SAFETY DATA SHEETS

This SDS packet was issued with item:

078944684

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

078944679

Norbrook Laboratories Ltd - Selamectin Spot for Cats (including puppies & kittens)

SECTION 1: IDENTIFICATION

1.1 Product identifier: Norbrook Laboratories Ltd - Selamectin Spot for Cats (including puppies & kittens)

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Veterinary Pharmaceutical Product

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Initial supplier identifier:

Norbrook Laboratories Ltd
Carnbane 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 phone number: +44 (0)28 3026 4435

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture:

WHMIS 2015:

Classification of this product has been carried out in accordance with Part 2 of Hazardous Products Regulations (SOR/2015-17)

Eye Irrit. 2: Eye irritation, Category 2, H319
Flam. Liq. 2: Flammable liquids, Category 2, H225
Repr. 2: Reproductive toxicity, Category 2, H361
STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336

2.2 Label elements:

This mixture is regulated under Veterinary Medicines Regulations and will be labelled accordingly

WHMIS 2015:

Danger

Hazard statements:

Eye Irrit. 2: H319 - Causes serious eye irritation
Flam. Liq. 2: H225 - Highly flammable liquid and vapour
Repr. 2: H361 - Suspected of damaging fertility or the unborn child
STOT SE 3: H336 - May cause drowsiness or dizziness

Precautionary statements:

P201: Obtain special instructions before use
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P280: Wear protective gloves/protective clothing/eye protection/face protection
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313: IF exposed or concerned: Get medical advice/attention
P370+P378: In case of fire: Use ABC powder extinguisher to put it out
P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively

Substances that contribute to the classification

Propan-2-ol (CAS: 67-63-0); Selamectin (CAS: 165108-07-6)

2.3 Health and physical hazards not otherwise classified (HHNOC - PHNOC):

Non-applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

- CONTINUED ON NEXT PAGE -

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Non-applicable

3.2 Mixtures:

Chemical description: Spot On

Components:

In accordance with Schedule I of the Hazardous Products Regulations (SOR/2015-17), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 67-63-0	**Propan-2-ol** Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336 - Danger 	**Proprietary**
CAS: 165108-07-6	**Selamectin** Repr. 2: H361 - Warning 	**Proprietary**

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

SECTION 4: FIRST-AID MEASURES

4.1 Description of necessary 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:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

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:

In case of consumption, seek immediate medical assistance showing the SDS of this product.

4.2 Most important symptoms/effects, acute and delayed:

Most important symptoms/effects, acute and delayed

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Non-applicable

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable (and unsuitable) extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO_2). IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

5.2 Specific hazards arising from the chemical:

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 Special protective equipment and precautions for fire-fighters:

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,...)

Additional provisions:

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.

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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 spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. 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 materials 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 and with the minimum requirements for protecting the security and health of workers. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks

PREGNANT WOMEN SHOULD NOT BE EXPOSED TO THIS PRODUCT. Transfer in fixed places that comply with the necessary security conditions (emergency showers and eyewash stations in close proximity), using personal protection equipment, especially on the hands and face (See section 8). Limit manual transfers to containers of small amounts. 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

Maximum Temp.: 30 ºC

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):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace (Occupational Health and Safety Regulation section 5.48):

- CONTINUED ON NEXT PAGE -

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification	Environmental limits		
Propan-2-ol	TLV-TWA	200 ppm	
CAS: 67-63-0	TLV-STEL	400 ppm	

8.2 Appropriate engineering controls:

A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protection Equipment. 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

Pictogram	PPE	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands

Pictogram	PPE	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application

D.- Ocular and facial protection

Pictogram	PPE	Remarks
 Mandatory face protection	Face shield	Clean daily and disinfect periodically according to the manufacturer´s instructions. Use if there is a risk of splashing.

E.- Bodily protection

Pictogram	PPE	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties	For professional use only. Clean periodically according to the manufacturer´s instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk, with antistatic and heat resistant properties	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

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 (VOC) according to Canadian Environmental Protection Act, 1999:

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Volatile organic compounds:	93.92 % weight
V.O.C. density at 20 ºC:	747.73 kg/m³ (747.73 g/L)

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 ºC:	Liquid
Appearance:	Not available
Color:	Not available
Odor:	Not available
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	85 ºC
Vapour pressure at 20 ºC:	4968 Pa
Vapour pressure at 50 ºC:	24953.82 Pa (24.95 kPa)
Evaporation rate at 20 ºC:	Non-applicable *

Product description:

Density at 20 ºC:	796.1 kg/m³
Relative density at 20 ºC:	0.796
Dynamic viscosity at 20 ºC:	2.41 cP
Kinematic viscosity at 20 ºC:	3.02 cSt
Kinematic viscosity at 40 ºC:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 ºC:	Non-applicable *
Partition coefficient n-octanol/water 20 ºC:	Non-applicable *
Solubility in water at 20 ºC:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *

Flammability:

Flash Point:	21 ºC
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	270 ºC
Lower flammability limit:	Not available
Upper flammability limit:	Not available

Explosive:

Lower explosive limit:	Non-applicable *
Upper explosive limit:	Non-applicable *

9.2 Other information:

Surface tension at 20 ºC:	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 (continued)

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 because the product is stable under recommended storage conditions. 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	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

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 (CO2), 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 effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. 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 this effect. For more information see section 3.

B- Inhalation (acute effect):

- 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 this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- 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.
  IARC: Propan-2-ol (3); 2,6-di-tert-butyl-p-cresol (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: Suspected of damaging fertility or the unborn child

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising 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) - single exposure:

Exposure in high concentration can cause a breakdown in the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.

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
Propan-2-ol	LD50 oral	5280 mg/kg	Rat
CAS: 67-63-0	LD50 dermal	12800 mg/kg	Rat
	LC50 inhalation	72.6 mg/L (4 h)	Rat
Selamectin	LD50 oral	>5000 mg/kg	
CAS: 165108-07-6	LD50 dermal	>5000 mg/kg	
	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 Ecotoxicity (aquatic and terrestrial, where available):

Identification	Acute toxicity		Species	Genus
Propan-2-ol	LC50	9640 mg/L (96 h)	Pimephales promelas	Fish
CAS: 67-63-0	EC50	13299 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	1000 mg/L (72 h)	Scenedesmus subspicatus	Algae
Selamectin	LC50	0.266 mg/L (96 h)	N/A	Fish
CAS: 165108-07-6	EC50	0.000026 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		

12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
Propan-2-ol	BOD5	1.19 g O2/g	Concentration	100 mg/L
CAS: 67-63-0	COD	2.23 g O2/g	Period	14 days
	BOD5/COD	0.53	% Biodegradable	86 %

12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
Propan-2-ol	BCF	3
CAS: 67-63-0	Pow Log	0.05
	Potential	Low

12.4 Mobility in soil:

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Absorption/desorption		Volatility	
Propan-2-ol	Koc	1.5	Henry	8.207E-1 Pa·m³/mol
CAS: 67-63-0	Conclusion	Very High	Dry soil	Yes
	Surface tension	2.24E-2 N/m (25 ºC)	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 Disposal methods:

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations. 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 recommended disposal down the drain. See epigraph 6.2.

Regulations related to waste management:

Legislation related to waste management:

Canadian Environmental Protection Act, 1999

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to Transportation of Dangerous Goods Regulations including Amendment SOR/2017-100

14.1 UN number: UN1993

14.2 United Nations proper shipping name: FLAMMABLE LIQUID, N.O.S. (Propan-2-ol)

14.3 Transport hazard class(es): 3

Labels: 3

14.4 Packing group: II

14.5 Environmental hazard: Yes

14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises

Physico-Chemical properties: see section 9

14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 38-16:

14.1 UN number: UN1993

14.2 United Nations proper shipping name: FLAMMABLE LIQUID, N.O.S. (Propan-2-ol)

14.3 Transport hazard class(es): 3

Labels: 3

14.4 Packing group: II

14.5 Environmental hazard: Yes

14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises

Physico-Chemical properties: see section 9

14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Non-applicable

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SECTION 14: TRANSPORT INFORMATION (continued)

Transport of dangerous goods by air:

With regard to IATA/ICAO 2019:

14.1	**UN number:**	UN1993
14.2	**United Nations proper shipping name:**	FLAMMABLE LIQUID, N.O.S. (Propan-2-ol)
14.3	**Transport hazard class(es):**	3
	Labels:	3
14.4	**Packing group:**	II
14.5	**Environmental hazard:**	Yes
14.6	**Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises**	
	Physico-Chemical properties:	see section 9
14.7	**Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):**	Non-applicable

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

Domestic Substances List (DSL): Propan-2-ol
Non-Domestic Substances List (NDSL): 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:

Canadian Environmental Protection Act, 1999

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Part 4 and Schedule I of the Hazardous Products Regulations (SOR/2015-17)

Texts of the legislative phrases mentioned in section 2:

H319: Causes serious eye irritation
H336: May cause drowsiness or dizziness
H361: Suspected of damaging fertility or the unborn child
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

WHMIS 2015:

Eye Irrit. 2: H319 - Causes serious eye irritation
Flam. Liq. 2: H225 - Highly flammable liquid and vapour
Repr. 2: H361 - Suspected of damaging fertility or the unborn child
STOT SE 3: H336 - May cause drowsiness or dizziness

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://whmis.org/

Abbreviations and acronyms:

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SECTION 16: OTHER INFORMATION (continued)

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

END OF SAFETY DATA SHEET