether 6-15 EO	106232-83-1 500-294-5	Acute Tox. 4; H332 Eye Dam. 1; H318 Aquatic Acute 1; H400	>= 0.1 - < 0.25
2-ethylhexanoic acid, zirconium salt	22464-99-9 245-018-1 01-2119979088-21	Repr. 1B; H360D	>= 0.1 - < 0.3
permethrin(ISO)	52645-53-1 258-067-9 613-058-00-2	Acute Tox. 4; H302 Acute Tox. 3; H331 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 ——————— M-Factor (Acute aquatic toxicity): 1,000 M-Factor (Chronic aquatic toxicity): 1,000	>= 0.1 - < 0.25
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6 01-2120761540-60	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411	>= 0.0025 - < 0.025
mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-	55965-84-9	Acute Tox. 3; H301 Acute Tox. 2; H330	>= 0.0002 - < 0.0015

isothiazol-3-one (3:1)	613-167-00-5 01-2120764691-48	Acute Tox. 2; H310 Skin Corr. 1C; H314 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100	
Substances with a workplace exposure limit :			
(2-methoxymethylethoxy)propanol	34590-94-8 252-104-2 01-2119450011-60		>= 1 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : If on skin, rinse well with water.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Induce vomiting immediately and call a physician.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

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

Hazardous combustion products : No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : 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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Do not flush into surface water or sanitary sewer system.
Prevent further leakage or spillage if safe to do so.

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

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

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Do not breathe vapours/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. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	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.
Advice on common storage	:	No materials to be especially mentioned.
Further information on storage stability	:	No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s)	:	For further information, refer to the product technical data sheet. Consult the technical guidelines for the use of this substance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
(2-Methoxymeth-ylethoxy)propanol	34590-94-8	TWA	50 ppm 308 mg/m3	2000/39/EC

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health ef-fects	Value
(2-Methoxymethyleth-oxy)propanol	Workers	Inhalation	Long-term systemic effects	308 mg/m3
	Consumers	Inhalation	Long-term systemic effects	37.2 mg/m3
	Workers	Dermal	Long-term systemic effects	283 mg/kg bw/day
	Consumers	Dermal	Long-term systemic effects	121 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	36 mg/kg bw/day
2-ethylhexanoic acid, zirconium salt	Workers	Inhalation	Long-term systemic effects	32 mg/m3
	Consumers	Inhalation	Long-term systemic effects	8 mg/m3
	Consumers	Oral	Long-term systemic effects	2.5 mg/kg bw/day
	Workers	Dermal	Long-term systemic effects	6.49 mg/kg bw/day
	Consumers	Dermal	Long-term systemic effects	3.25 mg/kg bw/day
1,2-benzisothiazol-3(2H)-one	Workers	Inhalation	Long-term systemic effects	6.81 mg/m3
	Workers	Dermal	Long-term systemic effects	0.966 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1.2 mg/m3
	Consumers	Dermal	Long-term systemic effects	0.345 mg/kg bw/day
reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one and 2-methyl-2H - isothiazol-3- one (3:1)	Consumers	Inhalation	Acute local effects	0.04 mg/m3
	Workers	Inhalation	Long-term local ef-fects	0.02 mg/m3
	Workers	Inhalation	Acute local effects	0.04 mg/m3
	Consumers	Inhalation	Long-term local ef-fects	0.02 mg/m3
	Consumers	Oral	Long-term systemic effects	0.09 mg/kg bw/day
	Consumers	Oral	Acute systemic ef-	0.11 mg/kg

			fects	bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
(2-Methoxymethylethoxy)propanol	Soil	2.74 mg/kg dry weight (d.w.)
	Marine water	1.9 mg/l
	Fresh water	19 mg/l
	Marine sediment	7.02 mg/kg dry weight (d.w.)
	Fresh water sediment	70.2 mg/kg dry weight (d.w.)
	Sewage treatment plant	4168 mg/l
	Intermittent use/release	190 mg/l
2-ethylhexanoic acid, zirconium salt	Soil	1.06 mg/kg dry weight (d.w.)
	Marine water	0.036 mg/l
	Fresh water	0.36 mg/l
	Marine sediment	0.637 mg/kg dry weight (d.w.)
	Fresh water sediment	6.37 mg/kg dry weight (d.w.)
	Sewage treatment plant	71.7 mg/l
	Intermittent use/release	0.493 mg/l
1,2-benzisothiazol-3(2H)-one	Fresh water	0.00403 mg/l
	Intermittent use/release	0.0011 mg/l
	Marine water	0.000403 mg/l
	Sewage treatment plant	1.03 mg/l
	Fresh water sediment	0.0499 mg/kg dry weight (d.w.)
	Marine sediment	0.00499 mg/kg dry weight (d.w.)
	Soil	3 mg/kg dry weight (d.w.)
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H -isothiazol-3- one (3:1)	Soil	0.01 mg/kg dry weight (d.w.)
	Marine water	0.00339 mg/l
	Fresh water	0.00339 mg/l
	Marine sediment	0.027 mg/kg dry weight (d.w.)
	Fresh water sediment	0.027 mg/kg dry weight (d.w.)
	Sewage treatment plant	0.23 mg/l
	Intermittent use/release	0.00339 mg/l

8.2 Exposure controls

Personal protective equipment

Eye/face protection : Equipment should conform to EN 166

Eye wash bottle with pure water
Tightly fitting safety goggles

Hand protection

Gloves	:	Nitrile rubber (> 0,1 mm; < 60 min); ISO EN374 butyl-rubber (> 0,6 mm; < 240 min); ISO EN374 Viton® (> 0,6 mm; < 240 min); ISO EN374 PE laminate (> 0,1 mm; < 240 min); ISO EN374
Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection	:	No personal respiratory protective equipment normally required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	milky
Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	7.5 - 8.5
Melting point/freezing point	:	0.0 °C (calculation method (principal components, lowest value))
Boiling point/boiling range	:	100 °C (calculation method (principal components, lowest value))
Flash point	:	Not applicable
Flammability (solid, gas)	:	Not applicable
Vapour pressure	:	23 hPa (calculation method (principal components, highest value)) (20 °C)
Relative density	:	1.00 (calculation method (principal components, highest value))

Density	:	1.00 - 1.02 g/cm3
Solubility(ies)		
Water solubility	:	soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Viscosity		
Viscosity, dynamic	:	similar to water
Viscosity, kinematic	:	< 21 mm2/s (40 °C)

9.2 Other information

No data available

VOC : (Directive 2004/42/EC)
50 g/l

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

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

10.4 Conditions to avoid

Conditions to avoid : No data available

10.5 Incompatible materials

Materials to avoid : Incompatible with strong acids and bases.

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Not classified based on available information.

Product:

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Components:

3-iodo-2-propynyl butylcarbamate:

Acute oral toxicity : LD50 Oral (Rat): >= > 300 - 500 mg/kg
Method: OECD Test Guideline 423

Acute toxicity estimate: 500 mg/kg
Method: Converted acute toxicity point estimate

Acute inhalation toxicity : LC50 (Rat, male and female): 0.67 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

tebuconazole (ISO):

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

Alcohols, C12-15, branched and linear, ethoxylated:

Acute inhalation toxicity : Test atmosphere: vapour
Assessment: The component/mixture is moderately toxic after short term inhalation.

permethrin (ISO):

Acute oral toxicity : LD50 Oral (Rat): 1,479 mg/kg

Acute toxicity estimate: 500 mg/kg
Method: Converted acute toxicity point estimate

Acute inhalation toxicity : LC50 (Rat): > 0.599 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

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

1,2-benzisothiazol-3(2H)-one:

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

(2-Methoxymethylethoxy)propanol:

Acute oral toxicity : Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity	:	Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks : May cause skin irritation and/or dermatitis.

Components:

3-iodo-2-propynyl butylcarbamate:

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

permethrin (ISO):

Species	:	Rabbit
Result	:	No skin irritation

1,2-benzisothiazol-3(2H)-one:

Result : irritating

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks : Vapours may cause irritation to the eyes, respiratory system and the skin.

Components:

3-iodo-2-propynyl butylcarbamate:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Risk of serious damage to eyes.

Alcohols, C12-15, branched and linear, ethoxylated:

Result : Corrosive

permethrin (ISO):

Species	:	Rabbit
Result	:	No eye irritation

1,2-benzisothiazol-3(2H)-one:

Result : Corrosive

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Product:

Remarks : Causes sensitisation.

Components:

3-iodo-2-propynyl butylcarbamate:

Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : May cause sensitisation by skin contact.

permethrin (ISO):

Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : May cause sensitisation by skin contact.

1,2-benzisothiazol-3(2H)-one:

Result : Probability or evidence of skin sensitisation in humans

Germ cell mutagenicity

Not classified based on available information.

Components:

3-iodo-2-propynyl butylcarbamate:

Genotoxicity in vitro : Method: OECD Test Guideline 471
Result: negative

Method: OECD Test Guideline 476
Result: negative

Method: OECD Test Guideline 473
Result: negative

permethrin (ISO):

Genotoxicity in vitro : Result: negative

Carcinogenicity

Not classified based on available information.

Components:

permethrin (ISO):

Remarks	:	No significant adverse effects were reported

Reproductive toxicity

Not classified based on available information.

Components:

tebuconazole (ISO):

Reproductive toxicity - Assessment	:	Some evidence of adverse effects on sexual function and fertility ,and/or on development, based on animal experiments.

permethrin (ISO):

Effects on fertility	:	No significant adverse effects were reported
Effects on foetal development	:	No significant adverse effects were reported

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Components:

3-iodo-2-propynyl butylcarbamate:

Target Organs	:	larynx
Assessment	:	The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

permethrin (ISO):

Remarks	:	No significant adverse effects were reported

Repeated dose toxicity

Components:

3-iodo-2-propynyl butylcarbamate:

Species	:	Rat
NOAEL	:	1,16 mg/m3
Application Route	:	Inhalation
Test atmosphere	:	dust/mist
Exposure time	:	13 w
Number of exposures	:	7 d/w
Method	:	OECD Test Guideline 413

GLP	:	yes
Remarks	:	Subchronic toxicity
Species	:	Rat
NOAEL	:	20 mg/kg
Application Route	:	Oral
Exposure time	:	2 yr
Number of exposures	:	7 d/w

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks	:	No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

3-iodo-2-propynyl butylcarbamate:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.067 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia (water flea)): >= 0.16 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): >= 0.022 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Desmodesmus subspicatus (green algae)): 0.0046 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to microorganisms	:	EC50 (Bacteria): 44 mg/l Exposure time: 3 h
Toxicity to fish (Chronic toxicity)	:	NOEC: 0.0084 mg/l Exposure time: 35 d

Species: Pimephales promelas (fathead minnow)
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.05 mg/l
Exposure time: 21 d
Species: Daphnia (water flea)

M-Factor (Chronic aquatic toxicity) : 1

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity :

Very toxic to aquatic life with long lasting effects.

tebuconazole (ISO):

Toxicity to fish : LC50 (Fish): 4.4 mg/l
Exposure time: 96 h

Toxicity to algae/aquatic plants : IC50 (algae): 3.8 mg/l
Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : EC50 (Bacteria): 44 mg/l

M-Factor (Chronic aquatic toxicity) : 10

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity :

Very toxic to aquatic life with long lasting effects.

Alcohols, C12-15, branched and linear, ethoxylated:

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

permethrin (ISO):

Toxicity to fish : LC50 (Fish): 0.0076 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 0.00017 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (algae): 0.5 mg/l
Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : 1,000

M-Factor (Chronic aquatic toxicity) : 1,000

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity :

Very toxic to aquatic life with long lasting effects.

1,2-benzisothiazol-3(2H)-one:

Ecotoxicology Assessment

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

reaction mass of: 5-chloro-2- methyl-4-isothiazolin-3-one and 2-methyl-2H -isothiazol-3-one (3:1):

Toxicity to fish : LC50 (Salvelinus namaycush (lake trout)): >= 10.85 mg/l
Exposure time: 96 h

Toxicity to algae/aquatic plants : LC50 (algae): >= 0.82 mg/l
Exposure time: 48 h

LC50 (algae): 0.018 mg/l
Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : 100

M-Factor (Chronic aquatic toxicity) : 100

12.2 Persistence and degradability

Components:

3-iodo-2-propynyl butylcarbamate:

Biodegradability : Concentration: 0.02 mg/l
Result: Biodegradable

Biodegradation: > 80 %
Exposure time: 1 d
Method: OECD Test Guideline 302B

permethrin (ISO):

Biodegradability : Result: Not readily biodegradable.

12.3 Bioaccumulative potential

Components:

3-iodo-2-propynyl butylcarbamate:

Partition coefficient: n-octanol/water : log Pow: 2.8

permethrin (ISO):

Partition coefficient: n-octanol/water : log Pow: 5.95

1,2-benzisothiazol-3(2H)-one:

Partition coefficient: n-octanol/water : log Pow: 1.3

(2-Methoxymethylethoxy)propanol:

Partition coefficient: n-octanol/water : log Pow: -0.064

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

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

12.6 Other adverse effects

Product:

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number

ADN : UN 3082

ADR : UN 3082

RID : UN 3082

IMDG : UN 3082

IATA : UN 3082

14.2 UN proper shipping name

ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(permethrin, 3-iodo-2-propynyl butylcarbamate)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(permethrin, 3-iodo-2-propynyl butylcarbamate)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(permethrin, 3-iodo-2-propynyl butylcarbamate)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(permethrin, 3-iodo-2-propynyl butylcarbamate)

IATA : Environmentally hazardous substance, liquid, n.o.s.
(permethrin, 3-iodo-2-propynyl butylcarbamate)

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	9	
ADR	9	

RID : 9

IMDG : 9

IATA : 9

14.4 Packing group

ADN

Packing group	:	III
Classification Code	:	M6
Hazard Identification Number	:	90
Labels	:	9

ADR

Packing group	:	III
Classification Code	:	M6
Hazard Identification Number	:	90
Labels	:	9
Tunnel restriction code	:	(-)

RID

Packing group	:	III
Classification Code	:	M6
Hazard Identification Number	:	90
Labels	:	9

IMDG

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

IATA (Cargo)

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

IATA (Passenger)

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

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Passenger)
Environmentally hazardous : yes

IATA (Cargo)
Environmentally hazardous : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Volatile organic compounds : Directive 2004/42/EC
Volatile organic compounds (VOC) content: 50 g/l

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Full text of H-Statements

H301	:	Toxic if swallowed.
H302	:	Harmful if swallowed.
H310	:	Fatal in contact with skin.
H314	:	Causes severe skin burns and eye damage.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H330	:	Fatal if inhaled.
H331	:	Toxic if inhaled.
H332	:	Harmful if inhaled.
H360D	:	May damage the unborn child.
H361d	:	Suspected of damaging the unborn child.
H372	:	Causes damage to organs through prolonged or repeated exposure.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Repr.	:	Reproductive toxicity
Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
2000/39/EC / TWA	:	Limit Value - eight hours

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

Further information

Classification of the mixture:		**Classification procedure:**
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 1	H410	Calculation method

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.