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| Version<br>2.1 | Revision Date: 28.09.2024                                    |                | S Number:<br>60103-00012   | Date of last issue: 06.04.2024<br>Date of first issue: 19.12.2019   |
|----------------|--|----------------|--|---|
|                |  |                |  |   |
| Section        | 1: Identification  |                |  |   |
| Pro            | oduct identifier   | :              | Levamisole / C   | Dxyclozanide Formulation  |
| Re             | commended use of the c<br>commended use<br>strictions on use | hem:<br>:<br>: | iical and restric<br>Veterinary pro<br>Not applicable            | duct  |
|                | nufacturer or supplier's<br>mpany                            | deta<br>:      | ils<br>MSD   |   |
| Ado            | dress  | :              | 50 Tuas West<br>Singapore - S                                    | Drive<br>ingapore 638408  |
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| Em             | ergency telephone numbe                                      | er :           | 65 6697 2111   | (24/7/365)  |
| E-n            | nail address   | :              | EHSDATASTE   | EWARD@msd.com   |
| Section        | 2: Hazard identification                                     |                |  |   |
| Cla            | ssification of the substa                                    | nce            | or mixture   |   |
| Rej            | productive toxicity  | :              | Category 2   |   |
|                | ng-term (chronic) aquatic<br>zard                            | :              | Category 2   |   |
|                | S Label elements, includ zard pictograms                     | ding           | precautionary  | statements  |
|                |  |                |  | ¥   |
| Sig            | nal word   | :              | Warning  | •   |
| Ha             | zard statements  | :              |  | cted of damaging the unborn child.<br>aquatic life with long lasting effects.   |
| Pre            | ecautionary statements                                       | :              | P202 Do not h<br>and understoo<br>P273 Avoid re<br>P280 Wear pro | pecial instructions before use.<br>andle until all safety precautions have been read<br>d.<br>lease to the environment.<br>otective gloves/ protective clothing/ eye protec-<br>ection/ hearing protection. |
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#### **Response:**

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 an approved waste disposal plant.

### Other hazards which do not result in classification

None known.

#### Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

#### Components

| Chemical name            | CAS-No.    | Concentration (% w/w) |
|--------------------------|------------|-----------------------|
| Kaolin                   | 1332-58-7  | >= 1 -< 10            |
| oxyclozanide             | 2277-92-1  | >= 3 -< 10            |
| levamisole hydrochloride | 16595-80-5 | >= 1 -< 3             |
| Citric acid              | 77-92-9    | >= 1 -< 10            |

#### **Section 4: First-aid measures**

| Description of necessary | first-aid measures  |
|--------------------------|---|
| General advice           | <ul> <li>In the case of accident or if you feel unwell, seek medical advice immediately.</li> <li>When symptoms persist or in all cases of doubt seek medical advice.</li> </ul>  |
| If inhaled               | : If inhaled, remove to fresh air.<br>Get medical attention.  |
| In case of skin contact  | <ul> <li>In case of contact, immediately flush skin with soap and plenty<br/>of water.</li> <li>Remove contaminated clothing and shoes.</li> <li>Get medical attention.</li> <li>Wash clothing before reuse.</li> <li>Thoroughly clean shoes before reuse.</li> </ul> |
| In case of eye contact   | : Flush eyes with water as a precaution.<br>Get medical attention if irritation develops and persists.  |
| If swallowed             | <ul> <li>If swallowed, DO NOT induce vomiting.</li> <li>Get medical attention.</li> <li>Rinse mouth thoroughly with water.</li> <li>Never give anything by mouth to an unconscious person.</li> </ul>   |
| Most important symptoms  | and effects, both acute and delayed   |
| D' I                     |   |

#### Risks : Suspected of damaging the unborn child.



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# Levamisole / Oxyclozanide Formulation

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| Protectio              | on of first-aiders                      | :         | and use the rec   | iders should pay attention to self-protection,<br>ommended personal protective equipment<br>tial for exposure exists (see section 8).                                  |
| Indicati               | on of any immediate                     | me        | dical attention   | and special treatment needed   |
| Treatme                | ent                                     | :         | Treat symptom   | atically and supportively.   |
| ection 5: F            | ire-fighting measure                    | S         |   |  |
| Extingui               | shing media                             |           |   |  |
| -                      | extinguishing media                     | :         | Water spray<br>Alcohol-resistar<br>Carbon dioxide<br>Dry chemical |  |
| Unsuital<br>media      | ble extinguishing                       | :         | None known.   |  |
| Special                | hazards arising from                    | n th      | e substance or  | mixture  |
| -                      | -                                       |           |   | mbustion products may be a hazard to health  |
| Hazardo<br>ucts        | ous combustion prod-                    | :         | Carbon oxides<br>Chlorine compo<br>Nitrogen oxides                |  |
| Special                | protective actions for                  | or fi     | re-fighters   |  |
| Special<br>for firefig | protective equipment ghters             | :         |   | ire, wear self-contained breathing apparatus.<br>rotective equipment.  |
| Specific<br>ods        | extinguishing meth-                     | :         | cumstances an<br>Use water spra                                   | ng measures that are appropriate to local cir-<br>d the surrounding environment.<br>y to cool unopened containers.<br>haged containers from fire area if it is safe to |
| ection 6: A            | ccidental release me                    | easi      | ures  |  |
|                        | ecautions, protective<br>al precautions | e eq<br>: | Use personal p<br>Follow safe har                                 | nergency procedures<br>rotective equipment.<br>Idling advice (see section 7) and personal pro<br>ent recommendations (see section 8).                                  |
|                        | tal precautions<br>mental precautions   | :         | Prevent further<br>Prevent spread<br>barriers).                   | o the environment.<br>leakage or spillage if safe to do so.<br>ing over a wide area (e.g. by containment or<br>lose of contaminated wash water.                        |
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|         | and materials for con<br>ods for cleaning up | cannot be contain<br>ntainment and cleanin<br>: Soak up with in<br>For large spills,<br>ment to keep m<br>be pumped, sto<br>Clean up remaind<br>bent.<br>Local or nationary<br>posal of this man<br>employed in the<br>mine which reg<br>Sections 13 an |                                 |  |  |

### Section 7: Handling and storage

### Precautions for safe handling

|                             | 5    |  |
|-----------------------------|------|--|
| Technical measures          | :    | See Engineering measures under EXPOSURE<br>CONTROLS/PERSONAL PROTECTION section. |
| Local/Total ventilation     | :    | Use only with adequate ventilation.  |
| Advice on safe handling     | :    |  |
| 5                           |      | 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 as-                     |
|                             |      | sessment   |
|                             |      | Do not eat, drink or smoke when using this product.                              |
|                             |      | Take care to prevent spills, waste and minimize release to the                   |
|                             |      | environment.   |
| Hygiene measures            | :    | If exposure to chemical is likely during typical use, provide eye                |
|                             |      | flushing systems and safety showers close to the working                         |
|                             |      | place.   |
|                             |      | When using do not eat, drink or smoke.   |
|                             |      | 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 | , in | cluding any incompatibilities  |
| Conditions for safe storage | :    | Keep in properly labelled containers.  |
|                             |      | Store locked up.   |
|                             |      | Store in accordance with the particular national regulations.                    |
| Materials to avoid          | :    | Do not store with the following product types:                                   |
|                             |      |  |



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#### Section 8: Exposure controls/personal protection

#### Control parameters

### **Occupational Exposure Limits**

| Components               | CAS-No.        | Value type<br>(Form of<br>exposure)                | Control parame-<br>ters / Permissible<br>concentration | Basis    |
|--------------------------|----------------|--|--|----------|
| Kaolin                   | 1332-58-7      | PEL (long<br>term) (Res-<br>pirable dust)          | 2 mg/m3  | SG OEL   |
|                          |                | TWA (Res-<br>pirable par-<br>ticulate mat-<br>ter) | 2 mg/m3  | ACGIH    |
| oxyclozanide             | 2277-92-1      | TWA  | 0.4 mg/m3 (OEB<br>2)                                   | Internal |
| levamisole hydrochloride | 16595-80-5     | TWA  | 20 µg/m3 (OEB 3)                                       | Internal |
|                          | Further inform | ation: Skin  |  |          |
|                          |                | Wipe limit   | 200 µg/100 cm <sup>2</sup>                             | Internal |

| Appropriate engineering :<br>control measures | Use appropriate engineering controls and manufacturing<br>technologies to control airborne concentrations (e.g., drip-<br>less quick connections).<br>All engineering controls should be implemented by facility<br>design and operated in accordance with GMP principles to<br>protect products, workers, and the environment.<br>Containment technologies suitable for controlling compounds<br>are required to control at source and to prevent migration of<br>the compound to uncontrolled areas (e.g., open-face con-<br>tainment devices).<br>Minimize open handling. |
|---|--|
| Individual protection measures                | s, such as personal protective equipment (PPE)   |
| Eye/face protection :                         | Wear safety glasses with side shields or goggles.<br>If the work environment or activity involves dusty conditions,<br>mists or aerosols, wear the appropriate goggles.<br>Wear a faceshield or other full face protection if there is a<br>potential for direct contact to the face with dusts, mists, or<br>aerosols.  |
| Skin protection :                             | Work uniform or laboratory coat.<br>Additional body garments should be used based upon the<br>task being performed (e.g., sleevelets, apron, gauntlets, dis-<br>posable suits) to avoid exposed skin surfaces.<br>Use appropriate degowning techniques to remove potentially   |
| Respiratory protection :                      | contaminated clothing.<br>If adequate local exhaust ventilation is not available or expo-<br>sure assessment demonstrates exposures outside the rec-   |



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|                | ilter type<br>d protection                   | :    | ommended guidel<br>Particulates type | ines, use respiratory protection.                                 |  |  |
| N              | laterial                                     | :    | Chemical-resistan                    | t gloves  |  |  |
| R              | emarks                                       | :    | Consider double gloving.             |   |  |  |
| Section 9      | 9: Physical and chemica                      | l pr | operties                             |   |  |  |
| Арре           | earance                                      | :    | liquid                               |   |  |  |
| Colo           | ur   | :    | No data available                    | )   |  |  |
| Odo            | ur   | :    | No data available                    | )   |  |  |
| Odo            | ur Threshold                                 | :    | No data available                    | )   |  |  |
| pН             |  | :    | No data available                    |   |  |  |
| Melti          | ing point/freezing point                     | :    | No data available                    | )   |  |  |
| Initia<br>rang | l boiling point and boiling<br>e             | :    | No data available                    |   |  |  |
| Flas           | h point                                      | :    | No data available                    | )   |  |  |
| Evap           | poration rate                                | :    | No data available                    | )   |  |  |
| Flam           | nmability (solid, gas)                       | :    | Not applicable                       |   |  |  |
| Flam           | nmability (liquids)                          | :    | No data available                    |   |  |  |
|                | er explosion limit / Upper<br>mability limit | :    | No data available                    | )   |  |  |
|                | er explosion limit / Lower<br>mability limit | :    | No data available                    |   |  |  |
| Vapo           | our pressure                                 | :    | No data available                    | )   |  |  |
| Rela           | tive vapour density                          | :    | No data available                    | )   |  |  |
| Rela           | tive density                                 | :    | No data available                    | )   |  |  |
| Dens           | sity   | :    | No data available                    | )   |  |  |
|                | bility(ies)<br>/ater solubility              | :    | No data available                    | )   |  |  |
|                | tion coefficient: n-<br>nol/water            | :    | Not applicable                       |   |  |  |
|                | -ignition temperature                        | :    | No data available                    |   |  |  |





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| Decomposition temperature  | :     | No data availab   | le  |  |
| Viscosity<br>Viscosity, kinematic  | :     | No data availab   | le  |  |
| Explosive properties   | :     | Not explosive   |   |  |
| Oxidizing properties   | :     | The substance   | or mixture is not classified as oxidizing.                              |  |
| Molecular weight   | :     | No data availab   | le  |  |
| Particle characteristics<br>Particle size  | :     | Not applicable  |   |  |
| tion 10: Stability and reactiv   | /ity  |   |   |  |
| Reactivity<br>Chemical stability<br>Possibility of hazardous reactions               | :     | Stable under no<br>Can react with s   | s a reactivity hazard.<br>ormal conditions.<br>strong oxidizing agents. |  |
| Conditions to avoid<br>Incompatible materials<br>Hazardous decomposition<br>products |       | <ul> <li>None known.</li> <li>Oxidizing agents</li> <li>No hazardous decomposition products are known.</li> </ul> |   |  |
| tion 11: Toxicological inforr  | natio | on  |   |  |
| Information on likely routes of exposure   |       | Inhalation<br>Skin contact<br>Ingestion<br>Eye contact  |   |  |
| Acute toxicity<br>Not classified based on avail                                      | able  | information.  |   |  |
| Product:   |       |   |   |  |
| Acute oral toxicity  |       | Acute toxicity es<br>Method: Calcula  | timate: > 2,000 mg/kg<br>tion method                                    |  |
| Components:  |       |   |   |  |
| Kaolin:  |       |   |   |  |
| Acute oral toxicity  | :     | : LD50 (Rat): > 5,000 mg/kg   |   |  |
| Acute dermal toxicity  | :     | : LD50 (Rat): > 5,000 mg/kg   |   |  |
| Noute definial toxicity  |       |   |   |  |
| oxyclozanide:  |       |   |   |  |



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|                         |                           |        |   |   |
|                         | toxicity (other routes o  | of :   | LDLo (sheep): 1<br>Application Rou            |   |
| lovar                   | nisole hydrochloride:     |        |   |   |
|                         | oral toxicity             | :      | LD50 (Rat): 180                               | ) mg/kg   |
|                         |                           |        | LD50 (Mouse):                                 |   |
|                         |                           |        | . ,   |   |
|                         |                           |        | LD50 (Rabbit):                                |   |
| Acute                   | inhalation toxicity       | :      | Remarks: No da                                | ata available   |
| Acute                   | dermal toxicity           | :      | Remarks: No da                                | ata available   |
| Citric                  | acid:                     |        |   |   |
| Acute                   | oral toxicity             | :      | LD50 (Mouse):                                 | 5,400 mg/kg   |
| Acute                   | dermal toxicity           | :      |   | ,000 mg/kg<br>Test Guideline 402<br>ne substance or mixture has no acute derm |
| Skin                    | corrosion/irritation      |        |   |   |
|                         | assified based on avai    | ilable | information.                                  |   |
| <u>Comp</u>             | oonents:                  |        |   |   |
| Kaoli                   |                           |        | 5.11.5  |   |
| Speci<br>Metho<br>Resul | bd                        | :      | Rabbit<br>OECD Test Gui<br>No skin irritatior |   |
| ovid                    | o-onido.                  |        |   |   |
| Rema                    | <b>ozanide:</b><br>ırks   | :      | Not classified d                              | ue to lack of data.   |
| levan                   | nisole hydrochloride:     |        |   |   |
| Rema                    |                           | :      | No data availab                               | le  |
| Citric                  | acid:                     |        |   |   |
| Speci                   |                           | :      | Rabbit  |   |
| Metho<br>Resul          |                           | :      | OECD Test Gui<br>No skin irritation           |   |
|                         | 1                         |        | INU SKILL ITTILATION                          |   |

Not classified based on available information.



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|                |                         |        |   |                                       |
| Com            | ponents:                |        |   |                                       |
| Kaol           | in:                     |        |   |                                       |
| Spec           |                         | :      | Rabbit  |                                       |
| Resu           |                         | :      | No eye irritation   |                                       |
| охус           | lozanide:               |        |   |                                       |
| Rem            | arks                    | :      | Not classified due  | e to lack of data.                    |
| levar          | misole hydrochloride:   |        |   |                                       |
| Rem            | arks                    | :      | No data available   |                                       |
| Citrie         | c acid:                 |        |   |                                       |
| Spec           |                         | :      | Rabbit  | reversing within 01 days              |
| Resu<br>Meth   |                         | :      | OECD Test Guide   | reversing within 21 days<br>eline 405 |
| Resp           | piratory or skin sensit | isatio | on  |                                       |
| Skin           | sensitisation           |        |   |                                       |
| -              | classified based on ava | ilable | information.  |                                       |
| Resp           | biratory sensitisation  |        |   |                                       |
| Not c          | classified based on ava | ilable | information.  |                                       |
| <u>Com</u>     | ponents:                |        |   |                                       |
| охус           | lozanide:               |        |   |                                       |
|                | sure routes             | :      | Dermal  |                                       |
| Rem            | arks                    | :      | Not classified due  | e to lack of data.                    |
|                | misole hydrochloride:   |        |   |                                       |
| Rem            | arks                    | :      | No data available   | •                                     |
| Gern           | n cell mutagenicity     |        |   |                                       |
| Not c          | classified based on ava | ilable | information.  |                                       |
| <u>Com</u>     | ponents:                |        |   |                                       |
| охус           | lozanide:               |        |   |                                       |
| Geno           | otoxicity in vitro      | :      | Test Type: Bacte<br>Result: negative  | rial reverse mutation assay (AMES)    |
|                |                         |        |   | nosomal aberration                    |
|                |                         |        | Test system: Hun<br>Result: positive  | παι τγπιρποζητές                      |
|                |                         |        | Test Type: Mouse  | e Lymphoma                            |
|                |                         |        | Result: positive  |                                       |
|                |                         |        |   |                                       |



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| Geno                                   | toxicity in vivo                            | : Test Type: Micronucleus<br>Species: Mouse<br>Application Route: Oral<br>Result: negative                        | test  |
|  |   | Test Type: unscheduled I<br>Species: Rat<br>Cell type: Liver cells<br>Application Route: Oral<br>Result: negative | ONA synthesis assay                                   |
| Germ cell mutagenicity -<br>Assessment |   | : Weight of evidence does cell mutagen.   | not support classification as a ger                   |
| levan                                  | nisole hydrochloride                        |   |   |
| Geno                                   | toxicity in vitro                           | : Test Type: Bacterial reve<br>Result: negative   | rse mutation assay (AMES)                             |
|  |   | Test Type: Chromosome<br>Result: negative   | aberration test in vitro                              |
| Citric                                 | acid:                                       |   |   |
| Geno                                   | toxicity in vitro                           | : Test Type: Bacterial reve<br>Result: negative   | rse mutation assay (AMES)                             |
|  |   | Test Type: in vitro micron<br>Result: positive  | ucleus test   |
|  |   | Test Type: Bacterial reve<br>Result: negative   | rse mutation assay (AMES)                             |
| Geno                                   | toxicity in vivo                            | cytogenetic test, chromos   | in vivo mammalian bone-marrow<br>somal analysis)      |
|  |   | Species: Rat<br>Application Route: Ingest<br>Result: negative   | ion   |
|  | <b>nogenicity</b><br>lassified based on ava | able information.   |   |
| <u>Com</u>                             | ponents:                                    |   |   |
| oxycl                                  | lozanide:                                   |   |   |
| Rema                                   |   | : Not classified due to lack  | of data.  |
| levan                                  | nisole hydrochloride                        |   |   |
| Speci                                  | -   | : Mouse   |   |
|  | cation Route<br>sure time                   | : Oral<br>: 2 Years   |   |



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|                | irks<br>es<br>cation Route<br>sure time<br>EL | : Rat<br>: Oral<br>: 2 Years<br>: 40 mg/kg bod  | adverse effects were reported  |
| Suspe          | oductive toxicity<br>ected of damaging the    | unborn child.   |  |
|                | oonents:                                      |   |  |
| -              | ozanide:<br>s on fertility                    | Species: Rat,<br>Application Ro<br>General Toxic<br>Symptoms: Re<br>and postnatal<br>Result: No effe<br>Test Type: Tw<br>Species: Rat<br>Application Ro<br>General Toxic<br>weight<br>Symptoms: Re<br>and postnatal<br>Result: No effe<br>Test Type: Tw<br>Species: Rat<br>Application Ro<br>Early Embryon<br>weight<br>Result: No fete | ity - Parent: NOAEL: 25 - 35 mg/kg body weight<br>educed body weight, No effects on embryofoetal<br>development<br>ects on fertility<br>vo-generation reproduction toxicity study<br>bute: Oral<br>ity - Parent: LOAEL: 75 - 100 mg/kg body<br>educed body weight, No effects on embryofoetal<br>development<br>ects on fertility<br>vo-generation reproduction toxicity study |
| Effect<br>ment | s on foetal develop-                          | Species: Rat<br>Application Ro<br>General Toxic<br>weight   | oute: Oral<br>ity - Parent: LOAEL: 80 - 160 mg/kg body<br>otoxicity, No teratogenic effects, No effects on<br>evelopment   |
|                |   | Developmenta  | al Toxicity: NOAEL: 200 mg/kg body weight<br>otoxicity, No teratogenic effects   |



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|   |   |       |                                     |  |
|   |   |       |                                     |  |
|   |   |       |                                     |  |
|   |   |       | Test Type: Deve<br>Species: Rat     | elopment   |
|   |   |       | Application Rou                     | te: Oral   |
|   |   |       | General Toxicity                    | / Maternal: LOAEL: 100 mg/kg body weight oxicity, No teratogenic effects |
|   |   |       | Test Type: Deve                     |  |
|   |   |       | Species: Rabbit<br>Application Rou  |  |
|   |   |       |                                     | Toxicity: NOAEL: 32 mg/kg body weight                                    |
|   |   |       |                                     | city, Skeletal malformations   |
| Reproductive toxicity - As-<br>sessment |   | :     | Suspected of da                     | amaging the unborn child.  |
| levam                                   | nisole hydrochloride:                       |       |                                     |  |
| Effect                                  | s on fertility                              | :     |                                     | e-generation reproduction toxicity study                                 |
|   |   |       | Species: Rat<br>Application Rou     | te: Oral   |
|   |   |       |                                     | ficant adverse effects were reported                                     |
| Effect                                  | s on foetal develop-                        | :     | Test Type: Emb                      | ryo-foetal development   |
| ment                                    |   |       | Species: Rat                        |  |
|   |   |       | Application Rou                     | te: Orai<br>Toxicity: NOAEL: 20 mg/kg body weight                        |
|   |   |       | Result: Fetotoxi                    |  |
|   |   |       | Test Type: Emb                      | ryo-foetal development   |
|   |   |       | Species: Rabbit                     |  |
|   |   |       | Application Rou                     | te: Oral<br>Toxicity: LOAEL: 40 mg/kg body weight                        |
|   |   |       | Result: Fetotoxi                    |  |
| Repro                                   | ductive toxicity - As-                      | :     | Some evidence                       | of adverse effects on development, based of                              |
| sessm                                   | •   |       | animal experime                     |  |
| Citric                                  | acid:                                       |       |                                     |  |
|   | s on foetal develop-                        | :     |                                     | -generation reproduction toxicity study                                  |
| ment                                    |   |       | Species: Rat                        | te lesse des   |
|   |   |       | Application Rou<br>Result: negative |  |
|   | <b>.</b>                                    |       |                                     |  |
|   | - single exposure<br>assified based on avai | lahle | information                         |  |
|   | oonents:                                    |       | intornation.                        |  |
| oxycl                                   | ozanide:                                    |       |                                     |  |
| -                                       | sure routes                                 | :     | Oral                                |  |
| Targe                                   | t Organs                                    | :     | Central nervous                     |  |
| Asses                                   | sment                                       | :     | May cause dam                       | age to organs.   |



| rsion          | Revision Date: 28.09.2024                     | SDS Number:Date of last issue: 06.04.2025360103-00012Date of first issue: 19.12.201  |             |
|----------------|---|--|-------------|
|                |   |  |             |
|                |   |  |             |
| Citric         | acid:   |  |             |
| Asse           | ssment  | : May cause respiratory irritation.  |             |
|                | - repeated exposur                            |  |             |
| Not c          | lassified based on av                         | ailable information.   |             |
| Com            | ponents:                                      |  |             |
| охус           | lozanide:                                     |  |             |
|                | et Organs<br>ssment                           | <ul> <li>Brain, Liver</li> <li>May cause damage to organs through prolonge exposure.</li> </ul>  | d or repeat |
| levan          | nisole hydrochloride                          | :  |             |
|                | et Organs                                     | : Blood, Testis  |             |
| Asse           | ssment  | : May cause damage to organs through prolonge exposure.  | d or repeat |
| Repe           | ated dose toxicity                            |  |             |
| <u>Com</u>     | oonents:                                      |  |             |
| охус           | lozanide:                                     |  |             |
| Spec           |   | : Rat  |             |
| NOAI<br>LOAE   |   | : 9 mg/kg<br>: 44.5 mg/kg  |             |
|                | cation Route                                  | : Oral   |             |
| Expo           | sure time                                     | : 3 Months   |             |
|                | et Organs                                     | : Brain, Liver, spleen, Adrenal gland  |             |
| Symp           | otoms   | : Liver effects  |             |
| Spec           |   | : Dog  |             |
| NOA            |   | : 5 mg/kg  |             |
| LOAE           | L<br>Cation Route                             | : 25 mg/kg<br>: Oral   |             |
|                | sure time                                     | : 3 Months   |             |
|                | et Organs                                     | : Brain, Liver   |             |
| Symp           | otoms   | : blood effects, alteration in liver enzymes   |             |
| levan          | nisole hydrochloride                          | ::   |             |
| Spec           |   | : Rat  |             |
| NOAI           |   | : 2.5 mg/kg<br>: Oral  |             |
|                |   | UTAT CONTRACT OF A DESCRIPTION OF A DESC |             |
| Appli          | cation Route                                  |  |             |
| Applie<br>Expo |   | : 18 Months<br>: Testis  |             |
| Applie<br>Expo | cation Route<br>sure time<br>et Organs<br>ies | : 18 Months  |             |



| ersion<br>1    | Revision Date: 28.09.2024 |      | 0S Number:<br>60103-00012        | Date of last issue: 06.04.2024<br>Date of first issue: 19.12.2019 |
|----------------|---------------------------|------|----------------------------------|---|
|                |                           |      |                                  |   |
|                | cation Route              | :    | Oral<br>18 Months                |   |
|                | sure time<br>et Organs    | :    | Blood                            |   |
| Speci          |                           | :    | Dog                              |   |
| LOAE<br>Applie | L<br>Cation Route         | :    | 40 mg/kg<br>Oral                 |   |
|                | sure time                 | :    | 3 Months                         |   |
| Citric         | acid:                     |      |                                  |   |
| Speci          |                           | :    | Rat                              |   |
| NOAE<br>LOAE   |                           | :    | 4,000 mg/kg<br>8,000 mg/kg       |   |
|                | cation Route              | :    | Ingestion                        |   |
| Expo           | sure time                 | :    | 10 Days                          |   |
| Aspir          | ration toxicity           |      |                                  |   |
| Not c          | lassified based on avail  | able | information.                     |   |
| <u>Com</u>     | ponents:                  |      |                                  |   |
| oxyc           | lozanide:                 |      |                                  |   |
| Not a          | pplicable                 |      |                                  |   |
| Expe           | rience with human ex      | posı | ire                              |   |
| <u>Com</u>     | ponents:                  |      |                                  |   |
| oxyc           | lozanide:                 |      |                                  |   |
| Inges          | tion                      | :    | Symptoms: May<br>nervous system  | cause, Gastrointestinal disturbance, Central depression           |
| levan          | nisole hydrochloride:     |      |                                  |   |
| Inges          | tion                      | :    | Symptoms: Nau<br>tension         | sea, Vomiting, Headache, Dizziness, hypo-                         |
| ection 1       | 2: Ecological informat    | ion  |                                  |   |
| Toxic          | city                      |      |                                  |   |
| <u>Com</u>     | ponents:                  |      |                                  |   |
| oxyc           | lozanide:                 |      |                                  |   |
|                | ity to daphnia and other  | r:   |                                  | magna (Water flea)): 0.69 mg/l                                    |
|                | tic invertebrates         | •    | ECOC (Daprilla<br>Exposure time: |   |

| aquatic invertebrates                  | • | Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
|--|---|--|
| M-Factor (Acute aquatic tox-<br>icity) | : | 1  |
| M-Factor (Chronic aquatic toxicity)    | : | 1  |



| ersion<br>1 | Revision Date: 28.09.2024                           |    | OS Number:<br>60103-00012  | Date of last issue: 06.04.2024<br>Date of first issue: 19.12.2019  |
|-------------|---|----|--|--|
|             |   |    |  |  |
|             |   |    |  |  |
| lev         | amisole hydrochloride:                              |    |  |  |
| To          | xicity to fish                                      | :  | Exposure time: 9   | atipes (Japanese medaka)): 37.3 mg/l<br>96 h<br>Test Guideline 203 |
|             | Toxicity to daphnia and other aquatic invertebrates |    | Exposure time: 4   | magna (Water flea)): 64 mg/l<br>48 h<br>Test Guideline 202         |
| Cit         | ric acid:   |    |  |  |
| To          | xicity to fish                                      | :  | LC50 (Pimephal<br>Exposure time: 9                                       | es promelas (fathead minnow)): > 100 mg<br>96 h                    |
|             | xicity to daphnia and other<br>uatic invertebrates  | :  | EC50 (Daphnia<br>Exposure time: 2  | magna (Water flea)): 1,535 mg/l<br>24 h                            |
| Ре          | rsistence and degradabili                           | ty |  |  |
| <u>Co</u>   | mponents:   |    |  |  |
| ox          | yclozanide:   |    |  |  |
| Sta         | ability in water                                    | :  | Hydrolysis: 50 %<br>Method: OECD   | b(156 d)<br>Test Guideline 111                                     |
| Cit         | ric acid:   |    |  |  |
| Bic         | odegradability                                      | :  | Result: Readily b<br>Biodegradation:<br>Exposure time: 2<br>Method: OECD | 97 %   |
| Bio         | paccumulative potential                             |    |  |  |
| <u>Co</u>   | mponents:   |    |  |  |
| ox          | yclozanide:   |    |  |  |
| Pa          | rtition coefficient: n-<br>anol/water               | :  | log Pow: 3.99<br>pH: 7<br>Method: OECD                                   | Test Guideline 107   |
| Cit         | ric acid:   |    |  |  |
|             | rtition coefficient: n-<br>anol/water               | :  | log Pow: -1.72   |  |
| Мо          | bility in soil                                      |    |  |  |
| <u>Co</u>   | mponents:   |    |  |  |
| ox          | yclozanide:   |    |  |  |
|             | tribution among environ-<br>ntal compartments       | :  | log Koc: 4.83<br>Method: OECD  | Test Guideline 106   |
|             |   |    | 15 / 18  |  |



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

### Other adverse effects No data available

| Section 13: Disposal considerations |   |  |  |  |  |  |  |
|-------------------------------------|---|--|--|--|--|--|--|
| Disposal methods                    |   |  |  |  |  |  |  |
| Waste from residues                 | : Do not dispose of waste into sewer.<br>Dispose of in accordance with local regulations.   |  |  |  |  |  |  |
| Contaminated packaging              | <ul> <li>Empty containers should be taken to an approved waste han-<br/>dling site for recycling or disposal.</li> <li>If not otherwise specified: Dispose of as unused product.</li> </ul> |  |  |  |  |  |  |

### Section 14: Transport information

### International Regulations

| UNRTDG                                     |   |   |
|--|---|---|
| UN number                                  | : | UN 3082   |
| UN proper shipping name                    | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,        |
|  |   | N.O.S.  |
|  |   | (oxyclozanide)                                      |
| Transport hazard class(es)                 | : | 9   |
| Packing group                              | : | III   |
| Labels                                     | : | 9   |
| Environmental hazards                      | : | yes   |
| IATA-DGR                                   |   |   |
| UN/ID No.                                  | : | UN 3082   |
| UN proper shipping name                    | : | Environmentally hazardous substance, liquid, n.o.s. |
|  |   | (oxyclozanide)                                      |
| Transport hazard class(es)                 | : | 9   |
| Packing group                              | : | III   |
| Labels                                     | : | Miscellaneous                                       |
| Packing instruction (cargo                 | : | 964   |
| aircraft)                                  |   | 004   |
| Packing instruction (passen-               | : | 964   |
| ger aircraft)<br>Environmentally hazardous |   | 1/00  |
| Environmentally hazardous                  | • | yes   |
| IMDG-Code                                  |   |   |
| UN number                                  | : | UN 3082   |
| Proper shipping name                       | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,        |
|  |   | N.O.S.  |
| <b>-</b> (1 ) ( )                          |   | (oxyclozanide)                                      |
| Transport hazard class(es)                 | : | 9   |
| Packing group                              | : |   |
|  | ÷ | 9   |
| EmS Code                                   | ÷ | F-A, S-F  |
| Marine pollutant                           | : | yes   |



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### Levamisole / Oxyclozanide Formulation

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#### 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

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subjected to the SDS, labelling, PEL and other requirements in the Act/Regulations.

| Environmental Protection and Management Act and<br>Environmental Protection and Management (Hazard-<br>ous Substances) Regulations |   | Not applicable |  |
|--|---|----------------|--|
| Fire Safety (Petroleum and Flammable Materials)  | : | Not applicable |  |

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

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

#### Section 16: Other information

Regulations

| Revision Date   | 28.09.2024  |  |  |  |
|---|---|--|--|--|
| 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/    |  |  |  |
| Date format   | dd.mm.yyyy  |  |  |  |
| Full text of other abbreviations                          |   |  |  |  |
| ACGIH   | USA. ACGIH Threshold Limit Values (TLV)   |  |  |  |
| SG OEL  | Singapore. Workplace Safety and Health (General Provisions)<br>Regulations - First Schedule Permissible Exposure Limits of<br>Toxic Substances. |  |  |  |
| ACGIH / TWA<br>SG OEL / PEL (long term)                   | 8-hour, time-weighted average<br>Permissible Exposure Level (PEL) Long Term   |  |  |  |



| Version | Revision Date: | SDS Number:   | Date of last issue: 06.04.2024  |
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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 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