SAFETY DATA SHEETS

According to Globally Harmonized System of

Classification and Labelling of Chemicals (GHS) -

Sixth revised edition

| Version: 1.0 | |
|---|---|
| Creation Date: Aug 15, 2017 | |
| Revision Date: Aug 15, 2017 1.Identification 1.1 GHS Product identifier | |
| Product name do | ramectin |
| 1.2 Other means of identificat | ion |
| Product number | - |
| Other names | Doromectin |
| 1.3 Recommended use of the | chemical and restrictions on use |
| Identified uses | For industry use only. |
| Uses advised against | no data available |
| 1.4 Supplier's details | |
| | |
| 1.5 Emergency phone number | r |
| Emergency phone number | - |
| Service hours | Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours). |
| 2.Hazard identification 2.1 Classification of the subst | ance or mixture |
| Acute toxicity - Oral, Category 4 | 1 |
| Reproductive toxicity, Category | 2 |
| Reproductive toxicity, Additiona | I category for effects on or via lactation |
| Hazardous to the aquatic enviro | nment, short-term (Acute) - Category Acute 1 |
| Hazardous to the aquatic enviro | nment, long-term (Chronic) - Category |
| Chronic 1 2.2 GHS label elements, inclu | ding precautionary statements |

2.2 GHS label elements, including precautionary statements

| Pictogram(s) | |
|-------------------------------|---|
| Signal word | Warning |
| Hazard statement(s) | H302 Harmful if swallowed H361 Suspected of damaging fertility or the unborn child H362 May cause harm to breast-fed children H400 Very toxic to aquatic life H410 Very toxic to aquatic life with long lasting effects |
| Precautionary statement(s) | |
| Prevention | P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P280 Wear protective gloves/protective clothing/eye protection/face protection. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P263 Avoid contact during pregnancy and while nursing. P273 Avoid release to the environment. |
| Response | P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/if you feel unwell. P330 Rinse mouth. |

P308+P313 IF exposed or concerned: Get

medical advice/ attention.

P391 Collect spillage.

Storage P405 Store locked up.

Disposal P501 Dispose of contents/container to ...

2.3 Other hazards which do not result in classification

none

3. Composition/information on ingredients

3.1 Substances

| Chemical | Common names and | CAS | EC | Concentration |
|------------|------------------|-----------------|--------|---------------|
| name | synonyms | number | number | Concentration |
| doramectin | doramectin | 117704-25- 3 | none | 100% |

4.First-aid measures

4.1 Description of necessary first-aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial

respiration. Consult a physician. In case of skin contact

Wash off with soap and plenty of water. Consult a physician. In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a

physician. If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with

water. Consult a physician.

4.2 Most important symptoms/effects, acute and delayed

no data available

4.3 Indication of immediate medical attention and special treatment needed, if necessary

no data available 5.Fire-fighting measures 5.1 Extinguishing media Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the chemical

no data available

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary. 6.Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing

vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to

safe areas. Avoid breathing dust. For personal protection see section 8. **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter

drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal. Sweep up and shovel. Keep in suitable, closed

containers for disposal.

7.Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid

exposure - obtain special instructions before use.Provide appropriate exhaust

ventilation at places where dust is formed. For precautions see section 2.2. **7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated

place.

8.Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

no data available Biological limit values

no data available 8.2 Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash

hands before breaks and at the end of workday.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Skin protection

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique(without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374

derived from it. Respiratory protection

Wear dust mask when handling large quantities. Thermal hazards

no data available 9.Physical and chemical properties

| Physical state | white to off-white crystalline powder | |
|---|--|--|
| Colour | no data available | |
| Odour | no data available | |
| Melting point/ freezing point | 116 - 119oC | |
| Boiling point or initial boiling point and boiling range | 967.4oC at 760 mmHg | |
| Flammability | no data available | |
| Lower and upper explosion limit / flammability limit | no data available | |
| Flash point | no data available | |
| Auto-ignition temperature | no data available | |
| Decomposition temperature | no data available | |
| рН | no data available | |
| Kinematic viscosity | no data available | |

Solubility

Partition coefficient n-octanol/water (log value)

Vapour pressure

Density and/or relative density

Relative vapour density

Particle characteristics

10.Stability and reactivity 10.1 Reactivity

no data available 10.2 Chemical stability

Stable under recommended storage conditions. **10.3 Possibility of hazardous reactions**

no data available 10.4 Conditions to avoid

no data available 10.5 Incompatible materials

no data available **10.6 Hazardous decomposition products**

no data available **11.Toxicological information** Acute toxicity

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available
 Skin corrosion/irritation

no data available Serious eye damage/irritation

no data available Respiratory or skin sensitization

no data available Germ cell mutagenicity

no data available Carcinogenicity

no data available Reproductive toxicity

no data available

no data available

no data available

0mmHg at 25°C

1.25 g/cm3

no data available

no data available

STOT-single exposure

no data available STOT-repeated exposure

no data available Aspiration hazard

no data available 12.Ecological information 12.1 Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available 12.2 Persistence and degradability

no data available 12.3 Bioaccumulative potential

no data available 12.4 Mobility in soil

no data available 12.5 Other adverse effects

no data available **13.Disposal considerations 13.1 Disposal methods** Product

The material can be disposed of by removal to a licensed chemical

destruction plant or by controlled incineration with flue gas scrubbing. Do not

contaminate water, foodstuffs, feed or seed by storage or disposal. Do not

discharge to sewer systems. Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible

packaging materials.

14.Transport information

14.1 UN Number

ADR/RID: no data availableIMDG: no data availableIATA: no data available

14.2 UN Proper Shipping Name

ADR/RID: no data available

IMDG: no data available

IATA: no data available

14.3 Transport hazard class(es)

ADR/RID: no data availableIMDG: no data availableIATA: no data available

14.4 Packing group, if applicable

ADR/RID: no data availableIMDG: no data availableIATA: no data available

14.5 Environmental hazards

ADR/RID: yesIMDG: yesIATA: yes

14.6 Special precautions for user

no data available

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

no data available

15.Regulatory information

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

| Chemical name | Common names and synonyms | CAS number | EC number |
|---|---------------------------|---------------|----------------|
| doramectin | doramectin | 117704-25-3 | none |
| European Inventory of Existing Commercial Chemical Substances (EINECS) | | | Not Listed. |
| EC Inventory | | | Not Listed. |
| United States Toxic Substances Control Act (TSCA) Inventory | | | Not Listed. |
| China Catalog of Hazardous chemicals 2015 | | | Not Listed. |
| New Zealand Inventory of Chemicals (NZIoC) | | | Listed. |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS) | | | Not Listed. |
| Vietnam National Chemical Inventory | | | Not Listed. |

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)

16.Other information

Information on revision

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Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods
 by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50% References
- IPCS The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- HSDB Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- IARC International Agency for Research on Cancer, website: http://www.iarc.fr/
- eChemPortal The Global Portal to Information on Chemical Substances by OECD, website:
 - http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple
- ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
- ERG Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
- Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- ECHA European Chemicals Agency, website: https://echa.europa.eu/

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