

# SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by  
UK REACH Regulations SI 2019/758



## FORCE ST

Version	Revision Date:	SDS Number:	Date of last issue: 01.11.2024
15.0	20.02.2026	S163049846	Date of first issue: 15.06.2017

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

#### 1.1 Product identifier

Trade name : FORCE ST

Design code : A13219F

Product Registration Number : MAPP 19042

Unique Formula Identifier (UFI) : R8NA-E0YP-400N-THKT

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

Use of the Sub-stance/Mixture : Insecticide

Recommended restrictions on use : professional use

#### 1.3 Details of the supplier of the safety data sheet

Company : Syngenta UK Limited  
Jealott's Hill International Research Centre  
Bracknell, Berkshire RG42 6EY  
United Kingdom

Telephone : +44 (0) 1223 883400

Telefax : -

E-mail address of person responsible for the SDS : MSDSenquiries.UK@syngenta.com

#### 1.4 Emergency telephone number

Emergency telephone number : +44 1484 538444

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)**

Acute toxicity, Category 4 : H332: Harmful if inhaled.  
Short-term (acute) aquatic hazard, Cate- : H400: Very toxic to aquatic life.

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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) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)**

Hazard pictograms :



Signal word : Warning

Hazard statements : H332 Harmful if inhaled.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P261 Avoid breathing mist or vapours.  
P271 Use only outdoors or in a well-ventilated area.  
**Response:**  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.  
P391 Collect spillage.  
**Disposal:**  
P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

Hazardous components which must be listed on the label:  
tefluthrin (ISO)

#### Additional Labelling

EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

### 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.

May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

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### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

##### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
tefluthrin (ISO)	79538-32-2 607-723-00-6	Acute Tox. 2; H300 Acute Tox. 1; H330 Acute Tox. 2; H310 Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 10,000 M-Factor (Chronic aquatic toxicity): 10,000	>= 10 - < 20
hydrocarbons, C9, aromatics	128601-23-0 649-356-00-4	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system) STOT SE 3; H335 (Respiratory sys- tem) Asp. Tox. 1; H304 Aquatic Chronic 2; H411 EUH066	>= 10 - < 20
sodium hydroxide	1310-73-2 215-185-5 011-002-00-6	Met. Corr. 1; H290 Acute Tox. 4; H312 Skin Corr. 1A; H314 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory sys- tem) Aquatic Chronic 3; H412	>= 1 - < 2

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		specific concentra- tion limit Skin Corr. 1A; H314 >= 5 % Skin Corr. 1B; H314 2 - < 5 % Skin Irrit. 2; H315 0.5 - < 2 % Eye Irrit. 2; H319 0.5 - < 2 %	
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1  specific concentra- tion limit Skin Sens. 1; H317 >= 0.05 %	>= 0.0025 - < 0.025

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.

If inhaled : Move the victim to fresh air.  
If breathing is irregular or stopped, administer artificial respiration.

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Keep patient warm and at rest.  
Call a physician or poison control centre immediately.

- In case of skin contact : Take off all contaminated clothing immediately.  
Wash off immediately with plenty of water.  
If skin irritation persists, call a physician.  
Wash contaminated clothing before re-use.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,  
for at least 15 minutes.  
Remove contact lenses.  
Immediate medical attention is required.
- If swallowed : If swallowed, seek medical advice immediately and show this  
container or label.  
Do NOT induce vomiting.

### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Aspiration may cause pulmonary oedema and pneumonitis.  
Skin contact paresthesia effects (itching, tingling, burning or  
numbness) are transient, lasting up to 24 hours.

Risks : Harmful if inhaled.

### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Do not induce vomiting: contains petroleum distillates and/or  
aromatic solvents.  
Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Extinguishing media - small fires  
Use water spray, alcohol-resistant foam, dry chemical or car-  
bon dioxide.  
Extinguishing media - large fires  
Alcohol-resistant foam  
or  
Water spray

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread  
fire.

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire- : As the product contains combustible organic components, fire  
fighting will produce dense black smoke containing hazardous prod-

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ucts of combustion (see section 10).

Exposure to decomposition products may be a hazard to health.

Hazardous combustion products : Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Chlorine compounds  
Fluorine compounds

### 5.3 Advice for firefighters

Special protective equipment for firefighters : Wear full protective clothing and self-contained breathing apparatus.

Further information : Do not allow run-off from fire fighting to enter drains or water courses.  
Cool closed containers exposed to fire with water spray.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Refer to protective measures listed in sections 7 and 8.

### 6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Do not flush into surface water or sanitary sewer system.  
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 : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).  
Clean contaminated surface thoroughly.  
Clean with detergents. Avoid solvents.  
Retain and dispose of contaminated wash water.

### 6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : No special protective measures against fire required.  
Avoid contact with skin and eyes.

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When using do not eat, drink or smoke.  
For personal protection see section 8.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

### 7.3 Specific end use(s)

Specific use(s) : For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
tefluthrin (ISO)	79538-32-2	TWA	0.04 mg/m <sup>3</sup> (Skin)	Syngenta
hydrocarbons, C9, aromatics	128601-23-0	TWA	19 ppm 100 mg/m <sup>3</sup>	Supplier
sodium hydroxide	1310-73-2	STEL	2 mg/m <sup>3</sup>	GB EH40

#### Derived No Effect Level (DNEL)

Substance name	End Use	Exposure routes	Potential health effects	Value
hydrocarbons, C9, aromatics	Workers	Inhalation	Long-term systemic effects	150 mg/m <sup>3</sup>
	Workers	Dermal	Long-term systemic effects	25 mg/kg
	Consumers	Inhalation	Long-term systemic effects	32 mg/m <sup>3</sup>
	Consumers	Dermal	Long-term systemic effects	11 mg/kg
	Consumers	Oral	Long-term systemic effects	11 mg/kg
	sodium hydroxide	Workers	Inhalation	Long-term local effects
Consumers		Inhalation	Long-term local effects	1 mg/m <sup>3</sup>
1,2-benzisothiazol-3(2H)-one	Workers	Inhalation	Long-term systemic effects	6.81 mg/m <sup>3</sup>
	Workers	Dermal	Long-term systemic effects	0.966 mg/kg
	Consumers	Inhalation	Long-term systemic	1.2 mg/m <sup>3</sup>

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			effects	
	Consumers	Dermal	Long-term systemic effects	0.345 mg/kg

### Predicted No Effect Concentration (PNEC)

Substance name	Environmental Compartment	Value
1,2-benzisothiazol-3(2H)-one	Fresh water	0.00403 mg/l
	Marine water	0.000403 mg/l
	Sewage treatment plant	1.03 mg/l
	Fresh water sediment	0.0499 mg/kg
	Marine sediment	0.00499 mg/kg
	Freshwater - intermittent	0.0011 mg/l
	Marine water - intermittent	0.000110 mg/l
	Soil	3 mg/kg

## 8.2 Exposure controls

### Engineering measures

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure standards.  
Where necessary, seek additional occupational hygiene advice.

### Personal protective equipment

Eye/face protection : No special protective equipment required.  
Hand protection

Material : Nitrile rubber  
Break through time : > 480 min  
Glove thickness : 0.5 mm

Remarks : Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. 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. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

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- Remove and wash contaminated clothing before re-use.  
Wear as appropriate:  
Impervious clothing
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
Suitable respiratory equipment:  
Respirator with a half face mask  
The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
- Protective measures : The use of technical measures should always have priority over the use of personal protective equipment.  
When selecting personal protective equipment, seek appropriate professional advice.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Appearance : liquid, opaque  
Colour : white to beige  
Odour : characteristic  
Odour Threshold : No data available
- pH : 11.0  
Concentration: 100 %w/v
- Melting point/freezing point : No data available
- Initial boiling point and boiling range : No data available
- Flash point : Method: Seta closed cup, Equilibrium method  
does not flash
- Evaporation rate : No data available
- Flammability (solid, gas) : No data available
- Upper explosion limit / Upper flammability limit : No data available
- Lower explosion limit / Lower flammability limit : No data available
- Vapour pressure : No data available

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Relative vapour density : No data available

Density : 1.066 g/cm<sup>3</sup>

Solubility(ies)  
Solubility in other solvents : Miscible  
Solvent: Water

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

Auto-ignition temperature : 601 °C

Decomposition temperature : No data available

Viscosity  
Viscosity, dynamic : 6,940 mPa,s (20 °C)  
4,440 mPa,s (40 °C)

Viscosity, kinematic : 6510 mm<sup>2</sup>/s (20 °C)  
4165 mm<sup>2</sup>/s (40 °C)

Explosive properties : Not explosive

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

### 9.2 Other information

Surface tension : 65.2 mN/m, 25 °C

Particle size : No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

None reasonably foreseeable.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

### 10.4 Conditions to avoid

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Conditions to avoid : No decomposition if used as directed.

### 10.5 Incompatible materials

Materials to avoid : None known.

### 10.6 Hazardous decomposition products

No hazardous decomposition products are known.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Information on likely routes of exposure : Ingestion  
Inhalation  
Skin contact  
Eye contact

#### Acute toxicity

Harmful if inhaled.

#### Product:

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

Acute inhalation toxicity : LC50 (Rat, male and female): > 2.54 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.

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

#### Components:

##### **tefluthrin (ISO):**

Acute oral toxicity : LD50 (Rat, male): 21.8 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): 0.0427 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, female): 177 mg/kg

##### **hydrocarbons, C9, aromatics:**

Acute oral toxicity : LD50 (Rat): 3,492 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 6,193 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

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Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

### **sodium hydroxide:**

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

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

Acute oral toxicity : LD50 (Rat, male): 670 mg/kg

Acute inhalation toxicity : LC50: 0.5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

### **Skin corrosion/irritation**

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

### **Product:**

Species : Rabbit  
Result : No skin irritation

### **Components:**

#### **tefluthrin (ISO):**

Species : Rabbit  
Result : No skin irritation

#### **hydrocarbons, C9, aromatics:**

Result : No skin irritation  
Result : Repeated exposure may cause skin dryness or cracking.

### **sodium hydroxide:**

Result : Corrosive

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

Species : Rabbit

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Result : Irritating to skin.

### Serious eye damage/eye irritation

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

#### Product:

Species : Rabbit  
Result : No eye irritation

#### Components:

##### **tefluthrin (ISO):**

Species : Rabbit  
Result : No eye irritation

##### **hydrocarbons, C9, aromatics:**

Result : No eye irritation

##### **sodium hydroxide:**

Result : Corrosive

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

Species : Rabbit  
Result : Risk of serious damage to eyes.

### Respiratory or skin sensitisation

#### **Skin sensitisation**

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

#### **Respiratory sensitisation**

Not classified due to lack of data.

#### Product:

Species : Guinea pig  
Result : Does not cause skin sensitisation.

#### Components:

##### **tefluthrin (ISO):**

Species : Guinea pig  
Result : Does not cause skin sensitisation.

##### **hydrocarbons, C9, aromatics:**

Result : Does not cause skin sensitisation.

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

Result : Probability or evidence of high skin sensitisation rate in humans

### Germ cell mutagenicity

Not classified due to lack of data.

#### Components:

##### tefluthrin (ISO):

Germ cell mutagenicity- Assessment : Animal testing did not show any mutagenic effects.

##### hydrocarbons, C9, aromatics:

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

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

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

### Carcinogenicity

Not classified due to lack of data.

#### Components:

##### tefluthrin (ISO):

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

##### hydrocarbons, C9, aromatics:

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

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

Carcinogenicity - Assessment : No data available

### Reproductive toxicity

Not classified due to lack of data.

#### Components:

##### tefluthrin (ISO):

Reproductive toxicity - Assessment : No toxicity to reproduction

##### hydrocarbons, C9, aromatics:

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Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity, No effects on or via lactation

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

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

No effects on or via lactation

### **STOT - single exposure**

Not classified due to lack of data.

#### **Components:**

##### **hydrocarbons, C9, aromatics:**

Target Organs : respiratory tract irritation  
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

##### **sodium hydroxide:**

Exposure routes : Inhalation  
Target Organs : Respiratory Tract  
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

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

Remarks : No data available

### **STOT - repeated exposure**

Not classified due to lack of data.

#### **Components:**

##### **tefluthrin (ISO):**

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

##### **hydrocarbons, C9, aromatics:**

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

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

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

### Aspiration toxicity

Not classified due to lack of data.

### Components:

#### hydrocarbons, C9, aromatics:

May be fatal if swallowed and enters airways.

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

No aspiration toxicity classification

### Further information

#### Product:

Remarks : May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

#### Components:

#### tefluthrin (ISO):

Remarks : May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

#### tefluthrin (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.00006 mg/l  
Exposure time: 96 h

LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.00013 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Americamysis): 0.000053 mg/l  
Exposure time: 96 h

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 1.05 mg/l  
Exposure time: 96 h  
Remarks: Highest attainable concentration

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M-Factor (Acute aquatic toxicity) : 10,000

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l  
Exposure time: 3 h

Toxicity to fish (Chronic toxicity) : NOEC: 0.0000096 mg/l  
Exposure time: 28 d  
Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10: 0.000009 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

NOEC: 0.000002 mg/l  
Exposure time: 28 d  
Species: Americamysis

M-Factor (Chronic aquatic toxicity) : 10,000

### hydrocarbons, C9, aromatics:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 9.2 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3.2 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 2.9 mg/l  
Exposure time: 72 h

NOEC (Raphidocelis subcapitata (freshwater green alga)): 1 mg/l  
End point: Growth rate  
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC: 1.23 mg/l  
Exposure time: 28 d  
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 2.14 mg/l  
Exposure time: 21 d  
Species: Daphnia (water flea)

### Ecotoxicology Assessment

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

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### sodium hydroxide:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): > 34.59 - < 47.13 mg/l  
Exposure time: 48 h

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

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2.18 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.94 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 0.15 mg/l  
Exposure time: 72 h

NOEC (Raphidocelis subcapitata (freshwater green alga)): 0.055 mg/l  
End point: Growth rate  
Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC: 0.21 mg/l  
Exposure time: 28 d  
Species: Oncorhynchus mykiss (rainbow trout)

M-Factor (Chronic aquatic toxicity) : 1

## 12.2 Persistence and degradability

### Components:

#### tefluthrin (ISO):

Stability in water : Degradation half life: 60 - 203 d  
Remarks: The substance is stable in water.

#### hydrocarbons, C9, aromatics:

Biodegradability : Result: Readily biodegradable.

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

Biodegradability : Result: Not readily biodegradable.

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### 12.3 Bioaccumulative potential

#### Components:

##### **tefluthrin (ISO):**

Bioaccumulation : Remarks: Bioaccumulates

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

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

### 12.4 Mobility in soil

#### Components:

##### **tefluthrin (ISO):**

Distribution among environmental compartments : Remarks: immobile

Stability in soil : Dissipation time: 48 - 151 d  
Percentage dissipation: 50 % (DT50)  
Remarks: Product is not persistent.

### 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.

#### Components:

##### **tefluthrin (ISO):**

Assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).  
Substance is not very persistent and very bioaccumulative (vPvB).

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

Assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).  
Substance is not very persistent and very bioaccumulative (vPvB).

### 12.6 Other adverse effects

Endocrine disrupting potential : This substance/mixture does not contain components considered to have endocrine disrupting properties for environment according to UK REACH Article 57(f).

#### Components:

##### **tefluthrin (ISO):**

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Endocrine disrupting potential : Substance does not have endocrine disrupting properties.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

Product : Do not contaminate ponds, waterways or ditches with chemical or used container.  
Do not dispose of waste into sewer.  
Where possible recycling is preferred to disposal or incineration.  
If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging : Empty remaining contents.  
Triple rinse containers.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.

### SECTION 14: Transport information

#### 14.1 UN number

ADR : UN 3082  
RID : UN 3082  
IMDG : UN 3082  
IATA : UN 3082

#### 14.2 UN proper shipping name

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

#### 14.3 Transport hazard class(es)

Class	Subsidiary risks
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**ADR** : 9  
**RID** : 9  
**IMDG** : 9  
**IATA** : 9

### 14.4 Packing group

#### ADR

Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9  
Tunnel restriction code : (-)  
Remarks : This product can be subject to exemptions when packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a net mass of 5 kg or less for solids.

#### RID

Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9  
Remarks : This product can be subject to exemptions when packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a net mass of 5 kg or less for solids.

#### IMDG

Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Remarks : This product can be subject to exemptions when packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a net mass of 5 kg or less for solids.

#### IATA (Cargo)

Packing instruction (cargo aircraft) : 964  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous  
Remarks : This product can be subject to exemptions when packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a net mass of 5 kg or less for solids.

#### IATA (Passenger)

Packing instruction (passen- : 964

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ger aircraft)  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous  
Remarks : This product can be subject to exemptions when packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a net mass of 5 kg or less for solids.

### 14.5 Environmental hazards

#### 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

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17)	: Conditions of restriction for the following entries should be considered: Number on list 3
UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	: Not applicable
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)	: Not applicable
Regulation (EU) No 2024/590 on substances that deplete the ozone layer	: Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	: Not applicable

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GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation : Not applicable  
Control of Major Accident Hazards Regulations 2015 (COMAH) E1 ENVIRONMENTAL HAZARDS

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial and livestock rearing emissions (integrated pollution prevention and control)  
Not applicable

### Other regulations:

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to protection of young people at work contained in Regulation 19) and of Directive 94/33/EC on the protection of young people at work.

### 15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

## SECTION 16: Other information

### Full text of H-Statements

H226 : Flammable liquid and vapour.  
H290 : May be corrosive to metals.  
H300 : Fatal if swallowed.  
H302 : Harmful if swallowed.  
H304 : May be fatal if swallowed and enters airways.  
H310 : Fatal in contact with skin.  
H312 : Harmful 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.  
H335 : May cause respiratory irritation.  
H336 : May cause drowsiness or dizziness.  
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.  
H412 : Harmful 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  
Asp. Tox. : Aspiration hazard  
Eye Dam. : Serious eye damage  
Flam. Liq. : Flammable liquids  
Met. Corr. : Corrosive to metals

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Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT SE	:	Specific target organ toxicity - single exposure
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
Syngenta	:	Syngenta Occupational Exposure Limit
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)
Syngenta / TWA	:	Time weighted average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - 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; TECl - 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:

Acute Tox. 4	H332
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

#### Classification procedure:

Based on product data or assessment
Calculation method
Calculation method

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

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