

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND SUPPLIER

<b>Product name:</b>	<b>Exodus Se</b>
<b>Product code:</b>	A010018
<b>Recommended use:</b>	Oral drench for the control and treatment of internal parasites and itchmite in sheep.
<b>Company details:</b>	Boehringer Ingelheim Animal Health New Zealand Limited
<b>Address:</b>	Level 3, Boehringer Ingelheim Building 2 Osterley Way Manukau City Auckland 2104 New Zealand
<b>Telephone number:</b>	Phone: +64 9 980 1600 Fax: +64 9 980 1601
<b>Emergency telephone number:</b>	Boehringer Ingelheim Freephone: 0800 800 822 National Poisons Centre : 0800 764 766 (0800 POISON) Fire Service, Ambulance : Dial 111
<b>Date of preparation:</b>	February 2008

## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<b>Chemical characterization:</b>	Liquid		
<b>Product components:</b>			
<b>Name</b>	<b>CAS</b>	<b>Proportion</b>	
Moxidectin	113507-06-5	1 g/L	
Selenium (as sodium selenate)	13410-01-0	0.5 g/L Selenium	
Other		to 1L	

## SECTION 3: HAZARDS IDENTIFICATION

<b>Hazard classifications:</b>	6.5B Contact sensitiser 6.8B Reproductive/developmental toxin 6.8C Reproductive/developmental toxin via lactation 9.1A Aquatic toxin 9.2C Soil toxin 9.4C Invertebrate toxin
<b>Priority and secondary identifiers:</b>	WARNING Dangerous to the environment
<b>Risk and safety phrases:</b>	6.5B Repeated exposure may cause skin allergy. Avoid skin contact. 6.8B Moxidectin possibly may affect development and/or reproduction. Handle with care. 6.8C Moxidectin possibly may have effects on or via lactation. Handle with care. 9.1A Very toxic to aquatic organisms. Avoid contamination of any water supply with product or empty container. 9.2C Harmful to the soil environment. Avoid release to the environment. 9.4C Harmful to terrestrial invertebrates. 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 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 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.

## SECTION 5: FIRE FIGHTING MEASURES

**Type of hazard:**

Non flammable, Non combustible, Non explosive

**Fire hazard properties:**

Exodus Se 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.

## 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 below 30°C. Protect from light. Keep out of reach of children.

**Store site requirements:**

This substance is subject to a requirement for an emergency management plan and secondary containment, whenever it is held in quantities of 100L or more. See Hazardous Substances (Emergency management) regulations 25 to 42.

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**Packaging:** Packaging Schedule 3 (UN Packing Group III) for quantities >5L (Hazardous Substances Packaging Regulations 2001).

## SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

**Workplace exposure standards:** Selenium compounds, as Se TWA 0.1mg/m<sup>3</sup>  
Dusts 10mg/m<sup>3</sup>

**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 and impervious gloves.

**References:** N/A

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Specify product data:** Formulation type: Solution  
Appearance: Clear straw to yellow solution  
Specific gravity: ~1.02-1.06 g/ml  
Boiling Point: ca. 100° C  
pH: 5 - 7  
Vapour Pressure: NA  
Solubility in Water: Moxidectin is insoluble in water

**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:** Repeated exposure may cause skin allergy. Danger of serious damage to health by prolonged exposure if swallowed. Moxidectin possibly may affect development and/or reproduction. Moxidectin possibly may have effects on or via lactation.

**Summaries data:** Moxidectin  
Moxidectin is an acute oral toxin [LD<sub>50</sub> (oral, mouse) 42mg/kg]. It can cause mild and transitory skin and eye irritation. Human health effects are considered unlikely of the product is used according to label, high dose exposure may cause central nervous system effects. Clinical signs in repeated high dose laboratory animal studies included lacrimation, salivation, slight ataxia, tremor, languid appearance (NOAEL 0.3mg/kg bw/d). The critical adverse effects in multigenerational high dose reproductive studies were mortality and reduced weight gain of pups in early lactation.  
Selenium (as sodium selenate)

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Sodium selenate is acutely toxic [LD<sub>50</sub> (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:

Very toxic to aquatic organisms. Harmful to the soil environment. Harmful to terrestrial invertebrates.

### Data organisation :

#### Moxidectin

Moxidectin is an effective insecticide and acaricide. It acts on the gamma-aminobutyric acid, as an inhibitory neurotransmitter, causing paralysis of the parasite. It is highly toxic to invertebrates in the aquatic, soil and terrestrial environments. Aquatic organisms: Moxidectin is highly toxic to fish and extremely toxic to aquatic invertebrates [LC<sub>50</sub> Rainbow trout is 0.16ppb (96hrs); EC<sub>50</sub> Daphnia magna 30ppt (48hrs)]. Possibly bioaccumulative. Soil organisms: Dung beetle. Moxidectin is toxic to mammals [LD<sub>50</sub> (oral, mouse) 42mg/kg], highly toxic to bees [LD<sub>50</sub> (oral) 0.46ug/bee; LD<sub>50</sub> (contact) 0.025ug/bee].

#### Selenium

Very toxic to fish [LC<sub>50</sub> (96hr, Flathead minnow) 690µg/L], to crustacea [LC<sub>50</sub> (48hr, *Grammarus pseudolimnaeus*) 83µg/L] and algae [EC<sub>50</sub> (96hr, green algae) 0.2mg/L]. Toxic to plants [EC20 (22d) 0.1mg/kg soil]. Toxic to terrestrial vertebrates based on an acute oral LD<sub>50</sub>(rats) of 25 mg/kg. Selenium is bioaccumulative and persists.

### Environmental risk and safety phrases:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Moxidectin 0.1%)

## SECTION 13: DISPOSAL CONSIDERATIONS

### Disposal information :

Preferably dispose of the product by use. Otherwise dispose of product and packaging at an approved landfill or other approved facility. 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 purpose.

## SECTION 14: TRANSPORT INFORMATION

### Relevant information:

Dangerous Goods for transport.  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Moxidectin 0.1%)  
UN Number: 3082  
Dangerous Goods Class: 9

### Other requirements:

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

N/A

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## SECTION 15: REGULATORY INFORMATION

<b>Regulatory status:</b>	Registered pursuant to the ACVM Act 1997, No. A010018 See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> for registration conditions
	Approved pursuant to the HSNO Act, HSR001900 See <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> for approval conditions
<b>HSNO and ACVM controls:</b>	SDS is required for quantities greater than or equal to 1L Refer to Section 3
<b>List exposure limits:</b>	None set

## SECTION 16: OTHER INFORMATION

<b>Additional information:</b>	For product information visit the Boehringer Ingelheim website <a href="http://www.boehringer-ingelheim.co.nz">www.boehringer-ingelheim.co.nz</a> While the information set forth is believed to be accurate as of the date hereof, BOEHRINGER INGELHEIM makes no warranty with respect hereto and disclaims all liability from reliance thereon.
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