

According to Regulation (EC) No.1907/2006



## PRODUCT SAFETY DATA SHEET

### CLOSAMECTIN SOLUTION FOR INJECTION

#### 1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND OF COMPANY / UNDERTAKING

Product Name	Closamectin Solution for Injection
Supplier	Norbrook Laboratories (Ireland) Ltd, Rossmore Industrial Estate, Clones Road, Monaghan. Republic of Ireland Telephone No. +353 (0) 47 81180 Fax No. +353 (0) 47 81187 E-Mail: roienquiries@norbrook.co.uk. Emergency Telephone +353 (0) 47 81180

#### 2. HAZARDS IDENTIFICATION

Physical and Chemical Hazards	:	Not classified as dangerous under EEC Directives 67/548/EEC, 88/379/EEC or 99/45/EC.
Environmental Hazards	:	Ivermectin is harmful to aquatic life. Surface waters or ditches should not be contaminated with product or used containers.
Adverse Human Health Effects	:	None known

#### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Preparation	:	Preparation
Active Ingredients	:	22, 23-Dihydroavermectin B <sub>1</sub> ( Ivermectin ) Closantel (as sodium)
Description	:	Anthelmintic Endectocide ( Chemical Group 3-AV )
Chemical Family	:	Avermectins & Salicylanilides

#### 4. FIRST AID MEASURES

Inhalation	:	Remove to fresh air. If any signs or symptoms occur or persist seek medical advice.
Skin Contact	:	Wash thoroughly with soap and water. Remove contaminated clothing and wash before reuse.
Eyes Contact	:	Immediately flush eyes with copious amounts of water for at least 15 minutes. If irritation persists, seek medical attention.
Ingestion	:	Do not induce vomiting. Seek medical attention.

#### 5. FIRE FIGHTING MEASURES



Extinguishing media:	Use carbon dioxide, dry chemical or alcohol-resistant foam spray extinguishers. Use water spray to cool fire-exposed containers. A fine water mist may be used to smother or to disperse vapours.
Fire and explosion hazards:	None

## 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	:	Provide good ventilation. Prevent skin and eye contact.
Environmental Precautions:		Keep away from drains, surface-water, ground-water and soil.
Method for Clean-up	:	Absorb small spills on spill pillows, sand, sawdust or other suitable absorbing material.

## 7. HANDLING AND STORAGE

Handling	:	Avoid contact with eyes, skin and clothing. Do not breathe vapours or mist. Do not ingest. Do not smoke or eat while handling the product. Wash thoroughly after handling. The containers should be stored in their original boxes when not in use.
Storage	:	Store in closed containers in a cool, dry, well-ventilated area, below 25°C and away from oxidisers, heat, sparks and open flame. Protect containers from physical damage and light.  Keep container closed when not in use. Before opening large containers, release any pressure build-up by loosening closure slowly. Do not transfer contents to unlabelled containers. Use only with adequate ventilation. Keep out of reach of children.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Component - Occupational Exposure Standard

Ivermectin	Not Established
Closantel Sodium	Not Established

### For pure ivermectin :

LD50 ( Oral, mouse )	25 mg/kg
LD50 ( Oral, rat )	50 mg/kg
LD50 ( Dermal, rat )	> 660 mg/kg

### For pure closantel sodium :

LD50 ( Oral, mouse )	331 mg/kg
LD50 ( Oral, rat )	342 mg/kg

Protective Equipment	:	Wear vinyl, nitrile or rubber gloves, a waterproof bib-apron and suitable eye protection when applying the product.
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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Liquid
Colour	:	Clear, pale yellow
Odour	:	None



**10. STABILITY AND REACTIVITY**

Stability	:	Stable under normal conditions of storage and use.
Conditions to avoid	:	None known
Materials to avoid	:	None known

**11. TOXICOLOGICAL INFORMATION**

## Exposure Effects ( Acute )

Eye Contact	:	Direct contact of the solution with eyes can cause irritation.
Skin Contact	:	Ivermectin is non-irritating in animal studies. Prolonged or repeated contact with Closamectin Injection may cause irritation and/or drying and cracking of the skin.
Inhalation	:	None known.
Ingestion	:	Oral toxicity of the Closamectin Injection solution is low. Pure ivermectin is considered highly toxic in acute animal studies.

If overexposed to ivermectin, symptoms may include decreased activity, slow rate of breathing, dilation of the pupils, muscle tremors and inco-ordination.

## Exposure Effects ( Chronic )

Unknown for the product mixture. When this product is used according to the directions, prolonged exposure of man is not expected. Ivermectin has tested negative in several mutagenicity studies.

**12. ECOLOGICAL INFORMATION**

Data on the ecological implications for Closamectin Injection is not yet available.

**13. DISPOSAL CONSIDERATIONS**

Product/Residues	:	Ivermectin is extremely dangerous to aquatic life. Do not discharge the material into surface or waste water. For disposal, use an incinerator licensed for chemical waste.
Package	:	Dispose of waste containers using regular disposal methods in accordance with local and national environmental regulations.

**14. TRANSPORT INFORMATION**

## Land, Sea &amp; Air Transport

ADR/RID, IMO/IMDG, IATA/ICAO, UN No. : Not applicable

**15. REGULATORY INFORMATION**

## Labelling Information

Safety Phrases	:	S2	Keep out of reach of children
		S7	Keep container tightly closed

**16. OTHER INFORMATION**



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Norbrook Laboratories Ltd - Closamectin Pour On - Vm 02000/4280  
Res : 94619

### Safety data sheet

According to 1907/2006/EC (REACH), 453/2010/EU, 2015/830/EU

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier:** Norbrook Laboratories Ltd - Closamectin Pour On - Vm 02000/4280  
Res : 94619
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Veterinary Pharmaceutical Product  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:** Norbrook Laboratories Ltd  
Cambane Industrial Estate  
BT35 6QQ Newry - Northern Ireland  
Phone.: +44 (0)28 3026 4435 -  
Fax: +44 (0)28 3026 5060  
<http://www.norbrook.com>
- 1.4 Emergency telephone number:** +44 (0)28 3026 4435

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture:

#### CLP Regulation (EC) n° 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) n° 1272/2008.

Acute Tox. 4: Acute toxicity if swallowed, Category 4, H302

Eye Irrit. 2: Eye irritation, Category 2, H319

Flam. Liq. 2: Flammable liquids, Category 2, H225

### 2.2 Label elements:

#### CLP Regulation (EC) n° 1272/2008:

Danger



#### Hazard statements:

Acute Tox. 4: H302 - Harmful if swallowed

Eye Irrit. 2: H319 - Causes serious eye irritation

Flam. Liq. 2: H225 - Highly flammable liquid and vapour

#### Precautionary statements:

P101: If medical advice is needed, have product container or label at hand

P102: Keep out of reach of children

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P264: Wash thoroughly after use

P280: Wear protective gloves/protective clothing/eye protection/face protection

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P501: Dispose of contents and / or their container according to the separated collection system used in your municipality

#### Substances that contribute to the classification

Closantel Sodium Dihydrate

(N.B. This mixture is regulated under the Veterinary Medicines Directive and will be labelled accordingly).

### 2.3 Other hazards:

Non-applicable

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substance:**  
Non-applicable
- 3.2 Mixture:**

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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continue)

**Chemical description:** Pour On Solution

**Components:**

In accordance with Annex II of Regulation (EC) n°1907/2006 (point 3), the product contains:

Identification:	Chemical name/Classification	Concentration
CAS: 61438-64-0 EC: 262-794-7 Index: Non-applicable REACH: Non-applicable	<b>Closantel Sodium Dihydrate</b> Regulation 1272/2008 Acute Tox. 3: H301 - Danger Not classified	10 - <25 %
CAS: 67-63-0 EC: 200-661-7 Index: 603-117-00-0 REACH: 01-2119457558-25-XXXX	<b>Propan-2-ol</b> Regulation 1272/2008 Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336 - Danger ATP CLP00	10 - <25 %

To obtain more information on the risk of the substances consult sections 8, 11, 12, 15 and 16.

### SECTION 4: FIRST AID MEASURES

**4.1 Description of first aid measures:**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

**By inhalation:**

This product is not classified as hazardous through inhalation, however, it is recommended in case of intoxication symptoms to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

**By skin contact:**

In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of modifications on the skin (stinging, redness, rashes, blisters,...), seek medical advice with this Safety data Sheet

**By eye contact:**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

**By ingestion/aspiration:**

Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administrate anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest.

**4.2 Most important symptoms and effects, both acute and delayed:**

Acute and delayed effects are indicated in sections 2 and 11.

**4.3 Indication of any immediate medical attention and special treatment needed:**

Non-applicable

### SECTION 5: FIREFIGHTING MEASURES

**5.1 Extinguishing media:**

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO2). IT IS RECOMMENDED NOT to use tap water as an extinguishing agent.

**5.2 Special hazards arising from the substance or mixture:**

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

**5.3 Advice for firefighters:**

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

**Additional provisions:**

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## SECTION 5: FIREFIGHTING MEASURES (continue)

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilled product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inertization agent. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

### 6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

### 6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

### 6.4 Reference to other sections:

See sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling:

#### A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

#### B.- Technical recommendations for the prevention of fires and explosions

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 94/9/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for conditions and materials that should be avoided.

#### C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

#### D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

### 7.2 Conditions for safe storage, including any incompatibilities:

#### A.- Technical measures for storage

Maximun Temp.: 25 °C

#### B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

### 7.3 Specific end use(s):

For the treatment of mixed trematode (fluke), nematode and arthropod infestations due to gastrointestinal roundworms, lungworms, eyeworms, warbles, mites and lice of cattle.

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the work environment

There are no environmental limits for the substances contained in the product

**DNEL (Workers):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Propan-2-ol CAS: 67-63-0 EC: 200-661-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	888 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	500 mg/m <sup>3</sup>	Non-applicable

**DNEL (General population):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Propan-2-ol CAS: 67-63-0 EC: 200-661-7	Oral	Non-applicable	Non-applicable	26 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	319 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	89 mg/m <sup>3</sup>	Non-applicable

**PNEC:**

Identification				
Propan-2-ol CAS: 67-63-0 EC: 200-661-7	STP	2251 mg/L	Fresh water	140.9 mg/L
	Soil	28 mg/kg	Marine water	140.9 mg/L
	Intermittent	140.9 mg/L	Sediment (Fresh water)	552 mg/kg
	Oral	160 g/kg	Sediment (Marine water)	552 mg/kg

**8.2 Exposure controls:**

**A.- General security and hygiene measures in the work place**



As a preventative measure it is recommended to use basic Personal Protection Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.



**B.- Respiratory protection**

The use of protection equipment will be necessary if a mist forms or if the professional exposure limits are exceeded.



**C.- Specific protection for the hands**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Chemical protective gloves		EN 420:2003+A1:2009	Replace the gloves at any sign of deterioration.

**D.- Ocular and facial protection**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against liquid splash		EN 166:2001 EN 172:1994/A1:2000 EN 172:1994/A2:2001 EN ISO 4007:2012	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

**E.- Bodily protection**



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Antistatic and fireproof protective clothing		EN 1149-1:2006 EN 1149-2:1997 EN 1149-3:2004 EN 168:2001 EN ISO 14116:2008/AC:2009 EN 1149-5:2008	Limited protection against flames.

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continue)**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory foot protection	Safety footwear with antistatic and heat resistant properties		EN 13287:2008 EN ISO 20345:2011 EN ISO 20344:2011	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2002	 Eyewash stations	DIN 12 899 ISO 3864-1:2002

**Environmental exposure controls:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

**Volatile organic compounds:**

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	43.46 % weight
V.O.C. density at 20 °C:	Non-applicable
Average carbon number:	2.31
Average molecular weight:	50.43 g/mol

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties:**

For complete information see the product datasheet.

**Appearance:**

Physical state at 20 °C:	Liquid
Appearance:	Not available
Color:	Blue
Odor:	Not available

**Volatility:**

Boiling point at atmospheric pressure:	80 °C
Vapour pressure at 20 °C:	6213 Pa
Vapour pressure at 50 °C:	29542 Pa (30 kPa)
Evaporation rate at 20 °C:	Non-applicable *

**Product description:**

Density at 20 °C:	Non-applicable *
Relative density at 20 °C:	Non-applicable *
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	Non-applicable *

\*Not relevant due to the nature of the product, not providing information property of its hazards.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continue)

Solubility properties: Non-applicable \*  
Decomposition temperature: Non-applicable \*  
Melting point/freezing point: Non-applicable \*

### Flammability:

Flash Point: 12 °C  
Autoignition temperature: 324 °C  
Lower flammability limit: Not available  
Upper flammability limit: Not available

### 9.2 Other information:

Surface tension at 20 °C: Non-applicable \*  
Refraction index: Non-applicable \*

\*Not relevant due to the nature of the product, not providing information property of its hazards.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity:

No hazardous reactions are expected if the following technical instructions storage of chemicals. See section 7.

### 10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

### 10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

### 10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable

### 10.5 Incompatible materials:

Acids	Water	Combustive materials	Combustible materials	Others
Not applicable	Not applicable	Avoid direct impact	Not applicable	Not applicable

### 10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

#### Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

#### A.- Ingestion:

- Acute toxicity: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

#### B- Inhalation:

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### SECTION 11: TOXICOLOGICAL INFORMATION (continue)

- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for skin contact. For more information see section 3.
- C- Contact with the skin and the eyes:
  - Contact with the skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for skin contact. For more information see section 3.
  - Contact with the eyes: Produces eye damage after contact.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
  - Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
  - Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
  - Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- E- Sensitizing effects:
  - Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensibilizing effects. For more information see section 3.
  - Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- F- Specific target organ toxicity (STOT)-time exposure:  
Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.
- G- Specific target organ toxicity (STOT)-repeated exposure:
  - Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
  - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- H- Aspiration hazard:  
Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**Other information:**

Non-applicable

**Specific toxicology information on the substances:**

Identification	Acute toxicity		Genus
	Route	Value	
Propan-2-ol CAS: 67-63-0 EC: 200-661-7	LD50 oral	5280 mg/kg	Rat
	LD50 dermal	12800 mg/kg	Rat
	LC50 inhalation	72.6 mg/L (4 h)	Rat
Closantel Sodium Dihydrate CAS: 61438-64-0 EC: 262-794-7	LD50 oral	100 mg/kg (ATEI)	
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	

### SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

**12.1 Toxicity:**

Identification	Acute toxicity		Specie	Genus
	Value	Duration		
Propan-2-ol CAS: 67-63-0 EC: 200-661-7	LC50	9640 mg/L (96 h)	Pimephales promelas	Fish
	EC50	13299 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	1000 mg/L (72 h)	Scenedesmus subspicatus	Algae

**12.2 Persistence and degradability:**

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**SECTION 12: ECOLOGICAL INFORMATION (continue)**

Identification	Degradability		Biodegradability	
	Propan-2-ol CAS: 67-63-0 EC: 200-661-7	BOD5	1.19 g O <sub>2</sub> /g	Concentration
	COD	2.23 g O <sub>2</sub> /g	Period	14 days
	BOD5/COD	0.53	% Biodegradable	86 %

**12.3 Bioaccumulative potential:**

Identification	Bioaccumulation potential	
	Propan-2-ol CAS: 67-63-0 EC: 200-661-7	BCF
	Pow Log	0.05
	Potential	Low

**12.4 Mobility in soil:**

Identification	Absorption/desorption		Volatility	
	Propan-2-ol CAS: 67-63-0 EC: 200-661-7	K <sub>oc</sub>	1.5	Henry
	Conclusion	Very High	Dry soil	Yes
	Surface tension	22400 N/m (25 °C)	Moist soil	Yes

**12.5 Results of PBT and vPvB assessment:**

Non-applicable

**12.6 Other adverse effects:**

Not described

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods:**

Code	Description	Waste class. (Regulation (EU) No 1357/2014)
16 03 05*	Organic wastes containing dangerous substances	Dangerous

**Type of waste (Regulation (EU) No 1357/2014):**

HP3 Flammable, HP6 Acute Toxicity

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommend disposal down the drain. See paragraph 6.2.

**Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) n°1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

**SECTION 14: TRANSPORT INFORMATION**

**Transport of dangerous goods by land:**

With regard to ADR 2015 and RID 2015:

**SECTION 14: TRANSPORT INFORMATION (continue)**



- 14.1 UN number:** UN1993
- 14.2 UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (Ethanol)
- 14.3 Transport hazard class(es):** 3  
Labels: 3
- 14.4 Packing group:** II
- 14.5 Dangerous for the environment:** No
- 14.6 Special precautions for user**  
Special regulations: 274, 601, 640D  
Tunnel restriction code: D/E  
Physico-Chemical properties: see section 9  
Limited quantities: 1 L
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**Transport of dangerous goods by sea:**

With regard to IMDG 37-14:



- 14.1 UN number:** UN1993
- 14.2 UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (Ethanol)
- 14.3 Transport hazard class(es):** 3  
Labels: 3
- 14.4 Packing group:** II
- 14.5 Dangerous for the environment:** No
- 14.6 Special precautions for user**  
Special regulations: 274, 944  
EmS Codes: F-E, S-E  
Physico-Chemical properties: see section 9  
Limited quantities: 1 L
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2015:



- 14.1 UN number:** UN1993
- 14.2 UN proper shipping name:** FLAMMABLE LIQUID, N.O.S. (Ethanol)
- 14.3 Transport hazard class(es):** 3  
Labels: 3
- 14.4 Packing group:** II
- 14.5 Dangerous for the environment:** No
- 14.6 Special precautions for user**  
Physico-Chemical properties: see section 9
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**SECTION 15: REGULATORY INFORMATION**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**

Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Non-applicable  
Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable  
Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable

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## SECTION 15: REGULATORY INFORMATION (continue)

Active substances for which a decision of non-inclusion onto Annex I (Regulation (EU) No 528/2012): Non-applicable  
REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

### **Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII, REACH):**

Non-applicable

### **Specific provisions in terms of protecting people or the environment:**

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

### **Other legislation:**

The product could be affected by sectorial legislation

### **15.2 Chemical safety assessment:**

The supplier has not carried out evaluation of chemical safety.

## SECTION 16: OTHER INFORMATION

### **Legislation related to safety data sheets:**

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EU) N° 453/2010, Regulation (EC) N° 2015/830)

### **Modifications related to the previous security card which concerns the ways of managing risks. :**

Non-applicable

### **Texts of the legislative phrases mentioned in section 2:**

H319: Causes serious eye irritation  
H302: Harmful if swallowed  
H225: Highly flammable liquid and vapour

### **Texts of the legislative phrases mentioned in section 3:**

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

### **CLP Regulation (EC) n° 1272/2008:**

Acute Tox. 3: H301 - Toxic if swallowed  
Eye Irrit. 2: H319 - Causes serious eye irritation  
Flam. Liq. 2: H225 - Highly flammable liquid and vapour  
STOT SE 3: H336 - May cause drowsiness or dizziness

### **Classification procedure:**

Eye Irrit. 2: Calculation method  
Acute Tox. 4: Calculation method  
Flam. Liq. 2: Calculation method (2.6.4.3)

### **Advice related to training:**

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

### **Principal bibliographical sources:**

<http://esis.jrc.ec.europa.eu>  
<http://echa.europa.eu>  
<http://eur-lex.europa.eu>

### **Abbreviations and acronyms:**

- ADR: European agreement concerning the international carriage of dangerous goods by road
- IMDG: International maritime dangerous goods code
- IATA: International Air Transport Association
- ICAO: International Civil Aviation Organisation
- COD: Chemical Oxygen Demand
- BOD5: 5-day biochemical oxygen demand
- BCF: Bioconcentration factor
- LD50: Lethal Dose 50
- CL50: Lethal Concentration 50
- EC50: Effective concentration 50
- Log-POW: Octanol-water partition coefficient
- Koc: Partition coefficient of organic carbon

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Safety data sheet

According to 1907/2006/EC (REACH), 453/2010/EU, 2015/830/EU

**Norbrook Laboratories Ltd - Closamectin Pour On - Vm 02000/4280**  
**Res : 94619**

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -

