



### Section 1 – Identification of the substance/preparation and the company

<b>Product Name:</b>	TwinAL Cattle
<b>Company:</b>	Donaghys Ltd.
<b>Address:</b>	16 Sheffield Crescent PO Box 20 449 Christchurch
<b>Telephone Number:</b>	0800 942 006
<b>Recommended Use:</b>	For the control of roundworms, tapeworm, lungworm and adult liver fluke in cattle, including roundworms resistant to benzimidazole or levamisole.

### Section 2 – Hazard Identification

#### Hazard Classes



Acute dermal toxicity Category 4  
Skin sensitisation Category 1  
Germ cell mutagenicity Category 2  
Reproductive toxicity Category 1  
specific target organ toxicity – repeated exposure  
Category 2  
Hazardous to terrestrial vertebrates

#### Hazard statements

Harmful in contact with skin.  
May cause an allergic skin reaction.  
Suspected of causing genetic defects.  
May damage fertility or the unborn child.  
May cause damage to organs.  
Harmful to terrestrial vertebrates.

#### Prevention statements

Keep out of reach of children.  
Read label before use.  
Wear protective gloves/protective clothing.  
In case of inadequate ventilation wear respiratory protection.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Use personal protective equipment as required.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wash hands thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Avoid release to the environment.

**EPA NZ Approval Code** HSR100758

**Signal word** DANGER



### Section 3 – Composition Information

Chemical Entity	CAS No.	Content
Levamisole hydrochloride	16595-80-5	8%
Albendazole	54965-21-8	10.21%
Trade secret	-	To 100%

### Section 4 – First Aid Measures

<b>If Swallowed:</b>	If swallowed seek medical attention. Do NOT induce Vomiting.
<b>If in eyes:</b>	If splashed in eyes wash out immediately with water.
<b>If on skin:</b>	Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
<b>If inhaled:</b>	Remove to fresh air.

Call a POISON CENTER or doctor/physician if you feel unwell.

If medical advice is needed, have product container or label at hand.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/ attention.

**POISON CENTRE CONTACT: 0800 764 766 (National Poisons Information Centre)**

### Section 5 – Fire-fighting Measures

<b>Suitable Extinguishing Media:</b>	Extinguish using water spray or chemical foam. Treat the fire as for the other materials present. Do not allow water to enter drains.
<b>Type of hazard:</b>	Non flammable, Non combustible, Non explosive.
<b>Protective Equipment:</b>	When fighting a major fire wear full protective clothing including breathing apparatus.
<b>Flashpoint:</b>	Not available

### Section 6 – Accidental Release Measures

<b>Spills and Disposal:</b>	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. Prevent contamination of water courses or sewers. Dispose of waste safely.
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### IN CASE OF EMERGENCY PHONE

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<b>Protective Equipment:</b>	Wear protective gloves and face/eye protection and protective clothing.
<b>Environmental Precautions:</b>	Prevent washings from entering waterways. Do NOT flush into surface water or sanitary sewer system.

### Section 7– Handling and Storage

<b>Technical precautions:</b>	In case of inadequate ventilation wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
<b>Safe handling advice:</b>	Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray.
<b>Storage conditions:</b>	Store in a cool place below 25°C. Keep out of reach of children.
<b>Approved handlers:</b>	Not required.
<b>Incompatible Materials:</b>	No information available

### Section 8 – Exposure Controls/Personal Protection

<b>Exposure Limits:</b>	Dusts 10mg/m <sup>3</sup>
<b>Protective Equipment:</b>	Observe good work place practices and avoid contact with skin and eyes. Wear overalls, safety glasses and waterproof gloves when handling. Wear eye / face protection. In case of inadequate ventilation, wear respiratory protection.
<b>Hygiene Precautions:</b>	Do not eat, drink or smoke when using this product.
<b>Engineering Controls:</b>	Ensure that ventilation maintains dust levels below WES.

### Section 9 – Physical and Chemical Properties

<b>Appearance:</b>	Viscous off white liquid
<b>Odour:</b>	No information available
<b>Specific Gravity:</b>	1.0 – 1.2
<b>pH:</b>	4.0 – 4.8
<b>Viscosity:</b>	2000-5000mPa.s

### Section 10 – Stability and Reactivity

<b>Stability:</b>	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
<b>Conditions to Avoid:</b>	No specific conditions to avoid.

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<b>Materials to Avoid:</b>	No specific materials to avoid.
<b>Hazardous Decomposition Products:</b>	No hazardous products are expected, except when heated to decomposition.
<b>Hazardous polymerization:</b>	Components are not expected to form hazardous polymers.

### Section 11 – Toxicological Information

**No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label.**

<b>Ingestion:</b>	May be harmful if swallowed. Danger of serious damage to health by prolonged exposure if swallowed.
<b>Inhalation:</b>	Do not breathe dust/fume/gas/mist/vapours/spray. In case of inadequate ventilation wear respiratory protection.
<b>Dermal:</b>	Harmful in contact with skin. May cause an allergic skin reaction. Wash hands thoroughly after handling.
<b>Ocular:</b>	No information available.
<b>Chronic Effects:</b>	May damage fertility or the unborn child. Albendazole may affect development and/or reproduction. May cause damage to organs. Albendazole and Levamisole HCl (blood and haematopoietic system) possibly may cause organ damage from repeated oral exposure at high doses.
<b>Mutagenic effects:</b>	Suspected of causing genetic defects. Albendazole and Levamisole HCl possibly may cause damage to genetic material.
<b>Sensitization:</b>	No information available.
<b>Summaries data:</b>	Albendazole: Benzimidazoles prevent tubulin polymerisation or spindle movement and their administration can result in aneuploidy. They are weak mutagens. Albendazole has low to moderate acute oral toxicity [LD50 (oral, rabbit) 500-1250mg/kg; LD50 (oral, rat) 1320-2400mg/kg; LD50 (oral, mice) >3000 mg/kg]. Identified as a potential skin sensitiser by a positive result in a guinea pig maximisation test. In repeated oral dose studies toxic effects included reduced weight gain, reduced erythrocyte and leucocyte counts, decreased testes and uterine weights, slight increases in relative liver and kidney weights, and sternal bone marrow hypocellularity (lowest NOAEL 5mg/kg/day). Teratogenicity (visceral, craniofacial and bone defects) has been demonstrated in animal studies (lowest NOEL was 5 mg/kg/day). Levamisole HCl:

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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 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

### Section 12 - Ecological Information

<b>Ecotoxicity:</b>	Harmful to terrestrial vertebrates Avoid release to the environment.
<b>Persistence and degradability:</b>	No data available.
<b>Bioaccumulative potential:</b>	No data available.
<b>Mobility in soil:</b>	No data available.
<b>Other adverse effects:</b>	No data available.
<b>Data organisation:</b>	Albendazole: Albendazole may be toxic to terrestrial vertebrates based on LD50 data [LD50 (oral, rabbit) 500-1250mg/kg]. Not toxic to fish or honey bees. The potential for bioaccumulation is low and benzimidazoles are degraded in soil and probably also in water. Levamisole HCl: Levamisole is potentially toxic to terrestrial vertebrates based on LD50 data [LD50 (oral, rats & mice) = 200-500mg/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.

### Section 13 – Disposal Considerations

<b>Product and container Disposal:</b>	Preferably dispose of product by use. Otherwise dispose of product, packaging and waste at an approved landfill or equivalent facility in accordance with local, regional and national environmental regulations. Donaghys is a member of Agrecovery Container Recycling programme. For details on how to correctly prepare your container and collection sites please visit <a href="http://www.agrecovery.co.nz">www.agrecovery.co.nz</a> .
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### Section 14 – Transport Information

#### International Regulations IATA-DGR

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID N.O.S., (Contains: Albendazole)  
**UN Number:** 3082  
**Hazard class:** 9  
**Subsidiary Risk Class:** No information available  
**Packing Group:** III  
**Marine pollutant:** Yes  
**EmS Fire:** F-A  
**EmS Spill:** S-F

#### IMDG-Code

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**Proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID N.O.S., (Contains: Albendazole)  
**Class:** 9  
**Packing group:** III  
**Marine pollutant:** No

### Section 15 – Regulatory Information

**EPA NZ Registration Code:** HSR100758  
**ACVM Registration Number:** A11778

### Section 16 – Other Information

The information in this MSDS is provided in good faith, but no warranty, expressed or implied is made. Contact Donaghys Ltd for more information.

**EMERGENCY CONTACT No.: 0800 764 766 (National Poisons Information Centre)**