SAFETY DATA SHEET

Deltamethrin (Scalibor) Collar

Version 8.5  Revision Date: 23.03.2020  SDS Number: 85702-00019  Date of last issue: 13.09.2019  Date of first issue: 01.04.2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Deltamethrin (Scalibor) Collar

Manufacturer or supplier’s details

Company: MSD
Address: 91-105 Harpin Street
         Bendigo 3550, Victoria Australia
Telephone: 908-740-4000
Emergency telephone number: 1 800 033 461
E-mail address: EHSDATASTEWARD@msd.com
Telefax: 1 800 817 414

Recommended use of the chemical and restrictions on use

Recommended use: Veterinary product

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral): Category 4
Skin sensitisation: Category 1
Reproductive toxicity: Category 2
Specific target organ toxicity - repeated exposure (Oral): Category 2 (Central nervous system, Immune system)
Specific target organ toxicity - repeated exposure (Inhalation): Category 2 (Central nervous system)

GHS label elements

Hazard pictograms:

Signal word: Warning

Hazard statements:
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H373 May cause damage to organs (Central nervous system, Immune system) through prolonged or repeated exposure if
swallowed. H373 May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.

Precautionary statements:

Prevention:
P201 Obtain special instructions before use. 
P202 Do not handle until all safety precautions have been read and understood. 
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. 
P264 Wash skin thoroughly after handling. 
P270 Do not eat, drink or smoke when using this product. 
P272 Contaminated work clothing should not be allowed out of the workplace. 
P280 Wear protective gloves. 
P281 Use personal protective equipment as required.

Response:
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. 
P302 + P352 IF ON SKIN: Wash with plenty of soap and water. 
P308 + P313 IF exposed or concerned: Get medical advice/ attention. 
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. 
P363 Wash contaminated clothing before reuse.

Storage: 
P405 Store locked up.

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

Other hazards which do not result in classification
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>polyvinyl chloride</td>
<td>9002-86-2</td>
<td>&gt;= 30 - &lt; 60</td>
</tr>
<tr>
<td>Triphenyl phosphate</td>
<td>115-86-6</td>
<td>&gt;= 30 - &lt; 60</td>
</tr>
<tr>
<td>Deltamethrin (ISO)</td>
<td>52918-63-5</td>
<td>&gt;= 3 - &lt; 10</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>&gt;= 1 - &lt; 10</td>
</tr>
</tbody>
</table>

SECTION 4. 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.
If inhaled : If inhaled, remove to fresh air.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : Harmful if swallowed.
May cause an allergic skin reaction.
Suspected of damaging fertility. Suspected of damaging the unborn child.
May cause damage to organs through prolonged or repeated exposure if swallowed.
May cause damage to organs through prolonged or repeated exposure if inhaled.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician : Treat symptomatically and supportively.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : None known.

Specific hazards during firefighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides
Nitrogen oxides (NOx)
Bromine compounds
Oxides of phosphorus
Metal oxides

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.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up: Sweep up or vacuum up spillage and collect in suitable container for disposal. 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.

SECTION 7. HANDLING AND STORAGE

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

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 swallow. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment. 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. 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.

Conditions for safe storage: Keep in properly labelled containers. Store locked up. Store in accordance with the particular national regulations.

Materials to avoid: Do not store with the following product types: Strong oxidizing agents.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type</th>
<th>Control parameter</th>
<th>Basis</th>
</tr>
</thead>
</table>

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Deltamethrin (Scalibor) Collar

<table>
<thead>
<tr>
<th>Substance</th>
<th>Form of exposure</th>
<th>Ters / Permissible concentration</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyvinyl chloride</td>
<td>9002-86-2</td>
<td>TWA (Respirable particulate matter)</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td>Triphenyl phosphate</td>
<td>115-86-6</td>
<td>TWA</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td>Deltamethrin (ISO)</td>
<td>52918-63-5</td>
<td>TWA</td>
<td>15 µg/m³ (OEB 3)</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>TWA</td>
<td>10 mg/m³</td>
</tr>
</tbody>
</table>

Further information: DSEN, Skin Wipe limit 150 µg/100 cm² Internal
Further information: This value is for inhalable dust containing no asbestos and < 1% crystalline silica

TWA 10 mg/m³ (Titanium dioxide) ACGIH

These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

Titanium dioxide

Engineering measures:
Use feasible engineering controls to minimize exposure to compound. All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

Personal protective equipment
Respiratory protection:
If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
Filter type: Particulates type

Hand protection:
Material: Chemical-resistant gloves

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

Skin and body protection:
Work uniform or laboratory coat.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: solid
Colour: white
Odour: very faint
Odour Threshold: No data available
pH: No data available
## Melting point/freezing point
- **No data available**

## Initial boiling point and boiling range
- **> 148.8 °C**

## Flash point
- **Not applicable**

## Evaporation rate
- **Not applicable**

## Flammability (solid, gas)
- **Not classified as a flammability hazard**

## Flammability (liquids)
- **No data available**

## Upper explosion limit / Upper flammability limit
- **No data available**

## Lower explosion limit / Lower flammability limit
- **No data available**

## Vapour pressure
- **Not applicable**

## Relative vapour density
- **Not applicable**

## 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**: **Not applicable**

## Explosive properties
- **Not explosive**

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

## Molecular weight
- **Not applicable**

## Particle size
- **Not applicable**

### SECTION 10. STABILITY AND REACTIVITY

- **Reactivity**: **Not classified as a reactivity hazard.**
- **Chemical stability**: **Stable under normal conditions.**
- **Possibility of hazardous reac-**: **Can react with strong oxidizing agents.**
SECTIONS

Conditions to avoid
Incompatible materials
Hazardous decomposition products

None known.
Oxidizing agents
No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Exposure routes
Skin contact
Ingestion
Eye contact

Acute toxicity
Harmful if swallowed.

Product:
Acute oral toxicity
Acute toxicity estimate: 1,668 mg/kg
Method: Calculation method

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

Components:

Triphenyl phosphate:
Acute oral toxicity
LD50 (Rat): > 5,000 mg/kg
Acute dermal toxicity
LD50 (Rabbit): > 10,000 mg/kg

Deltamethrin (ISO):
Acute oral toxicity
LD50 (Rat): 66.7 mg/kg
LD50 (Rat): 9 - 139 mg/kg
LD50 (Mouse): 19 - 34 mg/kg
Acute inhalation toxicity
LC50 (Rat): 0.8 mg/l
Exposure time: 2 h
Test atmosphere: dust/mist

Acute dermal toxicity
LD50 (Rabbit): 2,000 mg/kg
LD50 (Rat): > 800 mg/kg

Acute toxicity (other routes of administration)
LD50 (Rat): 2.5 mg/kg
Application Route: Intravenous
LD50 (Mouse): 10 mg/kg
Application Route: Intraperitoneal

Titanium dioxide:
Acute oral toxicity
LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity: LC50 (Rat): > 6.82 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

**Skin corrosion/irritation**
Not classified based on available information.

**Components:**

**Triphenyl phosphate:**
- **Species:** Rabbit
- **Method:** OECD Test Guideline 404
- **Result:** No skin irritation

**Deltamethrin (ISO):**
- **Species:** Rabbit
- **Result:** No skin irritation

**Titanium dioxide:**
- **Species:** Rabbit
- **Result:** No skin irritation

**Serious eye damage/eye irritation**
Not classified based on available information.

**Components:**

**Triphenyl phosphate:**
- **Species:** Rabbit
- **Result:** No eye irritation
- **Method:** OECD Test Guideline 405

**Deltamethrin (ISO):**
- **Species:** Rabbit
- **Result:** Moderate eye irritation

**Titanium dioxide:**
- **Species:** Rabbit
- **Result:** No eye irritation

**Respiratory or skin sensitisation**

**Skin sensitisation**
May cause an allergic skin reaction.

**Respiratory sensitisation**
Not classified based on available information.
Components:

Triphenyl phosphate:
- Test Type: Maximisation Test
- Exposure routes: Skin contact
- Species: Guinea pig
- Method: OECD Test Guideline 406
- Result: negative

Deltamethrin (ISO):
- Test Type: Maximisation Test
- Exposure routes: Dermal
- Species: Guinea pig
- Result: negative

Titanium dioxide:
- Test Type: Local lymph node assay (LLNA)
- Exposure routes: Skin contact
- Species: Mouse
- Result: negative

Chronic toxicity

Germ cell mutagenicity
Not classified based on available information.

Components:

Triphenyl phosphate:
- Genotoxicity in vitro
  - Test Type: Chromosome aberration test in vitro
    - Method: OECD Test Guideline 473
    - Result: negative
  - Test Type: Bacterial reverse mutation assay (AMES)
    - Method: OECD Test Guideline 471
    - Result: negative
  - Test Type: In vitro mammalian cell gene mutation test
    - Result: negative

Deltamethrin (ISO):
- Genotoxicity in vitro
  - Test Type: Bacterial reverse mutation assay (AMES)
    - Result: negative
  - Test Type: DNA Repair
    - Test system: Escherichia coli
    - Result: negative
Genotoxicity in vivo:
- Test Type: Micronucleus test
  - Species: Mouse
  - Application Route: Oral
  - Result: negative
- Test Type: dominant lethal test
  - Species: Mouse
  - Application Route: Oral
  - Result: negative
- Test Type: sister chromatid exchange assay
  - Species: Mouse
  - Cell type: Bone marrow
  - Application Route: Oral
  - Result: negative

Titanium dioxide:
- Genotoxicity in vitro:
  - Test Type: Bacterial reverse mutation assay (AMES)
  - Result: negative
- Genotoxicity in vivo:
  - Test Type: In vivo micronucleus test
  - Species: Mouse
  - Result: negative

Carcinogenicity:
Not classified based on available information.

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)
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Exposure time : 2 Years
NOAEL : 1 mg/kg body weight
Result : negative

Titanium dioxide:
Species : Rat
Application Route : inhalation (dust/mist/fume)
Exposure time : 2 Years
Method : OECD Test Guideline 453
Result : positive
Remarks : The mechanism or mode of action may not be relevant in humans.

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in inhalation studies with animals.

Reproductive toxicity
Suspected of damaging fertility. Suspected of damaging the unborn child.

Components:

Triphenyl phosphate:

Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rabbit
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

Deltamethrin (ISO):

Effects on fertility : Test Type: Three-generation reproduction toxicity study
Species: Rat
Application Route: oral (feed)
Early Embryonic Development: NOAEL: 50 mg/kg body weight
Symptoms: No effects on fertility, Embryo-foetal toxicity
Remarks: Significant toxicity observed in testing

Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Oral
Early Embryonic Development: LOAEL: 84 - 149 mg/kg body weight
Symptoms: No effects on fertility, Embryo-foetal toxicity

Test Type: Fertility
Species: Rat, male
Application Route: Oral
Fertility: LOAEL: 1 mg/kg body weight
Effects on foetal development:

Test Type: Development
Species: Mouse
Application Route: oral (gavage)
Developmental Toxicity: LOAEL: 1 mg/kg body weight
Result: Skeletal malformations
Remarks: Maternal toxicity observed.

Test Type: Development
Species: Rat, female
Developmental Toxicity: NOAEL: 10 mg/kg body weight
Symptoms: No effects on foetal development

Test Type: Development
Species: Rabbit, female
Application Route: oral (gavage)
Developmental Toxicity: NOAEL: 16 mg/kg body weight
Symptoms: No effects on foetal development

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

STOT - single exposure
Not classified based on available information.

Components:

Deltamethrin (ISO):
Assessment: May cause respiratory irritation.

STOT - repeated exposure
May cause damage to organs (Central nervous system, Immune system) through prolonged or repeated exposure if swallowed.
May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.

Components:

Deltamethrin (ISO):
Exposure routes: Ingestion
Target Organs: Central nervous system, Immune system
Assessment: Causes damage to organs through prolonged or repeated exposure.

Exposure routes: inhalation (dust/mist/fume)
Target Organs: Central nervous system
Assessment: Causes damage to organs through prolonged or repeated exposure.
### Repeated dose toxicity

#### Components:

**Triphenyl phosphate:**
- **Species:** Rat
- **NOAEL:** 105 mg/kg
- **Application Route:** Ingestion
- **Exposure time:** 90 Days
- **Method:** OECD Test Guideline 408

**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
  - **NOAEL:** 3 mg/m3
  - **LOAEL:** 1 mg/kg
  - **Application Route:** Inhalation (dust/mist/fume)
  - **Test atmosphere:** Dust/mist
  - **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
  - **NOAEL:** 6 mg/kg
  - **LOAEL:** 1 mg/kg
  - **Application Route:** Oral
  - **Exposure time:** 12 Weeks
  - **Target Organs:** Immune system
  - **Symptoms:** Immune system effects

**Titanium dioxide:**
- **Species:** Rat
- **NOAEL:** 24,000 mg/kg
- **Application Route:** Ingestion
Exposure time : 28 Days

Species : Rat
NOAEL : 10 mg/m3
Application Route : inhalation (dust/mist/fume)
Exposure time : 2 yr

Aspiration toxicity
Not classified based on available information.

Experience with human exposure

Product:
Skin contact : Remarks: Can be absorbed through skin.
Based on Animal Evidence
May irritate skin.
Ingestion : Remarks: May be harmful if swallowed.

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

Ecotoxicity

Product:
Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 13 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Ecotoxicology Assessment
Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Components:
Triphenyl phosphate:
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.4 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.41 mg/l
Exposure time: 48 h
Toxicity to algae/aquatic plants

Method: OECD Test Guideline 202

- NOEC (Pseudokirchneriella subcapitata (green algae)): 0.25 mg/l
  Exposure time: 72 h
  Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity)

Method: OECD Test Guideline 201

- EC10 (Oncorhynchus mykiss (rainbow trout)): 0.037 mg/l
  Exposure time: 30 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

Method: OECD Test Guideline 211

- NOEC (Daphnia magna (Water flea)): 0.254 mg/l
  Exposure time: 21 d

Deltamethrin (ISO):

Toxicity to fish

Method: OECD Test Guideline 203

- LC50 (Cyprinodon variegatus (sheepshead minnow)): 0.00048 mg/l
  Exposure time: 96 h

- LC50 (Oncorhynchus mykiss (rainbow trout)): 0.00039 mg/l
  Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates

- EC50 (Mysidopsis bahia (opossum shrimp)): 0.0037 µg/l
  Exposure time: 48 h

- EC50 (Daphnia magna (Water flea)): 0.0035 mg/l
  Exposure time: 48 h

- LC50 (Gammarus fasciatus (freshwater shrimp)): 0.0003 µg/l
  Exposure time: 96 h

Toxicity to algae/aquatic plants

Method: OECD Test Guideline 201

- EC50 (Pseudokirchneriella subcapitata (green algae)): > 9.1 mg/l
  Exposure time: 72 h
  Remarks: No toxicity at the limit of solubility

Toxicity to fish (Chronic toxicity)

Method: OECD Test Guideline 203

- NOEC (Pimephales promelas (fathead minnow)): 0.000022 mg/l
  Exposure time: 36 d

- NOEC (Pimephales promelas (fathead minnow)): 0.000017 mg/l
  Exposure time: 260 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

Method: OECD Test Guideline 203

- NOEC (Daphnia magna (Water flea)): 0.0041 µg/l
  Exposure time: 21 d

Titanium dioxide:

Toxicity to fish

Method: OECD Test Guideline 203

- LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
  Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates

Method: OECD Test Guideline 203

- EC50 (Daphnia magna (Water flea)): > 100 mg/l
aquatic invertebrates  Exposure time: 48 h

Toxicity to algae/aquatic plants:
EC50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l
Exposure time: 72 h

Toxicity to microorganisms:
EC50: > 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Persistence and degradability

Components:

polyvinyl chloride:
Biodegradability: Result: Not readily biodegradable.

Triphenyl phosphate:
Biodegradability: Result: Readily biodegradable.
Biodegradation: 83 - 94 %
Exposure time: 28 d

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

Bioaccumulative potential

Components:

Triphenyl phosphate:
Bioaccumulation: Species: Oryzias latipes (Orange-red killifish)
Bioconcentration factor (BCF): 144
Partition coefficient: n-octanol/water: log Pow: 4.63

Deltamethrin (ISO):
Bioaccumulation: Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 1,800
Partition coefficient: n-octanol/water: log Pow: 4.6

Mobility in soil

Components:

Deltamethrin (ISO):
Distribution among environmental compartments: log Koc: 7.2

Other adverse effects
No data available
SECTION 13. DISPOSAL CONSIDERATIONS

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

International Regulations

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

National Regulations

ADG
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

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

Prohibition/Licensing Requirements : There is no applicable prohibition or notification/licensing requirements, including for carcinogens under Commonwealth, State or Territory legislation.

The components of this product are reported in the following inventories:
AICS : not determined
DSL : not determined
IECSC : not determined

SECTION 16. OTHER INFORMATION

Further information
Revision Date : 23.03.2020
Sources of key data used to : Internal technical data, data from raw material SDSs, OECD
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Version 8.5  Revision Date: 23.03.2020  SDS Number: 85702-00019  Date of last issue: 13.09.2019


Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
AU OEL : Australia. Workplace Exposure Standards for Airborne Contaminants.

ACGIH / TWA : 8-hour, time-weighted average
AU OEL / TWA : Exposure standard - time weighted average

AIICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organization for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSGA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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

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