

# SAFETY DATA SHEET

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



## Deltamethrin (1.47%) Formulation

|         |                |                |                                 |
|---------|----------------|----------------|---------------------------------|
| Version | Revision Date: | SDS Number:    | Date of last issue: 06.04.2024  |
| 6.0     | 28.09.2024     | 10863970-00009 | Date of first issue: 11.10.2022 |

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

#### 1.1 Product identifier

|                               |   |                                                                                       |
|-------------------------------|---|---------------------------------------------------------------------------------------|
| Trade name                    | : | Deltamethrin (1.47%) Formulation                                                      |
| Product code                  | : | Butox pour-on aqueous                                                                 |
| Other means of identification | : | Blaze (A008214)<br>COOPERS EASY-DOSE POUR-ON CATTLE LICE AND FLY<br>TREATMENT (54096) |

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

|                                    |   |                    |
|------------------------------------|---|--------------------|
| Use of the Sub-<br>stance/Mixture  | : | Veterinary product |
| Recommended restrictions<br>on use | : | Not applicable     |

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

|                                                     |   |                                                                       |
|-----------------------------------------------------|---|-----------------------------------------------------------------------|
| Company                                             | : | MSD<br>Walton Manor, Walton<br>MK7 7AJ Milton Keynes - United Kingdom |
| Telephone                                           | : | +1-908-740-4000                                                       |
| E-mail address of person<br>responsible for the SDS | : | EHSDATASTEWARD@msd.com                                                |

#### 1.4 Emergency telephone number

+1-908-423-6000

### 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)**

|                                                                |                                                                          |
|----------------------------------------------------------------|--------------------------------------------------------------------------|
| Skin sensitisation, Category 1                                 | H317: May cause an allergic skin reaction.                               |
| Carcinogenicity, Category 1B                                   | H350: May cause cancer.                                                  |
| Specific target organ toxicity - repeated exposure, Category 2 | H373: May cause damage to organs through prolonged or repeated exposure. |
| 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.              |

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### 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 : Danger

Hazard statements :  
H317 May cause an allergic skin reaction.  
H350 May cause cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P391 Collect spillage.

Hazardous components which must be listed on the label:

deltamethrin (ISO)  
Formaldehyde  
1,2-Benzisothiazol-3(2H)-one  
Restricted to professional users.

### 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.

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).

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Components

| Chemical name | CAS-No.<br>EC-No. | Classification | Concentration<br>(% w/w) |
|---------------|-------------------|----------------|--------------------------|
|---------------|-------------------|----------------|--------------------------|

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|                          | Index-No.<br>Registration number                         |                                                                                                                                                                                                                                                                                                                                                                                                                                  |                     |
|--------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| deltamethrin (ISO)       | 52918-63-5<br>258-256-6<br>607-319-00-X                  | Acute Tox. 3; H301<br>Acute Tox. 3; H331<br>Eye Irrit. 2; H319<br>Skin Sens. 1A;<br>H317<br>Repr. 2; H361fd<br>STOT SE 3; H335<br>STOT RE 1; H372<br>(Central nervous<br>system, Immune<br>system)<br>STOT RE 1; H372<br>(Central nervous<br>system)<br>Aquatic Acute 1;<br>H400<br>Aquatic Chronic 1;<br>H410<br><br>M-Factor (Acute<br>aquatic toxicity):<br>1,000,000<br>M-Factor (Chronic<br>aquatic toxicity):<br>1,000,000 | $\geq 1 - < 2.5$    |
| Nonylphenol, ethoxylated | 9016-45-9                                                | Acute Tox. 4; H302<br>Eye Dam. 1; H318<br>Aquatic Acute 1;<br>H400<br>Aquatic Chronic 1;<br>H410<br><br>M-Factor (Acute<br>aquatic toxicity): 1<br>M-Factor (Chronic<br>aquatic toxicity): 10                                                                                                                                                                                                                                    | $\geq 0.1 - < 0.25$ |
| Formaldehyde             | 50-00-0<br>200-001-8<br>605-001-00-5<br>01-2119488953-20 | Flam. Gas 1B;<br>H221<br>Acute Tox. 3; H301<br>Acute Tox. 2; H330<br>Acute Tox. 3; H311<br>Skin Corr. 1B;<br>H314<br>Eye Dam. 1; H318<br>Skin Sens. 1A;<br>H317<br>Muta. 2; H341<br>Carc. 1B; H350<br>STOT SE 3; H335<br><br>specific concentra-                                                                                                                                                                                 | $\geq 0.2 - < 1$    |

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|                              |                                        |                                                                                                                                                                                                                                                                                                                                                     |                       |
|------------------------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
|                              |                                        | tion limit<br>Skin Corr. 1B;<br>H314<br>≥ 25 %<br>Skin Irrit. 2; H315<br>5 - < 25 %<br>Eye Irrit. 2; H319<br>5 - < 25 %<br>STOT SE 3; H335<br>≥ 5 %<br>Skin Sens. 1A;<br>H317<br>≥ 0.2 %                                                                                                                                                            |                       |
| 1,2-Benzisothiazol-3(2H)-one | 2634-33-5<br>220-120-9<br>613-088-00-6 | Acute Tox. 4; H302<br>Acute Tox. 2; H330<br>Skin Irrit. 2; H315<br>Eye Dam. 1; H318<br>Skin Sens. 1A;<br>H317<br>Aquatic Acute 1;<br>H400<br>Aquatic Chronic 1;<br>H410<br><br>M-Factor (Acute<br>aquatic toxicity): 1<br>M-Factor (Chronic<br>aquatic toxicity): 1<br><br>specific concentra-<br>tion limit<br>Skin Sens. 1A;<br>H317<br>≥ 0.036 % | ≥ 0.0025 - <<br>0.025 |

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.
- 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).

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|----------------|------------------------------|-------------------------------|-------------------------------------------------------------------|

- |                         |   |                                                                                                                                                                                                                       |
|-------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| If inhaled              | : | If inhaled, remove to fresh air.<br>Get medical attention.                                                                                                                                                            |
| In case of skin contact | : | In case of contact, immediately flush skin with soap and plenty of water.<br>Remove contaminated clothing and shoes.<br>Get medical attention.<br>Wash clothing before reuse.<br>Thoroughly clean shoes before reuse. |
| In case of eye contact  | : | Flush eyes with water as a precaution.<br>Get medical attention if irritation develops and persists.                                                                                                                  |
| If swallowed            | : | If swallowed, DO NOT induce vomiting.<br>Get medical attention.<br>Rinse mouth thoroughly with water.                                                                                                                 |

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

- |       |   |                                                                                                                                                                                                                                                                        |
|-------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Risks | : | May cause an allergic skin reaction.<br>May cause cancer.<br>May cause damage to organs through prolonged or repeated exposure.<br><br>This product contains a pyrethroid.<br>Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning. |
|-------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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

- |           |   |                                         |
|-----------|---|-----------------------------------------|
| Treatment | : | Treat symptomatically and supportively. |
|-----------|---|-----------------------------------------|

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- |                                |   |                                                                                            |
|--------------------------------|---|--------------------------------------------------------------------------------------------|
| Suitable extinguishing media   | : | Water spray<br>Alcohol-resistant foam<br>Carbon dioxide (CO <sub>2</sub> )<br>Dry chemical |
| Unsuitable extinguishing media | : | None known.                                                                                |

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

- |                                       |   |                                                                          |
|---------------------------------------|---|--------------------------------------------------------------------------|
| Specific hazards during fire-fighting | : | Exposure to combustion products may be a hazard to health.               |
| Hazardous combustion products         | : | Carbon oxides<br>Nitrogen oxides (NO <sub>x</sub> )<br>Bromine compounds |

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### 5.3 Advice for firefighters

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances 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.

## SECTION 6: Accidental release measures

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

- Personal precautions : Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

### 6.2 Environmental precautions

- 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.  
If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

### 6.3 Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up with inert absorbent material.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absorbent.  
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 determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### 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

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

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- Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.
- Advice on safe handling : Do not get on skin or clothing.  
Do not breathe mist or vapours.  
Do not swallow.  
Avoid contact with eyes.  
Wash skin thoroughly after handling.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Keep container tightly closed.  
Do not eat, drink or smoke when using this product.  
Take care to prevent spills, waste and minimize release to the environment.
- Hygiene measures : 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.

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

- Requirements for storage areas and containers : Keep in properly labelled containers. Store locked up. Keep tightly closed. Store in accordance with the particular national regulations.
- Advice on common storage : Do not store with the following product types:  
Strong oxidizing agents  
Self-reactive substances and mixtures  
Organic peroxides  
Explosives  
Gases

### 7.3 Specific end use(s)

- Specific use(s) : No data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

| Components         | CAS-No.                         | Value type (Form of exposure) | Control parameters           | Basis    |
|--------------------|---------------------------------|-------------------------------|------------------------------|----------|
| deltamethrin (ISO) | 52918-63-5                      | TWA                           | 15 µg/m <sup>3</sup> (OEB 3) | Internal |
|                    | Further information: DSEN, Skin |                               |                              |          |
|                    |                                 | Wipe limit                    | 100 µg/100 cm <sup>2</sup>   | Internal |
| Formaldehyde       | 50-00-0                         | TWA                           | 2 ppm                        | GB EH40  |

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|  |                                                                                 |      |                       |            |
|--|---------------------------------------------------------------------------------|------|-----------------------|------------|
|  |                                                                                 |      | 2.5 mg/m3             |            |
|  | Further information: Capable of causing cancer and/or heritable genetic damage. |      |                       |            |
|  |                                                                                 | STEL | 2 ppm<br>2.5 mg/m3    | GB EH40    |
|  | Further information: Capable of causing cancer and/or heritable genetic damage. |      |                       |            |
|  |                                                                                 | TWA  | 0.3 ppm<br>0.37 mg/m3 | 2004/37/EC |
|  | Further information: Dermal sensitisation, Carcinogens or mutagens              |      |                       |            |
|  |                                                                                 | STEL | 0.6 ppm<br>0.74 mg/m3 | 2004/37/EC |
|  | Further information: Dermal sensitisation, Carcinogens or mutagens              |      |                       |            |

### Derived No Effect Level (DNEL)

| Substance name               | End Use   | Exposure routes | Potential health effects   | Value              |
|------------------------------|-----------|-----------------|----------------------------|--------------------|
| Formaldehyde                 | Workers   | Inhalation      | Long-term systemic effects | 9 mg/m3            |
|                              | Workers   | Inhalation      | Long-term local effects    | 0.375 mg/m3        |
|                              | Workers   | Inhalation      | Acute local effects        | 0.75 mg/m3         |
|                              | Workers   | Skin contact    | Long-term systemic effects | 240 mg/kg bw/day   |
|                              | Workers   | Skin contact    | Long-term local effects    | 0.037 mg/cm2       |
|                              | Consumers | Inhalation      | Long-term systemic effects | 3.2 mg/m3          |
|                              | Consumers | Inhalation      | Long-term local effects    | 0.1 mg/m3          |
|                              | Consumers | Skin contact    | Long-term systemic effects | 102 mg/kg bw/day   |
|                              | Consumers | Skin contact    | Long-term local effects    | 0.012 mg/cm2       |
|                              | Consumers | Ingestion       | Long-term systemic effects | 4.1 mg/kg bw/day   |
| 1,2-Benzisothiazol-3(2H)-one | Workers   | Inhalation      | Long-term systemic effects | 6.81 mg/m3         |
|                              | Workers   | Skin contact    | Long-term systemic effects | 0.966 mg/kg bw/day |
|                              | Consumers | Inhalation      | Long-term systemic effects | 1.2 mg/m3          |
|                              | Consumers | Skin contact    | Long-term systemic effects | 0.345 mg/kg bw/day |

### Predicted No Effect Concentration (PNEC)

| Substance name | Environmental Compartment | Value     |
|----------------|---------------------------|-----------|
| Formaldehyde   | Fresh water               | 0.44 mg/l |
|                | Freshwater - intermittent | 4.44 mg/l |
|                | Marine water              | 0.44 mg/l |
|                | Sewage treatment plant    | 0.19 mg/l |

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|                              |                          |                                 |
|------------------------------|--------------------------|---------------------------------|
|                              | Fresh water sediment     | 2.3 mg/kg dry weight (d.w.)     |
|                              | Marine sediment          | 2.3 mg/kg dry weight (d.w.)     |
|                              | Soil                     | 0.2 mg/kg dry weight (d.w.)     |
| 1,2-Benzisothiazol-3(2H)-one | Fresh water              | 11 µg/l                         |
|                              | Intermittent use/release | 0.403 µg/l                      |
|                              | Marine water             | 1.1 µg/l                        |
|                              | Intermittent use/release | 0.0403 µg/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.)       |

### 8.2 Exposure controls

#### 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 containment devices).

Minimize open handling.

#### Personal protective equipment

Eye/face protection : Wear safety glasses with side shields or goggles.  
If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.  
Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

Hand protection

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

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, disposable suits) to avoid exposed skin surfaces.  
Use appropriate degowning techniques to remove potentially contaminated clothing.

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.  
Equipment should conform to BS EN 14387

Filter type : Combined particulates and organic vapour type (A-P)

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### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

|                                                  |                                                            |
|--------------------------------------------------|------------------------------------------------------------|
| Appearance                                       | : liquid, suspension                                       |
| Colour                                           | : white                                                    |
| Odour                                            | : No data available                                        |
| Odour Threshold                                  | : No data available                                        |
| pH                                               | : No data available                                        |
| Melting point/freezing point                     | : No data available                                        |
| Initial boiling point and boiling range          | : No data available                                        |
| Flash point                                      | : No data available                                        |
| Evaporation rate                                 | : No data available                                        |
| Flammability (solid, gas)                        | : Not applicable                                           |
| Upper explosion limit / Upper flammability limit | : No data available                                        |
| Lower explosion limit / Lower flammability limit | : No data available                                        |
| Vapour pressure                                  | : No data available                                        |
| Relative vapour density                          | : No data available                                        |
| Relative density                                 | : No data available                                        |
| Density                                          | : No data available                                        |
| Solubility(ies)                                  |                                                            |
| Water solubility                                 | : No data available                                        |
| Partition coefficient: n-octanol/water           | : Not applicable                                           |
| Auto-ignition temperature                        | : No data available                                        |
| Decomposition temperature                        | : No data available                                        |
| Viscosity                                        |                                                            |
| Viscosity, kinematic                             | : No data available                                        |
| Explosive properties                             | : Not explosive                                            |
| Oxidizing properties                             | : The substance or mixture is not classified as oxidizing. |

#### 9.2 Other information

|                        |                     |
|------------------------|---------------------|
| Flammability (liquids) | : No data available |
|------------------------|---------------------|

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Molecular weight : No data available

Particle size : Not applicable

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Not classified as a reactivity hazard.

#### 10.2 Chemical stability

Stable under normal conditions.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions : Can react with strong oxidizing agents.

#### 10.4 Conditions to avoid

Conditions to avoid : None known.

#### 10.5 Incompatible materials

Materials to avoid : Oxidizing agents

#### 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 : 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: > 20 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Calculation method

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

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### Components:

#### **deltamethrin (ISO):**

|                                                 |   |                                                                                                                         |
|-------------------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------|
| Acute oral toxicity                             | : | LD50 (Rat): 66.7 mg/kg<br>LD50 (Rat): 9 - 139 mg/kg<br>LD50 (Mouse): 19 - 34 mg/kg                                      |
| Acute inhalation toxicity                       | : | LC50 (Rat): 0.8 mg/l<br>Exposure time: 2 h<br>Test atmosphere: dust/mist                                                |
| Acute dermal toxicity                           | : | LD50 (Rabbit): 2,000 mg/kg<br>LD50 (Rat): > 800 mg/kg                                                                   |
| Acute toxicity (other routes of administration) | : | LD50 (Rat): 2.5 mg/kg<br>Application Route: Intravenous<br>LD50 (Mouse): 10 mg/kg<br>Application Route: Intraperitoneal |

#### **Nonylphenol, ethoxylated:**

|                     |   |                               |
|---------------------|---|-------------------------------|
| Acute oral toxicity | : | LD50 (Rat): 500 - 2,000 mg/kg |
|---------------------|---|-------------------------------|

#### **Formaldehyde:**

|                           |   |                                                                                                                      |
|---------------------------|---|----------------------------------------------------------------------------------------------------------------------|
| Acute oral toxicity       | : | Acute toxicity estimate: 100 mg/kg<br>Method: Expert judgement<br>Remarks: Based on national or regional regulation. |
| Acute inhalation toxicity | : | Acute toxicity estimate (Rat): 100 ppm<br>Exposure time: 4 h<br>Test atmosphere: gas<br>Method: Expert judgement     |
| Acute dermal toxicity     | : | LD50 (Rabbit): 270 mg/kg                                                                                             |

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

|                           |   |                                                                                                                                   |
|---------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------|
| Acute oral toxicity       | : | LD50 (Rat, male): 450 mg/kg<br>Method: OECD Test Guideline 401                                                                    |
| Acute inhalation toxicity | : | LC50 (Rat, male): 0.21 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Method: OECD Test Guideline 403                |
| Acute dermal toxicity     | : | LD50 (Rat): > 2,000 mg/kg<br>Method: OECD Test Guideline 402<br>Assessment: The substance or mixture has no acute dermal toxicity |

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|         |                |                |                                 |
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||

### Skin corrosion/irritation

Not classified based on available information.

#### Components:

##### deltamethrin (ISO):

|         |                      |
|---------|----------------------|
| Species | : Rabbit             |
| Result  | : No skin irritation |

##### Nonylphenol, ethoxylated:

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

##### Formaldehyde:

|         |                                                   |
|---------|---------------------------------------------------|
| Result  | : Corrosive after 3 minutes to 1 hour of exposure |
| Remarks | : Based on national or regional regulation.       |

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

|        |                   |
|--------|-------------------|
| Result | : Skin irritation |
|--------|-------------------|

### Serious eye damage/eye irritation

Not classified based on available information.

#### Components:

##### deltamethrin (ISO):

|         |                           |
|---------|---------------------------|
| Species | : Rabbit                  |
| Result  | : Moderate eye irritation |

##### Nonylphenol, ethoxylated:

|         |                                   |
|---------|-----------------------------------|
| Species | : Rabbit                          |
| Method  | : OECD Test Guideline 405         |
| Result  | : Irreversible effects on the eye |

##### Formaldehyde:

|         |                                   |
|---------|-----------------------------------|
| Result  | : Irreversible effects on the eye |
| Remarks | : Based on skin corrosivity.      |

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

|         |                                   |
|---------|-----------------------------------|
| Species | : Rabbit                          |
| Result  | : Irreversible effects on the eye |

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### Respiratory or skin sensitisation

#### Skin sensitisation

May cause an allergic skin reaction.

#### Respiratory sensitisation

Not classified based on available information.

#### Components:

##### 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                               |

##### Nonylphenol, ethoxylated:

|                 |                                        |
|-----------------|----------------------------------------|
| Test Type       | : Maximisation Test                    |
| Exposure routes | : Skin contact                         |
| Species         | : Guinea pig                           |
| Result          | : negative                             |
| Remarks         | : Based on data from similar materials |

##### 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 humans |
|------------|---------------------------------------------------------------------|

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

|                 |                           |
|-----------------|---------------------------|
| Test Type       | : Maximisation Test       |
| Exposure routes | : Skin contact            |
| Species         | : Guinea pig              |
| Method          | : OECD Test Guideline 406 |
| Result          | : positive                |

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

### Germ cell mutagenicity

Not classified based on available information.

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### Components:

#### **deltamethrin (ISO):**

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative<br><br>Test Type: DNA Repair<br>Test system: Escherichia coli<br>Result: negative<br><br>Test Type: Chromosomal aberration<br>Test system: Chinese hamster ovary cells<br>Result: negative<br><br>Test Type: In vitro mammalian cell gene mutation test<br>Test system: Chinese hamster lung cells<br>Concentration: LOAEL: 20 mg/kg<br>Result: positive |
| Genotoxicity in vivo  | : Test Type: Micronucleus test<br>Species: Mouse<br>Application Route: Oral<br>Result: negative<br><br>Test Type: dominant lethal test<br>Species: Mouse<br>Application Route: Oral<br>Result: negative<br><br>Test Type: sister chromatid exchange assay<br>Species: Mouse<br>Cell type: Bone marrow<br>Application Route: Oral<br>Result: negative                                                                              |

#### **Nonylphenol, ethoxylated:**

|                       |                                                                                                                           |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative<br>Remarks: Based on data from similar materials |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------|

#### **Formaldehyde:**

|                       |                                                                                                                                                                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES)<br>Result: positive<br><br>Test Type: In vitro mammalian cell gene mutation test<br>Result: positive<br><br>Test Type: Chromosome aberration test in vitro<br>Result: positive |
| Genotoxicity in vivo  | : Test Type: In vivo mammalian alkaline comet assay<br>Species: Mouse                                                                                                                                                               |

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|                                    |                                                                              |
|------------------------------------|------------------------------------------------------------------------------|
|                                    | Application Route: Inhalation                                                |
|                                    | Result: positive                                                             |
| Germ cell mutagenicity- Assessment | : Positive result(s) from in vivo mammalian somatic cell mutagenicity tests. |

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

|                       |                                                                                                                                                                                             |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES)<br>Method: OECD Test Guideline 471<br>Result: negative                                                                                 |
|                       | Test Type: In vitro mammalian cell gene mutation test<br>Method: OECD Test Guideline 476<br>Result: negative                                                                                |
|                       | Test Type: Chromosome aberration test in vitro<br>Method: OECD Test Guideline 473<br>Result: positive                                                                                       |
| Genotoxicity in vivo  | : Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 486<br>Result: negative |

### Carcinogenicity

May cause cancer.

### Components:

#### 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             |

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### Formaldehyde:

|                   |                    |
|-------------------|--------------------|
| Species           | : Rat              |
| Application Route | : inhalation (gas) |
| Exposure time     | : 28 Months        |
| Result            | : positive         |

|                              |                                                                |
|------------------------------|----------------------------------------------------------------|
| Carcinogenicity - Assessment | : Sufficient evidence of carcinogenicity in animal experiments |
|------------------------------|----------------------------------------------------------------|

### Reproductive toxicity

Not classified based on available information.

### Components:

#### deltamethrin (ISO):

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Effects on fertility          | :<br>Test Type: Three-generation reproduction toxicity study<br>Species: Rat<br>Application Route: oral (feed)<br>Early Embryonic Development: NOAEL: 50 mg/kg body weight<br>Symptoms: No effects on fertility, Embryo-foetal toxicity<br>Remarks: Significant toxicity observed in testing<br><br>Test Type: Two-generation reproduction toxicity study<br>Species: Rat<br>Application Route: Oral<br>Early Embryonic Development: LOAEL: 84 - 149 mg/kg body weight<br>Symptoms: No effects on fertility, Embryo-foetal toxicity<br><br>Test Type: Fertility<br>Species: Rat, male<br>Application Route: Oral<br>Fertility: LOAEL: 1 mg/kg body weight<br>Symptoms: Effects on fertility<br>Target Organs: Testes |
| Effects on foetal development | :<br>Test Type: Development<br>Species: Mouse<br>Application Route: oral (gavage)<br>Developmental Toxicity: LOAEL: 1 mg/kg body weight<br>Result: Skeletal malformations<br>Remarks: Maternal toxicity observed.<br><br>Test Type: Development<br>Species: Rat, female<br>Developmental Toxicity: NOAEL: 10 mg/kg body weight<br>Symptoms: No effects on foetal development<br><br>Test Type: Development<br>Species: Rabbit, female<br>Application Route: oral (gavage)<br>Developmental Toxicity: NOAEL: 16 mg/kg body weight<br>Symptoms: No effects on foetal development                                                                                                                                       |

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## Deltamethrin (1.47%) Formulation

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

### Formaldehyde:

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: inhalation (gas)  
Result: negative

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

Effects on fertility : Test Type: Fertility/early embryonic development  
Species: Rat  
Application Route: Ingestion  
Method: OPPTS 870.3800  
Result: negative

### STOT - single exposure

Not classified based on available information.

### Components:

#### deltamethrin (ISO):

Assessment : May cause respiratory irritation.

### Formaldehyde:

Assessment : May cause respiratory irritation.

### STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

### 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.

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

Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

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### Repeated dose toxicity

#### Components:

##### **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                                                               |
| 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, Salivation |

|                   |                  |
|-------------------|------------------|
| 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 |

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

|                   |                                     |
|-------------------|-------------------------------------|
| Species           | : Dog                               |
| NOAEL             | : 5 mg/kg                           |
| LOAEL             | : 20 mg/kg                          |
| Application Route | : Ingestion                         |
| Exposure time     | : 90 Days                           |
| Method            | : Directive 67/548/EEC, Annex, B.27 |

### Aspiration toxicity

Not classified based on available information.

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### 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, Nausea, Vomiting, Dizziness, tingling, Sweating, muscle twitching, Blurred vision, Fatigue, anorexia, Allergic reactions |
| Ingestion    | : Symptoms: muscle pain, Small pupils                                                                                                                                               |

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

##### deltamethrin (ISO):

|                                                     |                                                                                                                                                                                                                                                      |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to fish                                    | : LC50 (Cyprinodon variegatus (sheepshead minnow)): 0.00048 mg/l<br>Exposure time: 96 h<br><br>LC50 (Oncorhynchus mykiss (rainbow trout)): 0.00039 mg/l<br>Exposure time: 96 h                                                                       |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Mysidopsis bahia (opossum shrimp)): 0.0037 µg/l<br>Exposure time: 48 h<br><br>EC50 (Daphnia magna (Water flea)): 0.0035 mg/l<br>Exposure time: 48 h<br><br>LC50 (Gammarus fasciatus (freshwater shrimp)): 0.0003 µg/l<br>Exposure time: 96 h |
| Toxicity to algae/aquatic plants                    | : EC50 (Pseudokirchneriella subcapitata (green algae)): > 9.1 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: No toxicity at the limit of solubility                                                                      |
| M-Factor (Acute aquatic toxicity)                   | : 1,000,000                                                                                                                                                                                                                                          |
| Toxicity to fish (Chronic toxicity)                 | : NOEC: 0.000022 mg/l<br>Exposure time: 36 d<br>Species: Pimephales promelas (fathead minnow)<br><br>NOEC: 0.000017 mg/l<br>Exposure time: 260 d<br>Species: Pimephales promelas (fathead minnow)                                                    |

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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.0041 µg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

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

### Nonylphenol, ethoxylated:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 0.1 - 1 mg/l  
Exposure time: 96 h  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): > 0.1 - 1 mg/l  
Exposure time: 48 h  
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): > 1 - 10 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

EC10 (Selenastrum capricornutum (green algae)): > 1 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC: > 0.1 - 1 mg/l  
Exposure time: 100 d  
Species: Oryzias latipes (Japanese medaka)  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0.001 - 0.01 mg/l  
Exposure time: 28 d  
Species: Mysidopsis bahia (opossum shrimp)  
Remarks: Based on data from similar materials

M-Factor (Chronic aquatic toxicity) : 10

### Formaldehyde:

Toxicity to fish : LC50 (Morone saxatilis (striped bass)): 6.7 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : 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

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Toxicity to microorganisms : EC50 (activated sludge): 19 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 1.04 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211

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

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.74 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.24 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.1087 mg/l  
Exposure time: 24 h

EC10 (Pseudokirchneriella subcapitata (green algae)): 0.0268 mg/l  
Exposure time: 24 h

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : NOEC : 10.3 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 0.28 mg/l  
Exposure time: 33 d  
Species: Pimephales promelas (fathead minnow)  
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.91 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 1

## 12.2 Persistence and degradability

### Components:

#### deltamethrin (ISO):

Stability in water : Hydrolysis: 0 % (30 d)

#### Nonylphenol, ethoxylated:

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

### Formaldehyde:

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 99 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301A

## 12.3 Bioaccumulative potential

### Components:

#### deltamethrin (ISO):

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)  
Bioconcentration factor (BCF): 1,800

Partition coefficient: n-octanol/water : log Pow: 4.6

#### Nonylphenol, ethoxylated:

Partition coefficient: n-octanol/water : log Pow: 4.48

#### Formaldehyde:

Partition coefficient: n-octanol/water : log Pow: 0.35  
Remarks: Calculation

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

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)  
Bioconcentration factor (BCF): 6.62

Partition coefficient: n-octanol/water : log Pow: 0.7

## 12.4 Mobility in soil

### Components:

#### deltamethrin (ISO):

Distribution among environmental compartments : log Koc: 7.2

## 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.

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### 12.6 Other adverse effects

#### Product:

Endocrine disrupting potential : This substance/mixture contains components considered to have endocrine disrupting properties for environment according to UK REACH Article 57(f).

#### Components:

##### **Nonylphenol, ethoxylated:**

Endocrine disrupting potential : The substance is considered to have endocrine disrupting properties according to UK REACH Article 57(f) for environment

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.  
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.  
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.  
Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

## 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.<br>(deltamethrin (ISO), Nonylphenol, ethoxylated) |
| ADR  | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(deltamethrin (ISO), Nonylphenol, ethoxylated) |
| RID  | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(deltamethrin (ISO), Nonylphenol, ethoxylated) |
| IMDG | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,                                                          |

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**IATA** : N.O.S.  
(deltamethrin (ISO), Nonylphenol, ethoxylated)  
: Environmentally hazardous substance, liquid, n.o.s.  
(deltamethrin (ISO), Nonylphenol, ethoxylated)

### 14.3 Transport hazard class(es)

|             | Class | Subsidiary risks |
|-------------|-------|------------------|
| <b>ADN</b>  | : 9   |                  |
| <b>ADR</b>  | : 9   |                  |
| <b>RID</b>  | : 9   |                  |
| <b>IMDG</b> | : 9   |                  |
| <b>IATA</b> | : 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

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|----------------|------------------------------|-------------------------------|-------------------------------------------------------------------|

### 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

Remarks : 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 List of restrictions (Annex 17)

Number on list 28: Formaldehyde

Number on list 46a.: Nonylphenol, ethoxylated

Number on list 46b: Nonylphenol, ethoxylated

Number on list 72: Formaldehyde

UK REACH List of restrictions (Annex 17)

Substance(s) or mixture(s) are listed here according to their appearance in the regulation, irrespective of their use/purpose or the conditions of the restriction. Please refer to the conditions in corresponding Regulation to

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|                                                                                                                 |                       |                                                                               |                          |
|-----------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------|--------------------------|
|                                                                                                                 |                       | determine whether an entry is applicable to the placing on the market or not. |                          |
| UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation                             |                       | :                                                                             | Nonylphenol, ethoxylated |
| The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain) |                       | :                                                                             | Not applicable           |
| Regulation (EC) on substances that deplete the ozone layer                                                      |                       | :                                                                             | Not applicable           |
| UK REACH List of substances subject to authorisation (Annex XIV)                                                |                       | :                                                                             | Nonylphenol, ethoxylated |
| GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation                           |                       | :                                                                             | Nonylphenol, ethoxylated |
| Control of Major Accident Hazards Regulations 2015 (COMAH)                                                      |                       |                                                                               |                          |
| E1                                                                                                              | ENVIRONMENTAL HAZARDS | Quantity 1<br>100 t                                                           | Quantity 2<br>200 t      |

### Other regulations:

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to new and expectant mothers at work contained in Regulation 16 to 18) and of the Pregnant Workers Directive 92/85/EEC.

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.

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

|       |   |                |
|-------|---|----------------|
| AICS  | : | not determined |
| DSL   | : | not determined |
| IECSC | : | not determined |

## 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

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

### Full text of H-Statements

|      |   |                                          |
|------|---|------------------------------------------|
| H221 | : | Flammable gas.                           |
| H301 | : | Toxic if swallowed.                      |
| H302 | : | Harmful if swallowed.                    |
| H311 | : | Toxic in contact with skin.              |
| H314 | : | Causes severe skin burns and eye damage. |
| H315 | : | Causes skin irritation.                  |
| H317 | : | May cause an allergic skin reaction.     |

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|        |                                                                                |
|--------|--------------------------------------------------------------------------------|
| H318   | : Causes serious eye damage.                                                   |
| H319   | : Causes serious eye irritation.                                               |
| H330   | : Fatal if inhaled.                                                            |
| H331   | : Toxic if inhaled.                                                            |
| H335   | : May cause respiratory irritation.                                            |
| H341   | : Suspected of causing genetic defects.                                        |
| H350   | : May cause cancer.                                                            |
| H361fd | : Suspected of damaging fertility. Suspected of damaging the unborn child.     |
| H372   | : Causes damage to organs through prolonged or repeated exposure if inhaled.   |
| H372   | : Causes damage to organs through prolonged or repeated exposure if swallowed. |
| H400   | : Very toxic to aquatic life.                                                  |
| H410   | : Very 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                                                                                              |
| Carc.             | : Carcinogenicity                                                                                                                 |
| Eye Dam.          | : Serious eye damage                                                                                                              |
| Eye Irrit.        | : Eye irritation                                                                                                                  |
| Flam. Gas         | : Flammable gases                                                                                                                 |
| Muta.             | : Germ cell mutagenicity                                                                                                          |
| Repr.             | : Reproductive toxicity                                                                                                           |
| Skin Corr.        | : Skin corrosion                                                                                                                  |
| Skin Irrit.       | : Skin irritation                                                                                                                 |
| Skin Sens.        | : Skin sensitisation                                                                                                              |
| STOT RE           | : Specific target organ toxicity - repeated exposure                                                                              |
| STOT SE           | : Specific target organ toxicity - single exposure                                                                                |
| 2004/37/EC        | : Europe. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work |
| GB EH40           | : UK. EH40 WEL - Workplace Exposure Limits                                                                                        |
| 2004/37/EC / STEL | : Short term exposure limit                                                                                                       |
| 2004/37/EC / TWA  | : Long term exposure limit                                                                                                        |
| GB EH40 / TWA     | : Long-term exposure limit (8-hour TWA reference period)                                                                          |
| GB EH40 / STEL    | : Short-term exposure limit (15-minute reference period)                                                                          |

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;

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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

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 Agency, <http://echa.europa.eu/>

### Classification of the mixture:

|                   |      |
|-------------------|------|
| Skin Sens. 1      | H317 |
| Carc. 1B          | H350 |
| STOT RE 2         | H373 |
| Aquatic Acute 1   | H400 |
| Aquatic Chronic 1 | H410 |

### Classification procedure:

|                    |
|--------------------|
| Calculation method |
| Calculation method |
| Calculation method |
| Calculation method |
| Calculation method |

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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.

GB / EN