

## Praziquantel Formulation

|         |                |                |                                 |
|---------|----------------|----------------|---------------------------------|
| Version | Revision Date: | SDS Number:    | Date of last issue: 2025/02/19  |
| 2.0     | 2025/04/14     | 11511878-00002 | Date of first issue: 2025/02/19 |

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Praziquantel Formulation

Product code : Hadaclean 5%, Hadaclean A

**Manufacturer or supplier's details**

Company : MSD

Address : 126 E. Lincoln Avenue  
Rahway, New Jersey U.S.A. 07065

Telephone : 908-740-4000

Emergency telephone number : 1-908-423-6000

E-mail address : EHSDATASTEWARD@msd.com

**Recommended use of the chemical and restrictions on use**

Recommended use : Veterinary product

Restrictions on use : Not applicable

## 2. HAZARDS IDENTIFICATION

**GHS Classification**

Not a hazardous substance or mixture.

**GHS label elements**

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

**Other hazards which do not result in classification**

Dust contact with the eyes can lead to mechanical irritation.  
Contact with dust can cause mechanical irritation or drying of the skin.  
May form explosive dust-air mixture during processing, handling or other means.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Components**

| Chemical name               | CAS-No.    | Concentration (% w/w) |
|-----------------------------|------------|-----------------------|
| Starch                      | 9005-25-8  | $\geq 30$ - $< 60$    |
| praziquantel                | 55268-74-1 | $\geq 2.5$ - $< 10$   |
| Dimethyl octadienol         | 78-70-6    | $< 1$                 |
| 3,7-Dimethyl 2,6-octadienal | 5392-40-5  | $< 1$                 |

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**4. FIRST AID MEASURES**

- |                                                             |   |                                                                                                                                                                                                                       |
|-------------------------------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General advice                                              | : | In the case of accident or if you feel unwell, seek medical advice immediately.<br>When symptoms persist or in all cases of doubt seek medical advice.                                                                |
| If inhaled                                                  | : | If inhaled, remove to fresh air.<br>Get medical attention if symptoms occur.                                                                                                                                          |
| 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                                      | : | If in eyes, rinse well with water.<br>Get medical attention if irritation develops and persists.                                                                                                                      |
| If swallowed                                                | : | If swallowed, DO NOT induce vomiting.<br>Get medical attention if symptoms occur.<br>Rinse mouth thoroughly with water.                                                                                               |
| Most important symptoms and effects, both acute and delayed | : | Contact with dust can cause mechanical irritation or drying of the skin.<br>Dust contact with the eyes can lead to mechanical irritation.                                                                             |
| 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.                                                                                                                                                                               |

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**5. FIREFIGHTING MEASURES**

- |                                       |   |                                                                                                                                                                                                                                                 |
|---------------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media          | : | Water spray<br>Alcohol-resistant foam<br>Carbon dioxide (CO <sub>2</sub> )<br>Dry chemical                                                                                                                                                      |
| Unsuitable extinguishing media        | : | None known.                                                                                                                                                                                                                                     |
| 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> )                                                                                                                                                                                             |
| Specific extinguishing methods        | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers.<br>Remove undamaged containers from fire area if it is safe to do so.<br>Evacuate area. |
| Special protective equipment          | : | In the event of fire, wear self-contained breathing apparatus.                                                                                                                                                                                  |

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for firefighters

Use personal protective equipment.

**6. ACCIDENTAL RELEASE MEASURES**

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

Environmental precautions : Avoid release to the environment.  
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.  
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).  
Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.  
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.

**7. HANDLING AND STORAGE**

Technical measures : Static electricity may accumulate and ignite suspended dust causing an explosion.  
Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not get on skin or clothing.  
Avoid breathing dust, fume, gas, mist, vapours or spray.  
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  
Minimize dust generation and accumulation.  
Keep container closed when not in use.  
Keep away from heat and sources of ignition.  
Take precautionary measures against static discharges.  
Take care to prevent spills, waste and minimize release to the environment.

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

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

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Components with workplace control parameters

| Components                  | CAS-No.                                                                                                                                         | Value type<br>(Form of exposure)   | Control parameters / Permissible concentration | Basis    |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------------------------------------------------|----------|
| Starch                      | 9005-25-8                                                                                                                                       | NAB                                | 10 mg/m3                                       | ID OEL   |
|                             | Further information: Not classified as carcinogenic to humans. Not enough data to classify these materials as carcinogenic to humans or animals |                                    |                                                |          |
|                             |                                                                                                                                                 | TWA                                | 10 mg/m3                                       | ACGIH    |
| praziquantel                | 55268-74-1                                                                                                                                      | TWA                                | 0.5 mg/m3 (OEB 2)                              | Internal |
| 3,7-Dimethyl 2,6-octadienal | 5392-40-5                                                                                                                                       | TWA (Inhalable fraction and vapor) | 5 ppm                                          | ACGIH    |

**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.

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,

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appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

|                                                  |   |                                                                                 |
|--------------------------------------------------|---|---------------------------------------------------------------------------------|
| Appearance                                       | : | Crystalline solid                                                               |
| Colour                                           | : | No data available                                                               |
| 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                                      | : | Not applicable                                                                  |
| Evaporation rate                                 | : | Not applicable                                                                  |
| Flammability (solid, gas)                        | : | May form explosive dust-air mixture during processing, handling or other means. |
| Flammability (liquids)                           | : | Not applicable                                                                  |
| 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)<br>Water solubility              | : | No data available                                                               |
| Partition coefficient: n-octanol/water           | : | Not applicable                                                                  |
| Auto-ignition temperature                        | : | No data available                                                               |
| Decomposition temperature                        | : | No data available                                                               |

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|                          |   |                                                          |
|--------------------------|---|----------------------------------------------------------|
| Viscosity                |   |                                                          |
| Viscosity, kinematic     | : | Not applicable                                           |
| Explosive properties     | : | Not explosive                                            |
| Oxidizing properties     | : | The substance or mixture is not classified as oxidizing. |
| Molecular weight         | : | No data available                                        |
| Particle characteristics |   |                                                          |
| Particle size            | : | No data available                                        |

**10. STABILITY AND REACTIVITY**

|                                    |   |                                                                                                                            |
|------------------------------------|---|----------------------------------------------------------------------------------------------------------------------------|
| Reactivity                         | : | Not classified as a reactivity hazard.                                                                                     |
| Chemical stability                 | : | Stable under normal conditions.                                                                                            |
| Possibility of hazardous reactions | : | May form explosive dust-air mixture during processing, handling or other means.<br>Can react with strong oxidizing agents. |
| Conditions to avoid                | : | Heat, flames and sparks.<br>Avoid dust formation.                                                                          |
| Incompatible materials             | : | Oxidizing agents                                                                                                           |
| Hazardous decomposition products   | : | No hazardous decomposition products are known.                                                                             |

**11. TOXICOLOGICAL INFORMATION**

|                                          |   |                                                        |
|------------------------------------------|---|--------------------------------------------------------|
| Information on likely routes of exposure | : | Inhalation<br>Skin contact<br>Ingestion<br>Eye contact |
|------------------------------------------|---|--------------------------------------------------------|

**Acute toxicity**

Not classified based on available information.

**Components:****Starch:**

|                       |   |                              |
|-----------------------|---|------------------------------|
| Acute oral toxicity   | : | LD50 (Rat): > 5,000 mg/kg    |
| Acute dermal toxicity | : | LD50 (Rabbit): > 2,000 mg/kg |

**praziquantel:**

|                     |   |                                                                                 |
|---------------------|---|---------------------------------------------------------------------------------|
| Acute oral toxicity | : | LD50 (Rat): 2,480 mg/kg<br>LD50 (Mouse): 2,454 mg/kg<br>LD50 (Dog): > 200 mg/kg |
|---------------------|---|---------------------------------------------------------------------------------|

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LD50 (Rabbit): 1,050 mg/kg

**Dimethyl octadienol:**

|                           |                                                                                                                                       |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Acute oral toxicity       | : LD50 (Rat): 2,790 mg/kg<br>Method: OECD Test Guideline 401<br>Remarks: The test was conducted equivalent or similar to guideline    |
| Acute inhalation toxicity | : LC50 (Mouse): > 3.2 mg/l<br>Exposure time: 90 min<br>Test atmosphere: vapour<br>Remarks: No test guideline followed                 |
| Acute dermal toxicity     | : LD50 (Rabbit): 5,610 mg/kg<br>Method: OECD Test Guideline 402<br>Remarks: The test was conducted equivalent or similar to guideline |

**3,7-Dimethyl 2,6-octadienal:**

|                           |                                                                            |
|---------------------------|----------------------------------------------------------------------------|
| Acute oral toxicity       | : LD50 (Rat, female): 4,895 mg/kg                                          |
| Acute inhalation toxicity | : LC50 (Rat): > 0.68 mg/l<br>Exposure time: 7 h<br>Test atmosphere: vapour |
| Acute dermal toxicity     | : LD50 (Rabbit): 2,250 mg/kg                                               |

**Skin corrosion/irritation**

Not classified based on available information.

**Components:****praziquantel:**

|         |                     |
|---------|---------------------|
| Species | : Rabbit            |
| Method  | : Draize Test       |
| Remarks | : slight irritation |

**Dimethyl octadienol:**

|         |                                                 |
|---------|-------------------------------------------------|
| Species | : Rabbit                                        |
| Method  | : OECD Test Guideline 404                       |
| Result  | : Skin irritation                               |
| Remarks | : The test was conducted according to guideline |

**3,7-Dimethyl 2,6-octadienal:**

|         |                   |
|---------|-------------------|
| Species | : Rabbit          |
| Result  | : Skin irritation |

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**Serious eye damage/eye irritation**

Not classified based on available information.

**Components:****Starch:**

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

**praziquantel:**

|         |                       |
|---------|-----------------------|
| Species | : Rabbit              |
| Result  | : Mild eye irritation |
| Method  | : Draize Test         |

**Dimethyl octadienol:**

|         |                                                             |
|---------|-------------------------------------------------------------|
| Species | : Rabbit                                                    |
| Result  | : Irritation to eyes, reversing within 21 days              |
| Method  | : OECD Test Guideline 405                                   |
| Remarks | : The test was conducted equivalent or similar to guideline |

**3,7-Dimethyl 2,6-octadienal:**

|         |                                                |
|---------|------------------------------------------------|
| Species | : Rabbit                                       |
| Result  | : Irritation to eyes, reversing within 21 days |

**Respiratory or skin sensitisation****Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Components:****Starch:**

|                 |                     |
|-----------------|---------------------|
| Test Type       | : Maximisation Test |
| Exposure routes | : Skin contact      |
| Species         | : Guinea pig        |
| Result          | : negative          |

**praziquantel:**

|                 |                          |
|-----------------|--------------------------|
| Test Type       | : Maximisation Test      |
| Exposure routes | : Dermal                 |
| Species         | : Guinea pig             |
| Result          | : Not a skin sensitizer. |

**Dimethyl octadienol:**

|                 |                                 |
|-----------------|---------------------------------|
| Test Type       | : Local lymph node assay (LLNA) |
| Exposure routes | : Skin contact                  |

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|         |                                                 |
|---------|-------------------------------------------------|
| Species | : Mouse                                         |
| Method  | : OECD Test Guideline 429                       |
| Result  | : positive                                      |
| Remarks | : The test was conducted according to guideline |

|            |                                                                                |
|------------|--------------------------------------------------------------------------------|
| Assessment | : Probability or evidence of low to moderate skin sensitisation rate in humans |
|------------|--------------------------------------------------------------------------------|

**3,7-Dimethyl 2,6-octadienal:**

|                 |                                          |
|-----------------|------------------------------------------|
| Test Type       | : Human repeat insult patch test (HRIPT) |
| Exposure routes | : Skin contact                           |
| Result          | : positive                               |

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

**Germ cell mutagenicity**

Not classified based on available information.

**Components:****Starch:**

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative |
|-----------------------|--------------------------------------------------------------------------|

**praziquantel:**

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative |
|-----------------------|--------------------------------------------------------------------------|

|                                    |
|------------------------------------|
| Test Type: Chromosomal aberration  |
| Test system: Chinese hamster cells |
| Result: negative                   |

|                      |                                                                    |
|----------------------|--------------------------------------------------------------------|
| Genotoxicity in vivo | : Test Type: Micronucleus test<br>Species: Rat<br>Result: negative |
|----------------------|--------------------------------------------------------------------|

**Dimethyl octadienol:**

|                       |                                                                                                                                                                                   |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES)<br>Method: OECD Test Guideline 471<br>Result: negative<br>Remarks: The test was conducted equivalent or similar to guideline |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                    |
|--------------------------------------------------------------------|
| Test Type: In vitro mammalian cell gene mutation test              |
| Method: OECD Test Guideline 476                                    |
| Result: negative                                                   |
| Remarks: The test was conducted equivalent or similar to guideline |

|                                                |
|------------------------------------------------|
| Test Type: Chromosome aberration test in vitro |
|------------------------------------------------|

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|                      |                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Genotoxicity in vivo | Method: OECD Test Guideline 473<br>Result: negative<br>Remarks: The test was conducted equivalent or similar to guideline<br><br>: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)<br>Species: Mouse<br>Application Route: Ingestion<br>Method: OECD Test Guideline 474<br>Result: negative<br>Remarks: The test was conducted according to guideline |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**3,7-Dimethyl 2,6-octadienal:**

|                       |                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative<br><br>Test Type: In vitro mammalian cell gene mutation test<br>Method: OECD Test Guideline 476<br>Result: negative<br><br>Test Type: Chromosome aberration test in vitro<br>Result: negative<br><br>Test Type: In vitro sister chromatid exchange assay in mammalian cells<br>Result: positive |
| Genotoxicity in vivo  | : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)<br>Species: Mouse<br>Application Route: Ingestion<br>Result: negative                                                                                                                                                                                                                   |

**Carcinogenicity**

Not classified based on available information.

**Components:****praziquantel:**

|                   |                                                |
|-------------------|------------------------------------------------|
| Species           | : Hamster                                      |
| Application Route | : Oral                                         |
| Exposure time     | : 80 weeks                                     |
| NOAEL             | : 100 mg/kg body weight                        |
| Result            | : negative                                     |
| Remarks           | : No significant adverse effects were reported |

|                   |                         |
|-------------------|-------------------------|
| Species           | : Rat                   |
| Application Route | : Oral                  |
| Exposure time     | : 104 weeks             |
| NOAEL             | : 250 mg/kg body weight |

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|         |                                                |
|---------|------------------------------------------------|
| Result  | : negative                                     |
| Remarks | : No significant adverse effects were reported |

**3,7-Dimethyl 2,6-octadienal:**

|                   |                   |
|-------------------|-------------------|
| Species           | : Mouse           |
| Application Route | : Ingestion       |
| Exposure time     | : 104 - 105 weeks |
| Result            | : negative        |

**Reproductive toxicity**

Not classified based on available information.

**Components:****praziquantel:**

|                               |                                                                                                   |
|-------------------------------|---------------------------------------------------------------------------------------------------|
| Effects on fertility          | : Test Type: Fertility<br>Species: Rat<br>Remarks: No significant adverse effects were reported   |
|                               | Test Type: Fertility<br>Species: Mouse<br>Remarks: No significant adverse effects were reported   |
| Effects on foetal development | : Test Type: Development<br>Species: Rat<br>Remarks: No significant adverse effects were reported |
|                               | Test Type: Development<br>Species: Mouse<br>Remarks: No significant adverse effects were reported |

**Dimethyl octadienol:**

|                               |                                                                                                                                                   |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Effects on foetal development | : Test Type: Embryo-foetal development<br>Species: Rat<br>Application Route: Ingestion<br>Result: negative<br>Remarks: No test guideline followed |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|

**3,7-Dimethyl 2,6-octadienal:**

|                               |                                                                                                                                                                |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Effects on fertility          | : Test Type: One-generation reproduction toxicity study<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 443<br>Result: negative |
| Effects on foetal development | : Test Type: One-generation reproduction toxicity study<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 443<br>Result: negative |

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## II

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.

**Repeated dose toxicity****Components:****Starch:**

|                   |                           |
|-------------------|---------------------------|
| Species           | : Rat                     |
| NOAEL             | : $\geq 2,000$ mg/kg      |
| Application Route | : Skin contact            |
| Exposure time     | : 28 Days                 |
| Method            | : OECD Test Guideline 410 |

**praziquantel:**

|                   |                                                |
|-------------------|------------------------------------------------|
| Species           | : Rat                                          |
| NOAEL             | : 1,000 mg/kg                                  |
| Application Route | : Oral                                         |
| Remarks           | : No significant adverse effects were reported |

|                   |                                                |
|-------------------|------------------------------------------------|
| Species           | : Dog                                          |
| NOAEL             | : 60 mg/kg                                     |
| LOAEL             | : 180 mg/kg                                    |
| Application Route | : Oral                                         |
| Target Organs     | : Gastrointestinal tract                       |
| Remarks           | : No significant adverse effects were reported |

**Dimethyl octadienol:**

|                   |                                                 |
|-------------------|-------------------------------------------------|
| Species           | : Rat, male                                     |
| NOAEL             | : $\geq 497.9$ mg/kg                            |
| Application Route | : Ingestion                                     |
| Exposure time     | : 96 Days                                       |
| Method            | : OECD Test Guideline 408                       |
| Remarks           | : The test was conducted according to guideline |

|                   |                                                             |
|-------------------|-------------------------------------------------------------|
| Species           | : Rat                                                       |
| NOAEL             | : 250 mg/kg                                                 |
| Application Route | : Skin contact                                              |
| Exposure time     | : 91 Days                                                   |
| Method            | : OECD Test Guideline 411                                   |
| Remarks           | : The test was conducted equivalent or similar to guideline |

**3,7-Dimethyl 2,6-octadienal:**

|                   |               |
|-------------------|---------------|
| Species           | : Rat, female |
| LOAEL             | : 335 mg/kg   |
| Application Route | : Ingestion   |

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Exposure time : 14 Weeks

**Aspiration toxicity**

Not classified based on available information.

**Experience with human exposure****Components:****praziquantel:**

Inhalation : Symptoms: Headache, Tiredness, Dizziness, Gastrointestinal discomfort, decrease body temperature, Allergic reactions

**12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****praziquantel:**

Toxicity to fish : LC50 (Carassius auratus (goldfish)): 29.2 mg/l  
Exposure time: 96 hrs  
Method: OECD Test Guideline 203  
  
LC50 (Danio rerio (zebra fish)): 31.6 mg/l  
Exposure time: 96 hrs  
Method: OECD Test Guideline 203  
  
Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 35 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
  
Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition of activated sludge  
Method: OECD Test Guideline 209

**Dimethyl octadienol:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 27.8 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
Remarks: The test was conducted according to guideline  
  
Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 59 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: The test was conducted according to guideline  
  
Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 156.7 mg/l  
Exposure time: 96 h

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EC10 (Desmodesmus subspicatus (green algae)): 54.3 mg/l  
Exposure time: 96 h

Toxicity to microorganisms : EC10 (activated sludge): > 100 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
Remarks: The test was conducted according to guideline

**3,7-Dimethyl 2,6-octadienal:**

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 6.78 mg/l  
Exposure time: 96 h  
Method: DIN 38412

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 6.8 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 103.8 mg/l  
Exposure time: 72 h

EC10 (Desmodesmus subspicatus (green algae)): 3 mg/l  
Exposure time: 72 h

Toxicity to microorganisms : EC50 (activated sludge): 160 mg/l  
Exposure time: 30 min  
Method: OECD Test Guideline 209

**Persistence and degradability****Components:****Dimethyl octadienol:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 64.2 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D  
Remarks: The test was conducted according to guideline

**3,7-Dimethyl 2,6-octadienal:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: > 90 %  
Exposure time: 28 d  
Method: Directive 67/548/EEC Annex V, C.4.D.

**Bioaccumulative potential****Components:****praziquantel:**

Partition coefficient: n- : log Pow: 2.012

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n-octanol/water

pH: 7

**Dimethyl octadienol:**

Partition coefficient: n-octanol/water

: log Pow: 2.84  
Method: OECD Test Guideline 107  
Remarks: The test was conducted equivalent or similar to guideline

**3,7-Dimethyl 2,6-octadienal:**

Partition coefficient: n-octanol/water

: log Pow: 2.76

**Mobility in soil**

No data available

**Other adverse effects**

No data available

**13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Do not dispose of waste into sewer.  
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.

**14. TRANSPORT INFORMATION****International Regulations****UNRTDG**

UN number : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
Environmentally hazardous : no

**IATA-DGR**

UN/ID No. : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
Packing instruction (cargo aircraft) : Not applicable  
Packing instruction (passenger aircraft) : Not applicable

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**IMDG-Code**

|                      |                  |
|----------------------|------------------|
| UN number            | : Not applicable |
| Proper shipping name | : Not applicable |
| Class                | : Not applicable |
| Subsidiary risk      | : Not applicable |
| Packing group        | : Not applicable |
| Labels               | : Not applicable |
| EmS Code             | : Not applicable |
| Marine pollutant     | : Not applicable |

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**Special precautions for user**

Not applicable

**15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture****Minister of Industry Regulation No. 23/M-IND/PER/4/2013 concerning the Revision of Minister of Industry Regulation No. 87/M-IND/PER/9/2009 concerning Globally Harmonized System of Classification and Labelling of Chemicals.****Regulation of the Minister of Health No. 472 of 1996 on the Safeguarding of Substances Hazardous to Health**

Hazardous substances that must be registered : Not applicable

**Government Regulation No. 74 of 2001 on the Management of Hazardous and Toxic Substances**

|                                       |                  |
|---------------------------------------|------------------|
| Hazardous substances approved for use | : Not applicable |
| Prohibited substances                 | : Not applicable |
| Restricted substances                 | : Not applicable |

**Regulation of the Ministry of Trade No. 7 of 2022 on Distribution and Control of Hazardous Materials**

Type of hazardous materials subject to distribution and control, Annex I : Not applicable

Type of hazardous materials subject to distribution and control, Annex II : Not applicable

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

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

**16. OTHER INFORMATION**

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**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/>

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

Date format : yyyy/mm/dd

**Full text of other abbreviations**ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
ID OEL : Indonesia. Occupational Exposure LimitsACGIH / TWA : 8-hour, time-weighted average  
ID OEL / NAB : Long term exposure limit

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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be

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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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