

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND SUPPLIER

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| Product name: | Oxfen Hi Mineral |
| Product code: | A6166 |
| Recommended use: | Anthelmintic drench for the control of sensitive mature and immature <i>Haemonchus</i> , <i>Ostertagia</i> , <i>Trichostrongylus</i> , <i>Nematodirus</i> , <i>Cooperia</i> , <i>Strongyloides</i> , <i>Bunostomum</i> , <i>Oesophagostomum</i> , <i>Chabertia</i> , <i>Trichuris</i> , <i>Dictyocaulus</i> and <i>Moniezia</i> in cattle, sheep, goats and deer, and type II <i>Ostertagia</i> in cattle, and as an aid in the control of fluke in sheep. Oxfen Hi-Mineral is also ovicidal. Contains minerals. |
| Company details: | Merial New Zealand Ltd |
| Address: | Level 3, Merial Building Osterley Way Manukau City New Zealand |
| Telephone number: | Phone: +64 9 980 1600 Fax: +64 9 980 1601 |
| Emergency telephone number: | Merial Ancare Freephone: 0800 800 822 National Poisons Centre : 0800 764 766 (0800 POISON) Fire Service, Ambulance : Dial 111 |
| Date of preparation: | 4 April 2006 |

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

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| Chemical characterization: | Blue suspension liquid | |
| Product components: | | |
| <u>Name</u> | <u>CAS</u> | <u>Proportion</u> |
| Oxfendazole | 53716-50-0 | 22.65 g/L |
| Sodium selenate | 13410-01-0 | 1.25 (0.5 g/L Selenium) |
| Copper versenate | 14025-15-1 | 13.21 (2.1 g/L Copper) |
| Ethylene diamine dihydroiodine | 5700-49-2 | 1.25 (1 g/L Iodine) |
| Cobalt (as Cobalt disodium EDTA) | 15137-09-4 | 0.2 g/L Cobalt |
| Zinc (as Zinc disodium EDTA) | 14025-21-9 | 0.6 g/L Zinc |
| Other | | To 1L |

SECTION 3: HAZARDS IDENTIFICATION

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| Hazard classifications: | 6.3B, 6.4A, 6.5B, 6.8B, 6.9B, 9.1B, 9.2C |
| Priority and secondary identifiers: | WARNING KEEP OUT OF REACH OF CHILDREN WARNING Dangerous to the environment |
| Risk and safety phrases: | May cause mild skin irritation. Avoid skin contact. May cause eye irritation. Avoid contact with eyes. Repeated exposure may cause skin allergy. Avoid skin contact. Oxfendazole possibly may affect development and/or reproduction. Handle with care. Oxfendazole possibly may affect the liver and alimentary system. Copper versenate possibly may affect the kidney. Handle with care. Toxic to aquatic organisms. Avoid contamination of any water supply with product or empty container. Harmful to the soil environment. Avoid release to the environment. |

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SECTION 4: FIRST AID MEASURES

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| Necessary first aid measures: | For advice contact the National Poisons Centre on 0800 POISON (0800 764 766), or a doctor immediately. INGESTION: If swallowed seek medical attention. Do NOT induce vomiting. EYES: If splashed in eyes wash out immediately and thoroughly with water. SKIN: If skin or hair contact occurs remove contaminated clothing and flush skin and hair with running water. INHALATION: Remove to fresh air. |
| Workplace facilities: | No special facilities required. |
| Required instructions: | Observe good work practices and avoid skin and eye contact. Wash hands and exposed skin before meals and after use. Do not eat or drink while using. Launder protective clothing separately from other clothing, and before each reuse. |
| Notes for medical personnel: | Apply symptomatic therapy (no specific antidote). Note the nature of the product (possible reproductive/developmental toxin, irritant and sensitiser). |

SECTION 5: FIRE FIGHTING MEASURES

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| Type of hazard: | Non flammable, Non combustible, Non explosive |
| Fire hazard properties: | Oxfen Hi Mineral is not classified as flammable, and will not support combustion. Hazardous fumes when heated to decomposition. |
| Regulatory requirements: | Not applicable |
| Extinguishing media and methods: | Treat the fire as for the other materials present. Do not allow water to enter drains. |
| Hazchem code: | 2X |
| Recommended protective clothing: | When fighting a major fire wear full protective clothing including breathing apparatus. |

SECTION 6: ACCIDENTAL RELEASE MEASURES

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| Emergency procedures: | Wear suitable protective clothing. Restrict access to contaminated area. Contain the spill and prevent further dispersion. Retrieve intact containers from site. Place damaged containers into containment devices. Absorb spills with inert material and place in waste containers. Wash the area with water and absorb with further inert material. Collect spilled material and place in sealable containers for subsequent disposal. Avoid contamination of water courses or sewers. Dispose of waste safely. |
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SECTION 7: HANDLING AND STORAGE

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| Precautions for safe handling: | Apply with well-maintained and calibrated equipment. Handle with care. |
| Regulatory requirements: | N/A |
| Handling practices: | N/A |
| Approved handlers: | Not required |
| Conditions for safe storage: | Store in a cool place below 25°C with top secured. Keep out of reach of children. |
| Store site requirements: | This substance is subject to a requirement for an emergency management plan, containment and signage, whenever it is held in quantities of 1000L or more. See Hazardous Substances |

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Packaging:

(Emergency management) regulations 25 to 42.
Packaging Schedule 3 (UN Packing Group III) for quantities >5L
(Hazardous Substances Packaging Regulations 2001).

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

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| Workplace exposure standards: | Selenium compounds, as Se TWA 0.1mg/m ³ Copper fume TWA 0.2mg/m ³ Copper dusts & mists, as Cu TWA 1mg/m ³ Cobalt metal dust and fume, as Co TWA 0.05mg/m ³ Iodine Ceiling TWA 0.1ppm Dusts 10mg/m ³ |
| Application in the workplace: | Prevent exposure by using engineering controls, personal protective equipment and work practices that prevent skin contact. |
| Exposure standards outside the workplace: | EEL: Copper (Cu ²⁺) 0.0013mg/L water EEL: Zinc (Zn ²⁺) 0.0008mg/L water |
| Engineering controls: | Ensure that ventilation maintains dust levels below WES. |
| Personal protection: | Clothing should consist of overalls with long sleeves, including eye protection (eg. Goggles or face shield) and impervious gloves. |
| References: | N/A. |

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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| Specify product data: | <u>Appearance:</u> Blue Suspension Liquid <u>Solubility in water:</u> insoluble in water <u>Specific gravity:</u> ~ 1g/mL <u>Boiling point:</u> ca. 100 ⁰ C |
| Required specifications: | N/A |
| Further specifications: | N/A |
| Specific advice: | N/A |

SECTION 10: STABILITY AND REACTIVITY

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| Stability of the substance: | Stable under normal conditions of use and storage. |
| Conditions to avoid: | No specific conditions to avoid. |
| Material to avoid: | No specific materials to avoid. |
| Hazardous decomposition products: | No hazardous products are expected, except when heated to decomposition. |
| Hazardous polymerization: | Components are not expected to form hazardous polymers. |
| Specific data: | N/A |

SECTION 11: TOXICOLOGICAL INFORMATION

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| Data and interpretation: | May cause mild skin irritation. May cause eye irritation. Repeated exposure may cause skin allergy. Danger of serious damage to health by prolonged exposure if swallowed. Oxfendazole possibly may affect development and/or reproduction. Oxfendazole possibly may affect the liver and alimentary system. Copper versenate possibly may affect the kidney. |
| Effects of Acute Exposure: | <u>Oxfendazole:</u> Oxfendazole has low acute oral toxicity [LD ₅₀ (oral) > 6400mg/kg]. In repeated oral dose studies hepatocellular lipid vacuolation was identified as an early toxic effect (lowest NOEL was 0.7 mg/kg/day). Teratogenicity and foetal toxicity has been demonstrated in laboratory animal studies (lowest NOEL was |

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0.9mg/kg/day).

Copper versenate: Low to moderate acute toxicity. Copper may induce allergic contact dermatitis in susceptible individuals and is eye and skin irritant. Repeated oral dose chronic studies reported reduced growth rates, liver and kidney effects and microcytic anaemic in laboratory species.

Iodine EDDI: An acute oral toxin (doses of 2-3g iodine have been fatal). Iodine salts are eye, skin and mucous membrane irritants. Skin sensitiser. Chronic ingestion of large amounts of iodine (200 mg/day) results in thyroid disease.

Sodium selenate: Sodium selenate is acutely toxic [LD₅₀ (oral) 25mg/kg]. Dusts are toxic if inhaled and irritant to eyes. Acute poisoning exhibits as dyspnea, spasms and death from respiratory failure. Selenium poisoning in humans has been described and gastrointestinal and neurological symptoms predominated. Potential mutagen. Repeated oral dose testing in laboratory species identified a lowest NOAEL of 0.37mg/kg/day (liver toxicity).

SECTION 12: ENVIRONMENTAL INFORMATION

Potential environmental interactions:

Toxic to aquatic organisms. Harmful to the soil environment.

Data organisation :

Oxfendazole: Benzimidazoles are not toxic to birds or honey bees, but are moderately toxic to aquatic life [Oxfendazole: LC₅₀ *Daphnia magna* 0.52mg/L (48hrs)] . The potential for bioaccumulation is low and benzimidazoles are degraded in soil and probably also in water.

Copper versenate: Toxic to aquatic species (no data, 9.1D).

Iodine EDDI: Very toxic to aquatic organisms [LC₅₀ (96hr, Rainbow trout) 530ug/L; EC₅₀ (48hr, *Daphnia magna*) 160ug/L]. Toxic to terrestrial vertebrates based on an acute oral LD₅₀ (rat) of 960mg/kg. Potentially a terrestrial vertebrate toxin based on acute toxicity data.

Sodium selenate: Very toxic to fish [LC₅₀ (96hr, Flathead minnow) 690ug/L], to crustacea [LC₅₀ (48hr, *Grammarus pseudolimnaeus*) 83ug/L] and algae [EC₅₀ (96hr, green algae) 0.2mg/L]. Toxic to plants [EC₂₀ (22d) 0.1mg/kg soil]. Toxic to terrestrial vertebrates based on an acute oral LD₅₀(rats) of 25 mg/kg. Selenium is bioaccumulative and persists.

Environmental risk and safety phrases:

Harmful to the soil environment.

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Oxfendazole 2.3%)

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal information :

Product Disposal: To avoid disposal all attempts should be made to utilise the product completely in accordance with its registered use. Prevent the product from entering natural water sources.

Container Disposal: Burn empty container in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitable landfill. Do NOT use container for any other use.

SECTION 14: TRANSPORT INFORMATION

Relevant information:

Dangerous Goods for transport
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Oxfendazole 2.3%)
UN Number: 3082
Dangerous Goods Class: 9

The maximum quantity per package of this substance allowed for carriage on public transport is 1L.

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Other requirements: N/A

SECTION 15: REGULATORY INFORMATION

Regulatory status: Registered pursuant to the ACVM Act 1997, No. A6166. See www.foodsafety.govt.nz for registration conditions.

Approved pursuant to the HSNO Act, Approval Code HSR001901
See www.epa.govt.nz for approval conditions

HSNO and ACVM controls: SDS is required for quantities greater than or equal to 1L
Refer to Section 3

List exposure limits: N/A

SECTION 16: OTHER INFORMATION

Additional information: For product information visit the Merial website www.merial.co.nz

While the information set forth is believed to be accurate as of the date hereof, MERIAL NZ LTD. makes no warranty with respect hereto and disclaims all liability from reliance thereon.