

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND SUPPLIER

Product name:	Oxfen C Plus
Product code:	A9837
Recommended use:	Low dose selenised oral drench for the control and treatment of roundworms, lungworm, and tapeworm in cattle and sheep, type II ostertagia in cattle and aids in the control of liver fluke in sheep
Company details:	Merial Ancare
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:	Revised 14 March 2007

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization:	Off white to yellowish suspension liquid	
Product components:		
<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
Levamisole HCl	16595-80-5	150 g/L
Oxfendazole	53716-50-0	90.6 g/L
Sodium selenate	13410-01-0	2.0 (0.8 g/L Selenium)
Other		To 1g/L

SECTION 3: HAZARDS IDENTIFICATION

Hazard classifications:	6.1D, 6.5B, 6.6B, 6.8B, 6.9A, 9.1B, 9.3C
Priority and secondary identifiers:	WARNING KEEP OUT OF REACH OF CHILDREN WARNING Dangerous to the environment
Risk and safety phrases:	May be harmful if swallowed. Wash hands and exposed skin before meals and after use. Repeated exposure may cause skin allergy. Avoid skin contact. Levamisole HCl possibly may cause damage to genetic material. Handle with care. Oxfendazole may affect development and/or reproduction. Handle with care. Oxfendazole (liver and alimentary system) and Levamisole HCl (blood and haematopoietic system) may cause organ damage. Handle with care. Toxic to aquatic organisms. Avoid contamination of any water supply with product or empty container. Harmful to terrestrial vertebrates. Avoid release to the environment.

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SECTION 4: FIRST AID MEASURES

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

Type of hazard:	Non flammable, Non combustible, Non explosive
Fire hazard properties:	Oxfen C Plus 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

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

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

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Packaging:

quantities of 1000L or more. See Hazardous Substances (Emergency management) regulations 25 to 42.
Packaging Schedule 3 (UN Packing Group III) for quantities >1L (Hazardous Substances Packaging Regulations 2001).

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Workplace exposure standards:

Selenium compounds, as Se TWA 0.1mg/m³
Dusts 10mg/m³

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:

TELs and EELs are not set at this time.

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

Specify product data:

Appearance: Off white to yellowish Suspension Liquid

Solubility in water: insoluble in water

Specific gravity: ~ 1.1g/mL

pH: ~4

Solubility in Water: insoluble

Required specifications:

N/A

Further specifications:

N/A

Specific advice:

N/A

SECTION 10: STABILITY AND REACTIVITY

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

Data and interpretation:

May be harmful if swallowed.
May cause mild skin irritation.
Danger of serious damage to health by prolonged exposure if swallowed.
Levamisole HCl possibly may cause damage to genetic material.
Oxfendazole may affect development and/or reproduction.

Effects of Acute Exposure:

Oxfendazole (liver and alimentary system) and Levamisole HCl (blood and haematopoietic system) may cause organ damage
Levamisole HCl: Levamisole is a broad-spectrum anthelmintic with a long history of use in cattle and sheep. It has moderate to high acute toxicity [LD₅₀ (oral, rats & mice) = 200-500 mg/kg]. A potential mutagen [levamisole induced chromosome gaps and breaks in human lymphocytes in vitro and in vivo and levamisole hydrochloride induced an increase in the mitotic index, numerical

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chromosomal changes (aneuploidy, polyploidy) and structural chromosomal changes]. Haemolytic anaemic was the main toxic effect demonstrated in repeated dose animal studies (LOAEL 1.25mg/kg/day). In humans, levamisole has been associated with various non-specific effects (nausea, vomiting, rashes). Levamisole has induced leucopenia and agranulocytosis (idiosyncratic) at low doses.

Oxfendazole: Oxfendazole has low acute oral toxicity [LD₅₀ (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 0.9mg/kg/day).

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 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 terrestrial vertebrates.

Data organisation :

Levamisole HCl: Levamisole is potentially toxic to terrestrial vertebrates based on LD₅₀ data [LD₅₀ (oral, rats & mice) = 200-500 mg/kg]. Not toxic to fish or honey bees. Levamisole does not bioaccumulate in biological systems. In soil, levamisole has a half-life of five to seventy five days depending on sunlight, soil type and climatic conditions. Levamisole binds strongly to soil particles and organic matter. It does not leach in soils and is readily degraded by hydrolysis and microbial action.

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.

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.

Harmful to terrestrial vertebrates

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Oxfendazole 9%)

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.

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SECTION 14: TRANSPORT INFORMATION

Relevant information:	Dangerous Goods for transport ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Oxfendazole 9%) UN Number: 3082 Dangerous Goods Class: 9 The maximum quantity per package of this substance allowed for carriage on public transport is 0.1L.
Other requirements:	The maximum quantity per package of this substance allowed for carriage on public transport is 0.1L. N/A

SECTION 15: REGULATORY INFORMATION

Regulatory status:	Registered pursuant to the ACVM Act 1997, No. A9837. See www.foodsafety.govt.nz for registration conditions. Approved pursuant to the HSNO Act, Approval Code HSR001617 See www.epa.govt.nz for approval conditions SDS is required for quantities greater than or equal to 0.1L
HSNO and ACVM controls:	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.
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