

## Safety Data Sheet

### Section 1: Product & Company Identification

|                         |                                                                                                                  |
|-------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Product Name:</b>    | Doramectin                                                                                                       |
| <b>Product #:</b>       | D-2529                                                                                                           |
| <b>Synonyms:</b>        | Cyclohexylavermectin B <sub>1</sub> ; UK 67994                                                                   |
| <b>Supplier:</b>        | AG Scientific Holdings, LLC<br>9950 Scripps Lake Drive, Suite 104<br>San Diego, CA 92131<br>Tele# + 858-452-9925 |
| <b>Emergency Tele#:</b> | ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585                                               |

### Section 2: Composition / Information on Ingredients

| Component  | CAS #       | EC #      | % Composition |
|------------|-------------|-----------|---------------|
| Doramectin | 117704-25-3 | 601-490-4 | ≥98           |

### Section 3: Hazards Identification

|                |                                                                                      |
|----------------|--------------------------------------------------------------------------------------|
| <b>Symbols</b> |  |
|----------------|--------------------------------------------------------------------------------------|

#### HMIS Rating

| Health Hazard | Chronic Health Hazard | Flammability | Physical Hazard |
|---------------|-----------------------|--------------|-----------------|
| 3             | *                     | 0            | 0               |

#### NFPA Rating

| Health Hazard | Fire Hazard | Reactivity Hazard |
|---------------|-------------|-------------------|
| 4             | 0           | 0                 |

### Section 4: First Aid Measures

|                          |                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>General Overview:</b> | Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Remove breathing apparatus only after contaminated clothing have been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration. |
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|                    |                                                                                                                                   |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation:</b> | Supply fresh air or oxygen; call for doctor. In case of unconsciousness place patient stably in side position for transportation. |
| <b>Skin:</b>       | Immediately wash with water and soap and rinse thoroughly.                                                                        |
| <b>Eyes:</b>       | Rinse opened eyes for several minutes under running water. Then consult a doctor.                                                 |
| <b>Ingestion:</b>  | Do not induce vomiting; immediately call for medical help.                                                                        |
|                    | See section 11 for more detailed information on health effects & symptoms.                                                        |

## SECTION 5: Fire Fighting Measures

|                                                    |                                                                                               |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>Flammability of the product:</b>                | Product is not flammable.                                                                     |
| <b>Extinguishing Media:</b>                        | Use firefighting measures that suit the environment. A solid water stream may be inefficient. |
| <b>Hazardous thermal (de)composition products:</b> | No further relevant information available.                                                    |
| <b>Special Fire Fighting Procedures:</b>           | Mouth respiratory protective device.                                                          |
| <b>Flash Point:</b>                                | No data available                                                                             |

## Section 6: Accidental Release Measures

|                                   |                                                                                                                                             |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal Precautions:</b>      | Not required.                                                                                                                               |
| <b>Environmental Precautions:</b> | Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water. |
| <b>Methods for Clean-up:</b>      | Dispose contaminated material as waste according to section 13. Ensure adequate ventilation.                                                |

## SECTION 7: Handling & Storage

|                  |                                                                                                                |
|------------------|----------------------------------------------------------------------------------------------------------------|
| <b>Storage:</b>  | Recommended storage temperature: -20°C                                                                         |
| <b>Handling:</b> | Thorough dedusting. Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care. |

## SECTION 8: Exposure controls / Personal Protection

|                                          |                                                                                                                                                                                                                                                                                      |
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| <b>Respiratory Protection:</b>           |  <p>In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.</p> |
| <b>Skin and Body:</b>                    |   <p>Protective gloves and lab coat.</p>                                                                          |
| <b>Eyes:</b>                             |  <p>Tightly sealed goggles.</p>                                                                                                                                                                   |
| <b>Ventilation/Engineering Measures:</b> | Ensure adequate ventilation.                                                                                                                                                                                                                                                         |
| <b>Hygiene:</b>                          | Follow standard good industrial hygiene practices.                                                                                                                                                                                                                                   |
| <b>Other:</b>                            | Contains no substances with occupational exposure limit values.                                                                                                                                                                                                                      |

## SECTION 9: Physical and Chemical Properties

|                               |                             |
|-------------------------------|-----------------------------|
| <b>Appearance &amp; Odor:</b> | Solid. Characteristic odor. |
| <b>Formula</b>                | $C_{50}H_{74}O_{14}$        |
| <b>Molecular Wt.</b>          | 899.1                       |
| <b>Melting Pt.</b>            | 116-119°C (240.8-246.2°F)   |
| <b>Boiling Pt.</b>            | No data available           |
| <b>Density:</b>               | No data available           |
| <b>Vapor Pressure:</b>        | No data available           |
| <b>Evaporation Rate:</b>      | No data available           |
| <b>Vapor Density:</b>         | No data available           |

|                           |                                                             |
|---------------------------|-------------------------------------------------------------|
| <b>Solubility:</b>        | Chloroform: Soluble<br>Methanol: Soluble<br>Water: Miscible |
| <b>Flash Point:</b>       | No data available                                           |
| <b>Autoignition Temp:</b> | No data available                                           |

## SECTION 10: Stability and Reactivity

|                                          |                                                       |
|------------------------------------------|-------------------------------------------------------|
| <b>Stability:</b>                        | No decomposition if used according to specifications. |
| <b>Hazardous decomposition products:</b> | Carbon dioxide, carbon monoxide                       |
| <b>Materials to Avoid:</b>               | Strong oxidizing agents                               |
| <b>Conditions to avoid:</b>              | No data available                                     |

## SECTION 11: Toxicological Information

|                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RTECS#:</b>                                                                         | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>ACUTE Toxicity:</b>                                                                 | Subcutaneous TDLO: 0.3 mg/kg (rat)<br>Primary irritant effect:<br>· on the skin: No irritant effect.<br>· on the eye: No irritating effect.<br>· Sensitization: No sensitizing effects known.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>CHRONIC Toxicity:</b>                                                               | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Chronic Exposure:<br/>Carcinogen:<br/>Mutagen:<br/>Teratogen:<br/>Reproductive:</b> | IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.<br>AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by ACGIH.<br>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated human carcinogen by NTP.<br>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA.<br>EPA: No classification on carcinogenic data is available from EPA |

## SECTION 12: Ecological Information

|                     |                                                                                                                                                                                                              |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ecotoxicity:</b> | Water hazard class 3 (Self-assessment): extremely hazardous for water. Do not allow product to reach ground water, water course or sewage system, even in small quantities. Danger to drinking water if even |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                       |                                                                                                                                         |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
|                                       | extremely small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Very toxic for aquatic organisms |
| <b>Mobility:</b>                      | No data available                                                                                                                       |
| <b>Persistence and degradability:</b> | No data available                                                                                                                       |
| <b>Bioaccumulative potential:</b>     | No data available                                                                                                                       |
| <b>Other adverse effects:</b>         | No data available                                                                                                                       |
| <b>Corrosivity Characteristic:</b>    | No data available                                                                                                                       |
| <b>General Notes:</b>                 | Very toxic for fish                                                                                                                     |

## SECTION 13: Disposal Considerations

|                                         |                                                                                                       |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Residue Waste or Unused product:</b> | Must not be disposed of together with household garbage. Do not allow product to reach sewage system. |
| <b>Contaminated Packaging:</b>          | Disposal must be made according to official regulations.                                              |

## SECTION 14: Transportation Information

|                          |                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>UN ID#:</b>           | UN2811                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>ADR / RID (LAND):</b> | N/A                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>DOT regulations:</b>  | <p>UN2811<br/>           Proper Shipping Name: Toxic solids, organic, n.o.s. (Doramectin)<br/>           Class 6.1 Toxic substances<br/>           Label 6.1<br/>           Packing group I</p> <p>Quantity limitations<br/>           On passenger aircraft/rail: 5 kg<br/>           On cargo aircraft only: 50 kg</p>                                                                                     |
| <b>IMDG/IMO (SEA):</b>   | <p>UN2811<br/>           Proper Shipping Name: TOXIC SOLID, ORGANIC, N.O.S. (Doramectin)<br/>           Class 6.1 Toxic substances<br/>           Label 6.1<br/>           Packing group I</p> <p>Limited quantities (LQ) 0<br/>           Excepted quantities (EQ) Code: E5<br/>           Maximum net quantity per inner packaging: 1 g<br/>           Maximum net quantity per outer packaging: 300 g</p> |
| <b>IATA/DGR (AIR):</b>   | <p>UN2811<br/>           Proper Shipping Name: Toxic solid, organic, n.o.s. (Doramectin)<br/>           Class 6.1 Toxic substances</p>                                                                                                                                                                                                                                                                       |

|                            |                                                                                                                                                                                                                                                |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            | <p>Label 6.1<br/>Packing group I</p> <p>Remarks: When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10.</p> |
| <b>Special Provisions:</b> | <p>Environmental hazards: Environmentally hazardous substance, solid<br/>Special precautions for user: Warning: Toxic substances<br/>Hazard identification number (Kemler code): 66<br/>EMS Number: F-A,S-A<br/>Stowage Category: B</p>        |

## SECTION 15: Regulatory Information

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| <b>Health Phrases:</b> | <p>Danger!</p> <p>H300 Fatal if swallowed.</p> <p>H331 Toxic if inhaled.</p> <p>H360-H362 May damage fertility or the unborn child. May cause harm to breast-fed children.</p> <p>H370 Causes damage to organs.</p> <p>H372 Causes damage to organs through prolonged or repeated exposure.</p> <p>H410 Very toxic to aquatic life with long lasting effects.</p>                                                                                                                                                                                                                                                                                  |
| <b>Risk Phrases:</b>   | <p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P260 Do not breathe dusts or mists.</p> <p>P263 Avoid contact during pregnancy/while nursing.</p> <p>P264 Wash thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p>                                                                                        |
| <b>Safety Phrases:</b> | <p>P301+P310 If swallowed: Immediately call a poison center/doctor.</p> <p>P321 Specific treatment (see on this label).</p> <p>P330 Rinse mouth.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P314 Get medical advice/attention if you feel unwell.</p> <p>P391 Collect spillage.</p> <p>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/container in accordance with local/regional/national/international regulations.</p> |
| <b>EU Regulations:</b> | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>US Regulations:</b> | TSCA: Not listed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  | California Proposition 65: No products were found                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>U.S. Federal Regulations:</b> | <p>SARA 302/304 emergency planning and notification: No products were found.</p> <p>SARA 311/312 MSDS distribution-chemical inventory-hazard identification: No products were found.</p> <p>SARA 313 toxic chemicals notification and release reporting: No products were found.</p> <p>Clean Water Act (CWA) 307: No products were found.</p> <p>Clean Water Act (CWA) 311: No products were found.</p> <p>Clean Air Act (CAA) 112 accidental release prevention: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated flammable substances: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated toxic substances: No products were found.</p> <p>OSHA: Acute toxicity – oral (Cat. 2); Acute toxicity – inhalation (Cat. 3); Toxic to reproduction (Cat. 1B); Specific target organ toxicity – single exposure (Cat. 1); Specific target organ toxicity – repeated exposure (Cat. 1); Aquatic toxicity – acute (Cat. 1); Aquatic toxicity – chronic (Cat. 1)</p> |
| <b>WHMIS (Canada):</b>           | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## SECTION 16: Other Information

**LIABILITY STATEMENT:** *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.*