Revision Date:

Version



Date of last issue: 02.04.2024

Pyrantel Pamoate / Moxidectin Formulation

SDS Number:

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|---|--|------|---|---------------------------------|
| | | | | |
| Section 1 | : Identification | | | |
| Prod | uct identifier | : | Pyrantel Pamo | ate / Moxidectin Formulation |
| | mmended use of the ch | | | |
| | mmended use ictions on use | : | Veterinary proc Not applicable | luct |
| Manu | Ifacturer or supplier's d | leta | ils | |
| Com | bany | : | MSD | |
| Addro | ess | : | 50 Tuas West Singapore - Si | Drive ngapore 638408 |
| Telep | hone | : | +1-908-740-40 | 00 |
| Emer | gency telephone number | • : | 65 6697 2111 | 24/7/365) |
| E-ma | E-mail address | | : EHSDATASTEWARD@msd.com | |
| | | | | |
| Section 2 | : Hazard identification | | | |
| | : Hazard identification sification of the substar | nce | or mixture | |
| Clas Spec | | | | entral nervous system) |
| Class Spec repea | sification of the substar ific target organ toxicity - ated exposure -term (acute) aquatic | : | | entral nervous system) |
| Class Spec repea Short haza | sification of the substar ific target organ toxicity - ated exposure -term (acute) aquatic rd -term (chronic) aquatic | : | Category 2 (Ce | entral nervous system) |
| Class Spec repea Short haza Long haza | sification of the substar ific target organ toxicity - ated exposure -term (acute) aquatic rd -term (chronic) aquatic | : | Category 2 (Ce Category 1 Category 1 | |
| Class Spec repea Short haza Long haza GHS | sification of the substar ific target organ toxicity - ated exposure -term (acute) aquatic rd -term (chronic) aquatic rd | : | Category 2 (Ce Category 1 Category 1 | |
| Class Spec repea Short haza Long haza GHS Haza | sification of the substar ific target organ toxicity - ated exposure -term (acute) aquatic rd -term (chronic) aquatic rd Label elements, includi | : | Category 2 (Ce Category 1 Category 1 | |
| Class Spec repea Short haza Long haza GHS Haza Signa | sification of the substar ific target organ toxicity - ated exposure -term (acute) aquatic rd -term (chronic) aquatic rd Label elements, includi rd pictograms | : | Category 2 (Ce Category 1 Category 1 Precautionary s Warning H373 May cause through prolong | |
| Class Spec repea Short haza Long haza GHS Haza Signa Haza | sification of the substar ific target organ toxicity - ated exposure -term (acute) aquatic rd -term (chronic) aquatic rd Label elements, includi rd pictograms | : | Category 2 (Ce Category 1 Category 1 Category 1 precautionary s Warning H373 May caus through prolony H410 Very toxi Prevention: | statements |



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P273 Avoid release to the environment.

Response:

P314 Get medical advice/ attention if you feel unwell. P391 Collect spillage.

Disposal:

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

Additional Labelling

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 38.3%

Other hazards which do not result in classification

None known.

Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

Components

| Chemical name | CAS-No. | Concentration (% w/w) |
|--|-------------|-----------------------|
| 4,4'-methylenebis[3-hydroxy-2-naphthoic] acid, | 22204-24-6 | >= 30 -< 50 |
| compound with (E)-1,4,5,6-tetrahydro-1-methyl- | | |
| 2-[2-(2-thienyl)vinyl]pyrimidine (1:1) | | |
| Glycerine | 56-81-5 | >= 10 -< 20 |
| Moxidectin | 113507-06-5 | >= 1 -< 2.5 |
| Ethanol# | 64-17-5 | >= 0.1 -< 1 |

Voluntarily-disclosed substance

Section 4: First-aid measures

Description of necessary 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. |

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| | | _ | | | | |
| | important symptoms a | and | - | - | | |
| Risks : May cause damage to organs through prolonged or reperence exposure. | | | | hage to organs through prolonged or repeated | | |
| 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). | | | |
| Indica | ation of any immediate | e me | dical attention | and special treatment needed | | |
| Treat | ment | : | Treat symptoma | atically and supportively. | | |
| ection 5 | : Fire-fighting measure | es | | | | |
| - | guishing media | | | | | |
| Suital | ble extinguishing media | : | Water spray Alcohol-resistar | at foom | | |
| | | | Carbon dioxide | | | |
| | | | Dry chemical | 、 <i>,</i> | | |
| Unsu media | itable extinguishing a | : | None known. | | | |
| - | ial hazards arising from | n th | e substance or | mixture | | |
| fightir | | : | | mbustion products may be a hazard to health | | |
| Haza ucts | rdous combustion prod- | : | Carbon oxides Nitrogen oxides Sulphur oxides | ; (NOx) | | |
| Spec | ial protective actions f | or fi | ire-fighters | | | |
| for fire | al protective equipment efighters fic extinguishing meth- | : | Use personal p Use extinguishi cumstances and Use water spray | ire, wear self-contained breathing apparatus rotective equipment. ng measures that are appropriate to local cir- d the surrounding environment. y to cool unopened containers. haged containers from fire area if it is safe to | | |
| ection 6 | : Accidental release m | eas | | | | |
| _ | | | | _ | | |
| | precautions, protective onal precautions | e eq : | Use personal p Follow safe har | nergency procedures rotective equipment. Indling advice (see section 7) and personal pre- ent recommendations (see section 8). | | |
| | ental precautions onmental precautions | : | Prevent further Retain and disp | o the environment. leakage or spillage if safe to do so. lose of contaminated wash water. s should be advised if significant spillages ained. | | |



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Methods and materials 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. |
|-------------------------|--|
|-------------------------|--|

Section 7: Handling and storage

Precautions for safe handling Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. Local/Total ventilation : Use only with adequate ventilation. Do not breathe dust, fume, gas, mist, vapours or spray. Advice on safe handling : Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash skin thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment Do not eat, drink or smoke when using this product. Take care to prevent spills, waste and minimize release to the environment. If exposure to chemical is likely during typical use, provide eye Hygiene measures : 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, including any incompatibilities

| : | Keep in properly labelled containers. |
|---|---|
| | Store in accordance with the particular national regulations. |
| : | Do not store with the following product types: Strong oxidizing agents |
| | |



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Section 8: Exposure controls/personal protection

Control parameters

Occupational Exposure Limits

| Components | CAS-No. | Value type (Form of exposure) | Control parame- ters / Permissible concentration | Basis |
|--|-------------|-------------------------------------|--|----------|
| 4,4'-methylenebis[3-hydroxy-2- naphthoic] acid, compound with (E)-1,4,5,6-tetrahydro-1- methyl-2-[2-(2- thienyl)vinyl]pyrimidine (1:1) | 22204-24-6 | TWA | 250 μg/m3 (OEB 2) | Internal |
| Glycerine | 56-81-5 | PEL (long term) (Mist) | 10 mg/m3 | SG OEL |
| Moxidectin | 113507-06-5 | TWA | 10 µg/m3 (OEB 3) | Internal |
| | | Wipe limit | 100 µg/100 cm ² | Internal |
| Ethanol | 64-17-5 | PEL (long term) | 1,000 ppm 1,880 mg/m3 | SG OEL |
| | | STEL | 1,000 ppm | ACGIH |

| Appropriate engineering control measures | : | 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 con- tainment devices). Minimize open handling. |
|---|------|--|
| Individual protection measu | ires | , such as personal protective equipment (PPE) |
| 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. |
| Skin protection | : | Work uniform or laboratory coat. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, dis- posable 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 expo- sure assessment demonstrates exposures outside the rec- ommended guidelines, use respiratory protection. |
| Filter type Hand protection | : | Combined particulates and organic vapour type |
| Material | : | Chemical-resistant gloves |
| | | 5 / 20 |



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| | | | | |
| | | | | |
| | Remarks | : | Consider double of | gloving. |
| Section | on 9: Physical and chemica | l pro | operties | |
| A | Appearance | : | paste | |
| C | Colour | : | yellow | |
| C | Ddour | : | No data available | 9 |
| C | Ddour Threshold | : | No data available | 9 |
| þ | ЭΗ | : | No data available | 9 |
| Ν | Melting point/freezing point | : | No data available | 9 |
| | nitial boiling point and boiling ange | : | No data available | |
| F | Flash point | : | Not applicable | |
| E | Evaporation rate | : | Not applicable | |
| F | Flammability (solid, gas) | : | Not applicable | |
| F | Flammability (liquids) | : | No data available | 9 |
| | Jpper explosion limit / Upper lammability limit | : | No data available | 9 |
| | Lower explosion limit / Lower lammability limit | : | No data available | 9 |
| ١ | /apour pressure | : | Not applicable | |
| F | Relative vapour density | : | Not applicable | |
| F | Relative density | : | No data available | 9 |
| 0 | Density | : | No data available | 9 |
| S | Solubility(ies) Water solubility | : | No data available | 9 |
| | Partition coefficient: n- | : | Not applicable | |
| | octanol/water Auto-ignition temperature | : | No data available | 9 |
| C | Decomposition temperature | : | No data available | |
| ١ | /iscosity Viscosity, kinematic | : | Not applicable | |



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| Explo | sive properties | : | Not explosive | |
| Oxidi | zing properties | : | The substance | or mixture is not classified as oxidizing. |
| Moleo | cular weight | : | No data availal | ble |
| | ele characteristics le size | : | Not applicable | |
| ction 1 | 0: Stability and reactivi | ty | | |
| Possi tions Cond Incom | nical stability bility of hazardous reac- itions to avoid npatible materials rdous decomposition | | Stable under n Can react with None known. Oxidizing agen | as a reactivity hazard. ormal conditions. strong oxidizing agents. ts decomposition products are known. |
| ction 1 | 1: Toxicological inform | atic | on | |
| Inforn expos | nation on likely routes of sure | : | Skin contact Ingestion Eye contact | |
| | e toxicity lassified based on availa | ble | information. | |
| Prod | | | | |
| Acute | e oral toxicity | : | Acute toxicity es Method: Calcula | stimate: > 2,000 mg/kg ation method |
| Acute | inhalation toxicity | : | Acute toxicity es Exposure time: Test atmospher Method: Calcula | e: dust/mist |
| <u>Com</u> | oonents: | | | |
| | nethylenebis[3-hydroxy yl-2-[2-(2-thienyl)vinyl] | | | , compound with (E)-1,4,5,6-tetrahydro-1- |
| | e oral toxicity | | LD50 (Rat): > 2 | 4,000 mg/kg |
| | | | | |
| | | | LD50 (Mouse): | > 24,000 mg/kg |



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| | | | | |
| Glyce | rine: | | | |
| Acute | oral toxicity | : | LD50 (Rat): > 5,00 | 00 mg/kg |
| Acute | dermal toxicity | : | LD50 (Guinea pig |): > 5,000 mg/kg |
| Moxic | lectin: | | | |
| Acute | oral toxicity | : | LD50 (Rat): 106 n | ng/kg |
| | | | LD50 (Mouse): 42 | 2 - 84 mg/kg |
| Acute | inhalation toxicity | : | LC50 (Rat): 3.28 Exposure time: 5 Test atmosphere: | h |
| | | | LC50 (Rat): 2.87 · Test atmosphere: | |
| Acute | dermal toxicity | : | | 2,000 mg/kg ificant adverse effects were reported |
| | toxicity (other routes of istration) | : | LD50 (Rat): 394 n Application Route | |
| | | | LD50 (Mouse): 84 Application Route | |
| | | | LD50 (Rat): > 640 Application Route | |
| | | | LD50 (Mouse): 26 Application Route | |
| Ethan | ol: | | | |
| | oral toxicity | : | LD50 (Rat): 10,47 Method: OECD Te | |
| Acute | inhalation toxicity | : | LC50 (Rat, male): Exposure time: 4 Test atmosphere: | h |
| Acute | dermal toxicity | : | LD50 (Rabbit): > ² | 15,800 mg/kg |
| - | corrosion/irritation assified based on availa | ble | information. | |
| <u>Comp</u> | onents: | | | |
| Glyce | rine: | | | |
| Specie Resul | | : | Rabbit No skin irritation | |



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| | | | | |
| Moxia | dectin: | | | |
| Speci | es | : | Rabbit | |
| Resul | t | : | Mild skin irritatior | 1 |
| Ethan | nol: | | | |
| Speci | | : | Rabbit | |
| Metho Resul | | : | OECD Test Guid No skin irritation | ieline 404 |
| Serio | us eye damage/eye | irritati | on | |
| | assified based on ava | | | |
| <u>Comp</u> | oonents: | | | |
| Glyce | erine: | | | |
| Speci Resul | | : | Rabbit No eye irritation | |
| itesui | L | • | No eye imalion | |
| Moxic | dectin: | | | |
| Speci Resul | | : | Rabbit Moderate eye irri | itation |
| Resul | L | • | moderate eye in | |
| Ethan | nol: | | | |
| Speci Resul | | : | Rabbit | reversing within 21 days |
| Metho | | : | OECD Test Guid | |
| Respi | iratory or skin sensi | tisatic | 'n | |
| • | sensitisation | | | |
| | assified based on ava | | information. | |
| - | iratory sensitisation assified based on ava | | information | |
| | assified based on ava | elapsin | mormation. | |
| | | | | |
| Moxic Test 1 | lectin: | | Buehler Test | |
| Expos | sure routes | : | Dermal | |
| Speci Resul | | : | Guinea pig Not a skin sensit | izer. |
| 10000 | | • | | |
| Ethan | - | | | |
| Test T | Гуре sure routes | : | Mouse ear swelli Skin contact | ing test (MEST) |
| Fynog | | | | |



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| _ | | | | |
| Resu | ılt | : | negative | |
| | n cell mutagenicity classified based on av | ailable | information. | |
| Com | ponents: | | | |
| | methylenebis[3-hydr 1yl-2-[2-(2-thienyl)vin | | | compound with (E)-1,4,5,6-tetrahydro-1- |
| Geno | otoxicity in vitro | : | Test Type: Bacte Result: negative | erial reverse mutation assay (AMES) |
| Glyc | erine: | | | |
| Geno | otoxicity in vitro | : | Test Type: In vit Result: negative | ro mammalian cell gene mutation test |
| | | | Test Type: Bacte Result: negative | erial reverse mutation assay (AMES) |
| | | | Test Type: Chro Result: negative | mosome aberration test in vitro |
| | | | | damage and repair, unscheduled DNA syn- alian cells (in vitro) |
| Mox | idectin: | | | |
| Geno | otoxicity in vitro | : | Test Type: Bacte Result: negative | erial reverse mutation assay (AMES) |
| | | | | ro mammalian cell gene mutation test inese hamster ovary cells |
| | | | Test Type: in vite Test system: Es Result: negative | cherichia coli |
| Geno | otoxicity in vivo | : | Test Type: Chro Species: Rat Cell type: Bone Result: negative | |
| | | | Test Type: Unsc mammalian liver Species: Rat Cell type: Liver of Result: negative | cells |



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| | | | |
| | | | |
| Ethan | - | | |
| Genot | toxicity in vitro | | eterial reverse mutation assay (AMES) Test Guideline 471 e |
| | | | itro mammalian cell gene mutation test Test Guideline 476 e |
| | | Test Type: Chr Result: negativ | omosome aberration test in vitro e |
| Genot | toxicity in vivo | : Test Type: Mar cytogenetic ass Species: Rat Application Rou Result: negativ | ute: Ingestion |
| | | | |
| | | | |
| Carci | nogenicity | | |
| | nogenicity assified based on av | ailable information. | |
| Not cl | assified based on av | ailable information. | |
| Not cl | | ailable information. | |
| Not cl | assified based on av | ailable information. | |
| Not cl Comp Glyce | assified based on av ponents: erine: | ailable information. | |
| Not cl Comp Glyce Specie | assified based on av ponents: erine: es | : Rat | |
| Not cl <u>Comp</u> Glyce Specie Applic | assified based on av ponents: erine: | | |
| Not cl <u>Comp</u> Glyce Specie Applic | assified based on av ponents: erine: es cation Route sure time | : Rat : Ingestion | |
| Not cl <u>Comp</u> Glyce Specia Applic Expos Resul | assified based on av ponents: erine: es cation Route sure time | : Rat : Ingestion : 2 Years | |
| Not cl <u>Comp</u> Glyce Specia Applic Expos Resul Moxic | assified based on av <u>ponents:</u> erine: es cation Route sure time t dectin: | : Rat : Ingestion : 2 Years : negative | |
| Not cl Comp Glyce Specie Applic Expos Resul Moxic Specie | assified based on av <u>ponents:</u> erine: es cation Route sure time t dectin: es | : Rat : Ingestion : 2 Years | |
| Not cl Comp Glyce Specia Applic Expos Resul Moxic Specia Applic | assified based on av <u>ponents:</u> erine: es cation Route sure time t dectin: | : Rat : Ingestion : 2 Years : negative : Mouse | |
| Not cl Comp Glyce Specia Applic Expos Resul Moxic Specia Applic Expos NOAE | assified based on av <u>ponents:</u> erine: es cation Route sure time t dectin: es cation Route sure time sure time EL | Rat Ingestion 2 Years negative Mouse Oral 2 Years 4.5 mg/kg body | <i>v</i> weight |
| Not cl Comp Glyce Specia Applic Expos Resul Moxic Specia Applic Expos | assified based on av <u>ponents:</u> erine: es cation Route sure time t dectin: es cation Route sure time sure time EL | : Rat : Ingestion : 2 Years : negative : Mouse : Oral : 2 Years | v weight |
| Not cl Comp Glyce Specia Applic Expos Resul Moxic Specia Applic Expos NOAE Resul | assified based on av <u>conents:</u> erine: es cation Route sure time t dectin: es cation Route sure time EL t | Rat Ingestion 2 Years negative Mouse Oral 2 Years 4.5 mg/kg body negative | r weight |
| Not cl Comp Glyce Specie Applic Expos Resul Moxic Specie Applic Expos NOAE Resul Specie | assified based on av <u>ponents:</u> erine: es cation Route sure time t dectin: es cation Route sure time EL t t es | Rat Ingestion 2 Years negative Mouse Oral 2 Years 4.5 mg/kg body negative Rat | v weight |
| Not cl Comp Glyce Specie Applic Expos Resul Moxic Specie Applic Expos NOAE Resul Specie Applic | assified based on av <u>ponents:</u> erine: es cation Route sure time t dectin: es cation Route sure time EL t es cation Route sure time EL t | Rat Ingestion 2 Years negative Mouse Oral 2 Years 4.5 mg/kg body negative | r weight |
| Not cl Comp Glyce Specie Applic Expos Resul Moxic Specie Applic Expos NOAE Resul Specie Applic | assified based on av <u>ponents:</u> erine: es cation Route sure time t dectin: es cation Route sure time EL t es cation Route sure time t | Rat Ingestion 2 Years negative Mouse Oral 2 Years 4.5 mg/kg body negative Rat Oral | |
| Not cl Comp Glyce Specie Applic Expos Resul Moxic Specie Applic Expos NOAE Resul Specie Applic Expos | assified based on av <u>ponents:</u> erine: es cation Route sure time t dectin: es cation Route sure time EL t es cation Route sure time EL t | Rat Ingestion 2 Years negative Mouse Oral 2 Years 4.5 mg/kg body negative Rat Oral 2 Years | |
| Not cl Comp Glyce Specia Applic Expos Resul Moxic Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul | assified based on av <u>ponents:</u> erine: es cation Route sure time t dectin: es cation Route sure time EL t es cation Route sure time EL t t | Rat Ingestion 2 Years negative Mouse Oral 2 Years 4.5 mg/kg body negative Rat Oral 2 Years 4.5 mg/kg body negative | |
| Not cl Comp Glyce Specia Applic Expos Resul Moxic Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos | assified based on av <u>conents:</u> erine: es cation Route sure time t dectin: es cation Route sure time EL t es cation Route sure time EL t es cation Route sure time EL t es | Rat Ingestion 2 Years negative Mouse Oral 2 Years 4.5 mg/kg body negative Rat Oral 2 Years 4.5 mg/kg body negative Rat Oral 2 Years 4.5 mg/kg body negative Dog | |
| Not cl Comp Glyce Specia Applic Expos Resul Moxic Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul | assified based on av <u>conents:</u> erine: es cation Route sure time t dectin: es cation Route sure time EL t es cation Route sure time EL t es cation Route sure time EL t es cation Route sure time EL t | Rat Ingestion 2 Years negative Mouse Oral 2 Years 4.5 mg/kg body negative Rat Oral 2 Years 4.5 mg/kg body negative | |
| Not cl Comp Glyce Specia Applic Expos Resul Moxic Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul Specia Applic Expos NOAE Resul | assified based on av <u>ponents:</u> erine: es cation Route sure time t dectin: es cation Route sure time EL t es cation Route sure time EL t es cation Route sure time EL t es cation Route sure time EL t | Rat Ingestion 2 Years negative Mouse Oral 2 Years 4.5 mg/kg body negative Rat Oral 2 Years 4.5 mg/kg body negative Dog Oral | / weight |

Reproductive toxicity

Not classified based on available information.



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| 4,4'-n | <u>ponents:</u> nethylenebis[3-hydro yl-2-[2-(2-thienyl)viny | | d, compound with (E)-1,4,5,6-tetrahydro-1- |
| | ts on foetal develop- | : Test Type: Em Species: Rat Application Ro Developmenta Result: No efforment were det Test Type: Em Species: Rabb Application Ro Developmenta | al Toxicity: NOAEL: 3,000 mg/kg body weight ects on fertility and early embryonic develop- tected. hbryo-foetal development bit oute: Oral al Toxicity: NOAEL: 1,000 mg/kg body weight ects on fertility and early embryonic develop- |
| Glyce | erine: | | |
| Effect | ts on fertility | : Test Type: Tw Species: Rat Application Ro Result: negativ | |
| Effect ment | ts on foetal develop- | : Test Type: Em Species: Rat Application Rc Result: negativ | |
| Moxi | dectin: | | |
| Effect | ts on fertility | Species: Rat Application Ro General Toxic Symptoms: Re Result: No effe | vo-generation reproduction toxicity study bute: Oral ity F1: LOAEL: 0.8 mg/kg body weight educed foetal weight, foetal mortality ects on fertility, Some evidence of adverse ef- opment, based on animal experiments. |
| | | Species: Rat Application Ro General Toxic Symptoms: Re Result: No effe | ree-generation reproduction toxicity study oute: Oral ity F1: LOAEL: 0.8 mg/kg body weight educed foetal weight, foetal mortality ects on fertility, Some evidence of adverse ef- opment, based on animal experiments. |
| Effect ment | ts on foetal develop- | Species: Rat Application Ro General Toxic | nbryo-foetal development oute: Oral ity Maternal: LOAEL: 10 mg/kg body weight toxicity: LOAEL: 10 mg/kg body weight |



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| | | | al malformations |
| | | Remarks: The es. | effects were seen only at maternally toxic dos- |
| | | Test Type: Em Species: Rabb | bryo-foetal development it |
| | | Developmenta | ute: Oral ty Maternal: LOAEL: 5 mg/kg body weight I Toxicity: NOAEL: 10 mg/kg body weight atogenic effects, No embryotoxic effects |
| Repro sessm | ductive toxicity - As- nent | : Some evidence animal experin | e of adverse effects on development, based on nents. |
| Ethan | iol: | | |
| Effects | s on fertility | Species: Mous Application Ro | |
| | - single exposure | Result: negativ | re |
| Not cla STOT May c | assified based on ava - repeated exposure ause damage to organ | ilable information. | |
| Not cla STOT May c <u>Comp</u> | assified based on ava - repeated exposure ause damage to organ ponents: | ilable information. | |
| Not cla STOT May c Comp Moxic Targe | assified based on ava - repeated exposure ause damage to organ | ilable information. ns (Central nervous s : Central nervou | ystem) through prolonged or repeated exposur |
| Not cla STOT May c Comp Moxic Targe Asses | assified based on ava - repeated exposure ause damage to organ conents: dectin: t Organs | ilable information. ns (Central nervous s : Central nervou : Causes damag | ystem) through prolonged or repeated exposur |
| Not cla STOT May c Comp Moxic Targe Asses Repea | assified based on ava - repeated exposure ause damage to organ conents: dectin: t Organs soment | ilable information. ns (Central nervous s : Central nervou : Causes damag | ystem) through prolonged or repeated exposur |
| Not cla STOT May c Comp Moxic Targe Asses Repea Comp 4,4'-m | assified based on ava - repeated exposure ause damage to organ bonents: dectin: t Organs ssment ated dose toxicity bonents: | ilable information. ns (Central nervous s : Central nervou : Causes damag exposure. • • • • • • • • • • • • • • • • • • • | ystem) through prolonged or repeated exposu |
| Not cla STOT May c Comp Moxic Targe Asses Repea Comp 4,4'-m methy Specie | assified based on ava - repeated exposure ause damage to organ conents: dectin: t Organs ssment ated dose toxicity conents: nethylenebis[3-hydro yl-2-[2-(2-thienyl)viny es | ilable information. ns (Central nervous s : Central nervous : Causes damag exposure. (I)pyrimidine (1:1): : Dog | ystem) through prolonged or repeated exposur is system ge to organs through prolonged or repeated |
| Not cla STOT May c Comp Moxic Targe Asses Repea Comp 4,4'-m methy Specie NOAE | assified based on ava - repeated exposure ause damage to organ - repeated exposure ause damage to organ | ilable information. ns (Central nervous s : Central nervous : Causes damag exposure. (I]pyrimidine (1:1): : Dog : 10 mg/kg | ystem) through prolonged or repeated exposur is system ge to organs through prolonged or repeated |
| Not cla STOT May c Comp Moxic Targe Asses Repea Comp 4,4'-m methy Specie NOAE LOAE | assified based on ava - repeated exposure ause damage to organ conents: dectin: t Organs sment ated dose toxicity conents: nethylenebis[3-hydro yl-2-[2-(2-thienyl)viny es EL L | ilable information. ns (Central nervous sy : Central nervous : Causes damager exposure. (I]pyrimidine (1:1): : Dog : 10 mg/kg : 30 mg/kg | ystem) through prolonged or repeated exposu is system ge to organs through prolonged or repeated |
| Not cla STOT May c Comp Moxic Targe Asses Repea Comp 4,4'-m methy Specie NOAE LOAE Applic | assified based on ava - repeated exposure ause damage to organ conents: dectin: t Organs sment ated dose toxicity conents: methylenebis[3-hydro yl-2-[2-(2-thienyl)viny es EL L cation Route | ilable information. ns (Central nervous sy : Central nervous sy : Causes damage exposure. (I]pyrimidine (1:1): : Dog : 10 mg/kg : 30 mg/kg : Ingestion | ystem) through prolonged or repeated exposu is system ge to organs through prolonged or repeated |
| Not cla STOT May c Comp Moxic Targe Asses Repea Comp 4,4'-m methy Specie NOAE LOAE Applic | assified based on ava - repeated exposure ause damage to organ bonents: dectin: t Organs sment ated dose toxicity bonents: hethylenebis[3-hydro yl-2-[2-(2-thienyl)viny es EL L sation Route sure time | ilable information. ins (Central nervous since in the second second | ystem) through prolonged or repeated exposu is system ge to organs through prolonged or repeated |
| Not cla STOT May c Comp Moxic Targe Asses Repea 4,4'-m methy Specie NOAE LOAE Applic Expos Rema | assified based on ava - repeated exposure ause damage to organ - onents: dectin: t Organs - sment - ated dose toxicity - onents: - nethylenebis[3-hydro yl-2-[2-(2-thienyl)viny - es - L - L - bation Route - sure time - rks - es | ilable information. ins (Central nervous synthesic) : Central nervous : Causes damage exposure. (I)pyrimidine (1:1): : Dog : 10 mg/kg : 30 mg/kg : Ingestion : 3 d : No significant a : Dog | ystem) through prolonged or repeated exposu is system ge to organs through prolonged or repeated d, compound with (E)-1,4,5,6-tetrahydro-1- |
| Not cla STOT May c Comp Moxic Targe Asses Repea Comp 4,4'-m methy Specie NOAE LOAE Applic Expos Rema | assified based on ava - repeated exposure ause damage to organ - onents: - dectin: t Organs ssment - ated dose toxicity - onents: - ated dose toxicity - onents: - onents: | ilable information. ins (Central nervous since in the contral nervous sin | ystem) through prolonged or repeated exposu is system ge to organs through prolonged or repeated d, compound with (E)-1,4,5,6-tetrahydro-1- |
| Not cla STOT May c Comp Moxic Targe Asses Repea Comp 4,4'-m methy Specie NOAE LOAE Applic Expos Rema | assified based on ava - repeated exposure ause damage to organ - onents: dectin: t Organs - sment - ated dose toxicity - onents: - one | ilable information. ins (Central nervous synthesic) : Central nervous : Causes damage exposure. (I)pyrimidine (1:1): : Dog : 10 mg/kg : 30 mg/kg : Ingestion : 3 d : No significant a : Dog | ystem) through prolonged or repeated exposu is system ge to organs through prolonged or repeated d, compound with (E)-1,4,5,6-tetrahydro-1- |



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| Expo Rema Spec NOAI Applie | EL cation Route sure time arks ies | : Dog : 600 mg/kg : Oral : 30 d : No significant a : Dog : 600 mg/kg : Oral : 90 d | adverse effects were reported |
| Rema | | : No significant a | adverse effects were reported |
| Speci NOAI LOAE Applie | EL | : Rat : 0.167 mg/l : 0.622 mg/l : inhalation (dus : 13 Weeks | t/mist/fume) |
| | | : Rat : 8,000 - 10,000 : Ingestion : 2 yr | mg/kg |
| | | : Rabbit : 5,040 mg/kg : Skin contact : 45 Weeks | |
| Spec NOAI LOAE Applie Expos | EL | : Mouse : 3.9 mg/kg : 15.4 mg/kg : Oral : 4 Weeks : Tremors | |
| Expo Targe | EL | : Rat : 3.9 mg/kg : 7.9 mg/kg : Oral : 13 Weeks : Central nervou : Tremors, Saliva | |
| | EL | : Dog : 0.3 mg/kg : 0.9 mg/kg : Oral : 90 Days | |



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| | | | |
| Targe Symp | et Organs toms | : Central nervous : Tremors, Lachr | s system ymation, Salivation |
| Expos | EL cation Route sure time et Organs | : Dog : 1.15 mg/kg : Oral : 52 Weeks : Central nervous : Tremors, Lachr | |
| | es EL | : Rat : 1,730 mg/kg : 3,200 mg/kg : Ingestion : 90 Days | |
| • | ation toxicity | ailable information | |
| | rience with human e | | |
| <u>Com</u> | oonents: | | |
| | nethylenebis[3-hydr yl-2-[2-(2-thienyl)vin | | l, compound with (E)-1,4,5,6-tetrahydro-1 |
| Inges | tion | : Symptoms: Abo Headache, Dizz | dominal pain, Nausea, Vomiting, Diarrhoea, ziness, Fever |
| Moxie | dectin: | | |
| | contact contact | : Remarks: No h : Remarks: No h | uman information is available. uman information is available. uman information is available. uman information is available. |

Toxicity

Components:

4,4'-methylenebis[3-hydroxy-2-naphthoic] acid, compound with (E)-1,4,5,6-tetrahydro-1-methyl-2-[2-(2-thienyl)vinyl]pyrimidine (1:1):

| Acute aquatic toxicity | : | Toxic effects cannot be excluded |
|------------------------|---|----------------------------------|
| | | |

| Chronic aquatic toxicity | : | Toxic effects cannot be excluded |
|--------------------------|---|----------------------------------|
|--------------------------|---|----------------------------------|

Glycerine:



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| | | | | |
| Тс | xicity to fish | : | LC50 (Oncorhync Exposure time: 96 | chus mykiss (rainbow trout)): 54,000 mg/l 5 h |
| | xicity to daphnia and other uatic invertebrates | : | EC50 (Daphnia m Exposure time: 48 | nagna (Water flea)): 1,955 mg/l 3 h |
| Τc | xicity to microorganisms | : | NOEC (Pseudom Exposure time: 16 Method: DIN 38 4 | |
| М | oxidectin: | | | |
| Τc | Toxicity to fish | | LC50 (Lepomis m Exposure time: 96 Method: OECD T | |
| | | | LC50 (Oncorhync Exposure time: 96 Method: OECD T | |
| | xicity to daphnia and other uatic invertebrates | : | EC50 (Daphnia m Exposure time: 48 Method: OECD T | |
| | xicity to algae/aquatic ants | : | EC50 (Pseudokiro mg/l Exposure time: 72 Method: OECD T | |
| | Factor (Acute aquatic tox- | : | 10,000 | |
| | ty) Factor (Chronic aquatic kicity) | : | 10,000 | |
| Et | hanol: | | | |
| To | xicity to fish | : | LC50 (Pimephale Exposure time: 96 | s promelas (fathead minnow)): 14,200 mg/l 5 h |
| | xicity to daphnia and other uatic invertebrates | : | EC50 (Ceriodaph Exposure time: 48 | nia dubia (water flea)): 5,012 mg/l 3 h |
| | xicity to algae/aquatic ants | : | ErC50 (Chlorella Exposure time: 72 | vulgaris (Fresh water algae)): 275 mg/l 2 h |
| | | | EC10 (Chlorella v Exposure time: 72 | rulgaris (Fresh water algae)): 11.5 mg/l 2 h |
| Tc ici | exicity to fish (Chronic tox- | : | NOEC (Oryzias la Exposure time: 10 | atipes (Japanese medaka)): >= 79 mg/l 00 d |
| aq | xicity to daphnia and other uatic invertebrates (Chron- toxicity) | : | NOEC (Daphnia r Exposure time: 9 | nagna (Water flea)): 9.6 mg/l d |



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| | | | | |
| Тох | Toxicity to microorganisms | | EC50 (Protozoa): 5,800 mg/l Exposure time: 4 h | |
| Per | sistence and degradab | ility | | |
| Cor | nponents: | | | |
| - | cerine: degradability | : | Biodegradation Exposure time: | |
| | anol: degradability | : | Result: Readily Biodegradation Exposure time: | |
| Bio | accumulative potential | | | |
| Cor | nponents: | | | |
| Part | cerine: tition coefficient: n- anol/water | : | log Pow: -1.75 | |
| Part | kidectin: tition coefficient: n- anol/water | : | log Pow: 4.7 | |
| Part | anol: tition coefficient: n- anol/water | : | log Pow: -0.35 | |
| | bility in soil data available | | | |
| | er adverse effects data available | | | |

Section 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 han- dling site for recycling or disposal. If not otherwise specified: Dispose of as unused product. |



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Section 14: Transport information

International Regulations

| UNRTDG | | |
|---|---|---|
| UN number | : | UN 3077 |
| UN proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Moxidectin) |
| Transport hazard class(es) | : | 9 |
| Packing group | : | III |
| Labels | : | 9 |
| Environmental hazards | : | yes |
| IATA-DGR | | |
| UN/ID No. | : | UN 3077 |
| UN proper shipping name | : | Environmentally hazardous substance, solid, n.o.s. (Moxidectin) |
| Transport hazard class(es) | : | 9 |
| Packing group | : | III |
| Labels | : | Miscellaneous |
| Packing instruction (cargo aircraft) | : | 956 |
| Packing instruction (passen- ger aircraft) | : | 956 |
| Environmentally hazardous | : | yes |
| IMDG-Code | | |
| UN number | : | UN 3077 |
| Proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Moxidectin) |
| Transport hazard class(es) | | 9 |
| Packing group | : | |
| Labels | : | 9 |
| EmS Code | : | J F-A, S-F |
| Marine pollutant | : | yes |
| | • | , |

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

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.

Section 15: Regulatory information

Safety, health and environmental regulations specific for the product in question



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| tions: Act/R Envir Envir ous S Fire S | | ed to the SDS, label d Management Act a d Management (Haz s | ard- | | |
| - | | oduct are reported | in the following inventories: | | |
| DSL | somponents of this p | : not determine | - | | |
| AICS | | : not determine | d | | |
| IECS | С | : not determine | d | | |
| ection 1 | 6: Other information | | | | |
| Revis | sion Date | : 26.06.2024 | | | |
| Sour | ner information ces of key data used to vile the Safety Data t | eChem Portal | Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen- cy, http://echa.europa.eu/ | | |
| Date format : dd.mm.yyyy | | | | | |
| Full t | ext of other abbreviat | ions | | | |
| | ACGIH : USA. ACGIH Threshold Limit Values (TLV) SG OEL : Singapore. Workplace Safety and Health (General Pro Regulations - First Schedule Permissible Exposure Lim Toxic Substances. | | orkplace Safety and Health (General Provisions) First Schedule Permissible Exposure Limits of | | |
| | IH / STEL DEL / PEL (long term) | | Short-term exposure limit Permissible Exposure Level (PEL) Long Term | | |
| Land Carci Stand x% ro ENCS x% g tem; - Inte | 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 fo 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 | | | | |



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centration 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 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.

SG / EN