


## Immucox Breeders & Layers Vaccine<sup>®</sup>

### Section 1: Identification of the Substance and Supplier

<b>Product name:</b>	Immucox Breeders and Layers Vaccine
<b>Other name:</b>	Immucox I Coccidiosis vaccine
<b>ACVM Registration:</b>	A007156
<b>Recommended use:</b>	Poultry vaccine as an aid in the prevention of Coccidiosis induced disease.
<b>Company details:</b>	Pacificvet Limited
<b>Address:</b>	3 Hickory Place Hornby 8042 Christchurch New Zealand
<b>Telephone number:</b>	+64 3 349 8438 (business hours 8:30 am to 5:00 pm)
<b>Emergency telephone:</b>	Pacificvet Limited: 0508 388 388 National Poisons Centre: 0800 764 766 (0800 POISON)
<b>Date of Preparation:</b>	19th September 2018

### Section 2: Hazard Identification

<b>Hazard classifications:</b>	<p>HSNO Classification Veterinary Medicines (Limited Pack Size, Finished Dose) Group Standard 2017 HSNO Approval: HSR100757 6.1B Acute Toxicity by oral ingestion 6.3A Skin irritant 6.4A Eye irritant 6.5A Respiratory Sensitiser 6.5B Contact Sensitiser 6.6B Suspected Human Mutagen following prolonged ingestion 6.7B Suspected Human Carcinogen following prolonged ingestion 6.8B Suspected Human Reproductive toxicant following prolonged ingestion</p> <p>Not a Dangerous Good according to IATA of NZTA. Hazchem code: 1Y (recommended)</p>
<b>Pictograms:</b>	
<b>Signal words:</b>	Danger
<b>Hazard statements:</b>	<p>H300 Fatal if swallowed H315 Causes skin irritation H317 May cause an allergic skin irritation H319 Causes serious eye irritation H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled H341 Suspected of causing genetic defects if inhaled H351 Suspected of causing cancer if inhaled H361 Suspected of damaging the unborn child following prolonged ingestion</p>

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## Section 2: Hazard Identification (continued)

<b>Precautionary statements:</b>	<p>P102 Keep out of the reach of children</p> <p>P103 Read label before use</p> <p>P280 Wear protective gloves, eye protection, face protection and protective clothing</p> <p>P201 Obtain special instructions before use</p> <p>P202 Do not handle until all safety precautions have been read and understood</p>
<b>Prevention statements:</b>	<p>P102 Keep out of the reach of children</p> <p>P103 Read label before use</p> <p>P201 Obtain special instructions before use</p> <p>P202 Do not handle until all safety precautions have been read and understood</p> <p>P270 Do not eat, drink or smoke when using this product</p> <p>P264 Do not get in eyes, on skin or on clothing</p> <p>P270 Do not eat, drink or smoke when using this product</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace</p> <p>P280 Wear protective gloves, eye protection, face protection and protective clothing</p> <p>P281 Use personal protective equipment as required</p> <p>P285 In the case of inadequate ventilation wear respiratory protection when spray administering the product according to AS/NZS 4501</p>
<b>Response statements:</b>	<p>P301 + P321 + P310 IF SWALLOWED: Rinse mouth immediately and drink plenty of water. Call a POISON CENTER or doctor/physician.</p> <p>P302 + P352, P333 + P313 IF ON SKIN: Wash immediately with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P321 The Potassium Dichromate and Colourant components are recorded as contact sensitizers. Skin exposure to product may cause allergic dermatitis. Wear gloves to avoid accidental contact with the product. Colourant component is recorded as causing Allergic Asthma following ingestion.</p> <p>P304 + P341, P342 + P311 IF INHALED: If breath is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.</p> <p>P305 + P351 + P338, P337 + P313 IF IN EYES: Keep eyelid open and immediately rinse with large quantities of water, for at least 5 minutes. Remove contact lenses, if present and easy to do. If eye irritation persists: Get medical advice/ attention.</p> <p>P362 Take off contaminated clothing and wash before reuse.</p>
<b>Storage statements:</b>	<p>P405 Store locked up in refrigeration.</p> <p>P102 Keep out of the reach of Children.</p> <p>This substance does not require an approved handler.</p>
<b>Disposal statements:</b>	<p>P501 Product must be disposed of through an appropriate hazardous waste company. Containers may be recycled if they are clean and free of any harmful residue.</p>

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## Section 3: Composition

<b>Substance characterisation:</b>	Green Liquid		
<b>Product components:</b>	<b>Name</b>	<b>CAS</b>	<b>Proportion</b>
	Potassium Dichromate	7778-50-9	<1.5%
	FD&C Yellow No. 5 Food Dye	1934-21-0	2%
	FD&C Blue No. 2 Food Dye	860-22-0	2%
	Water	7723-18-5	>90%
	Live oocysts of <i>Eimeria species</i>	n/a	>5%
*This is a commercial product and the exact ratio of components may vary.			

## Section 4: First Aid Measures

<b>General:</b>	For advice contact the National Poisons Centre on 0800 POISON (08000 764 766) or a doctor if you feel that you may have been harmed by this product.
<b>Personal precautions protective equipment:</b>	<b>Wear suitable protective clothing such as overalls, gloves, safety glasses and to avoid contact with skin and eyes, when mixing product and administering the product. When spray administering the product use Respiratory Protection according to AS/NZS 4501.</b>
<b>Inhalation:</b>	Reactions in sensitive individuals can occur shortly after exposure to the product and are characterised by difficulty in breathing. The person affected by the product should be moved into the open fresh air and kept at rest in a position comfortable for breathing. Immediate medical attention should be sought if breathing difficulty continues. If medical advice is needed, have this SDS at hand.
<b>Ingestion:</b>	If product is swallowed do NOT induce vomiting, wash mouth with water and give plenty of water to drink. Seek immediate medical advice. If medical advice is needed, have this SDS at hand.
<b>Self-Injection:</b>	Not applicable.
<b>Skin Contact:</b>	Wash product off the skin and flush with lukewarm gently flowing water until product is dislodged. Then wash with soap and water to remove any final traces of the product.
<b>Eye Contact:</b>	If product gets into the eye, keep the eye lid open and rinse immediately with large quantities of lukewarm gently flowing water for 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing for 5 minutes to remove product. If eye irritation persists: Get medical advice/ attention.

## Most important symptoms and effects, acute and delayed from exposure and medical attention required

<b>Inhalation:</b>	Product is a potential respiratory irritant and may trigger Asthma symptoms or breathing difficulties in sensitive individuals following ingestion. Any respiratory reaction of difficulty in breathing that cannot quickly be resolved after moving to fresh air requires prompt medical attention.
<b>Ingestion:</b>	Product can be an irritant to digestive tract tissue particularly the intestinal mucosa causing discomfort. The Potassium Dichromate component has the potential for Acute Toxicity when ingested orally. Get medical attention and take this SDS with you.
<b>Skin Contact:</b>	Product can be irritant to the skin and cause contact dermatitis. Product contains Potassium dichromate and FD&C Blue No. 2 dye as components that are recorded as skin sensitisers. Seek medical advice should a skin rash or contact dermatitis develop, advise the practitioner that the product contains Potassium dichromate and FD&C Blue No. 2 dye known skin sensitisers. Take this SDS with you.
<b>Eye Contact:</b>	Product is an irritant to the eyes and causes discomfort and there is the potential to cause eye damage. Should discomfort and irritation of eye persist after flushing with water to clear the product seek urgent medical attention. Take this SDS with you.

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### Most important symptoms and effects, acute and delayed from exposure and medical attention required (cont)

<b>Advice to Doctor:</b>	<p>The product contains components known to cause a range of symptoms. There is no specific antidote. Treat symptomatically.</p> <p><b>Oral Ingestion:</b> Product has the potential to be an irritant to digestive tract tissue and could be acutely toxic to a child.</p> <p><b>Inhalation:</b> Ingestion of the product may cause Asthma type symptoms of breathing difficulties in sensitive individuals.</p> <p><b>Skin Contact:</b> Product is an irritant to the skin and contains contact sensitizing components that can cause allergic dermatitis.</p> <p><b>Eye Contact:</b> Potential for Ocular tissue irritation and damage.</p> <p>The product contains components recorded by the NZ EPA.</p> <p>Potassium dichromate: <b>6.1B</b> acute toxicity oral, <b>6.5B</b> skin sensitizer, <b>6.6B</b> human mutagen, <b>6.7B</b> human carcinogen, <b>6.8B</b> human reproductive toxicant damaging to the unborn child, <b>6.3A</b> skin irritant and <b>6.4A</b> eye irritant.</p> <p>FD&amp;C Yellow No.5 Food Dye: <b>6.5A</b> evidence of Allergic Asthma in sensitive individuals</p> <p>FD&amp;C Blue No. 2 Food Dye: <b>6.5A</b> evidence of Allergic Asthma in sensitive individuals and <b>6.5B</b> contact/skin sensitizer.</p>
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### Section 5: Fire Fighting Measures

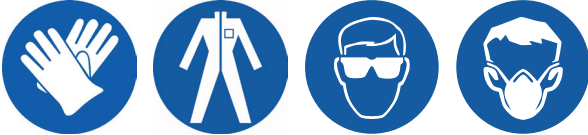
<b>Type of hazard:</b>	Not readily combustible. In combustion may emit toxic fumes.
<b>Extinguishing media and methods:</b>	Use extinguishing media suitable to burning materials such as water, foam, dry agent (CO2), sand or dolomite.
<b>HAZCHEM code</b>	1Y (recommended)
<b>Special protective equipment and Precautions</b>	Wear self-contained breathing apparatus.

### Section 6: Spillage and Accidental Release Measures

<b>Personal precautions, protective equipment:</b>	Wear personal protection equipment of overalls, gloves and safety glasses to prevent skin and eye contact.
<b>Environmental Precautions:</b>	Treat the recovered material as toxic and dispose through appropriate means. Do not allow to enter into the surface water or drains.
<b>Containment and Clean up</b>	Absorb product spill with paper towels or rags and neutralize with Chlorine Bleach prior to collecting in an appropriate container for disposal in garbage or preferably incinerate residue. Clear contaminated area thoroughly of product residue by wet mopping with bleach solution, the cleaning residue must be diluted prior to disposal in sewage system. The vaccine should be considered a biohazard to poultry as it contains a live culture of Eimeria oocysts and disposal should avoid the potential risk of uncontrolled spread to non-vaccinated birds.
<b>Emergency Response:</b>	Does not trigger thresholds.

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Section 7: Handling and Storage	
<b>Precautions for safe handling:</b>	Read product label instructions prior to use. <b>Protective clothing such as overalls, gloves and safety glasses/goggles to prevent contact with the product is recommended.</b>
<b>Regulatory requirements:</b>	Keep out of the reach of children. For animal treatment only. Read label before use. Obtain special instructions before use.
<b>Handling practices:</b>	All work processes must be undertaken so as to <b>avoid ingestion, skin contact and eye contact with the product. Wear personal protective equipment (PPE)</b> After mixing of the product remove protective clothing and wash hands before eating, drinking, chewing gum or using tobacco.
<b>Approved handlers:</b>	Not applicable
<b>Conditions for safe storage:</b>	<b>KEEP OUT OF THE REACH OF CHILDREN.</b> Store in the original container in a locked refrigeration unit between 3 and 7°C. Do not Freeze.
<b>Store site requirements:</b>	Not subject to a Hazardous Substances Emergency Response Plan.
<b>Packaging:</b>	Store only in original packaging with lid sealed. Once seal is broken use all of the product.
<b>Specific end use:</b>	Only to be used according to the directions on the label.

Section 8: Exposure Controls/Personal Protection	
	
<b>Workplace Exposure Standards:</b>	A workplace exposure standard (WES) has not been established by WorkSafe New Zealand for this product.
<b>Engineering Controls:</b>	Exposure can be reduced by use of personal protective equipment and increasing the ventilation.
<b>Personal Protective Equipment:</b>	Guidance from AS/NZS 1716 Occupational Respiratory Protection, AS/NZS 4501 Occupational Protective Clothing, AS/NZS 2161 Occupational Protective Gloves, AS/ NZS 1336 Occupational Eye Protection and AS/NZS 2210 Occupational Protective Footwear is recommended.
<b>Eye/Face Protection:</b>	Wear suitable goggles to prevent product from entering eyes.
<b>Skin Protection:</b>	Suitable overalls and gloves are to be worn. Single-use gloves of natural rubber or natural latex may be used. Overalls must be washed prior to reuse.
<b>Respiratory Protection:</b>	Recommended that a filter mask is worn that is appropriate to limit exposure to product spray mists if spray administering the vaccine.
<b>General Hygiene:</b>	After mixing the product remove protective clothing and wash hands before eating, drinking, chewing gum or using tobacco.

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### Section 9: Physical and Chemical Properties

<b>Appearance:</b>	Green Liquid
<b>Odour:</b>	No distinct odour
<b>Odour threshold:</b>	Does not apply
<b>pH:</b>	No data
<b>Freezing/ Melting Point:</b>	No data
<b>Boiling Point:</b>	No data
<b>Flash Point:</b>	No data
<b>Flammability:</b>	No data
<b>Explosive limits:</b>	Does not apply
<b>Fire Hazard Properties:</b>	Does not readily burn
<b>Vapour pressure:</b>	Does not apply
<b>Vapour density:</b>	Does not apply
<b>Specific gravity or density:</b>	No data
<b>Solubility:</b>	100% in water
<b>Partition coefficient:</b>	Does not apply
<b>Auto-ignition temperature:</b>	Does not apply
<b>Decomposition temperature:</b>	Does not apply
<b>Kinematic viscosity:</b>	Does not apply
<b>Particle characteristics:</b>	No data

### Section 10: Stability and Reactivity

<b>Reactivity:</b>	Unlikely to react or decompose under normal storage.
<b>Stability:</b>	Stable stored under normal conditions.
<b>Conditions to avoid:</b>	Do not freeze product.
<b>Incompatible materials:</b>	Not applicable
<b>Hazardous Decomposition Materials:</b>	No data. The following might be expected in small quantities: oxides of Chromium, Nitrogen oxides (NO <sub>x</sub> ), Carbon dioxide (CO <sub>2</sub> ), Sulfur oxides (SO <sub>x</sub> ), Carbon monoxide (CO).
<b>Hazard Reactions:</b>	Product will not auto-polymerize.

**Section 11: Toxicological Information**

<b>Toxicological Information:</b>	<p><b>No data available for product.</b></p> <p><b>6.1B Acute toxicity via Oral</b></p> <p>Using LD<sub>50</sub> for the ingredients based on data for the rat. The 15mL vial of the product has the potential to supply 199.5 mg of Potassium dichromate and under expert opinion the component has an Oral LD<sub>50</sub> of 36.79mg/kg. The only other component recorded with an Oral toxicity is the FD&amp; C Blue No. 2 Food Dye and the 15mL vial has the potential to supply 300 mg of toxicity but the Oral LD<sub>50</sub> for that component is substantial at 2000 mg/kg.</p> <p><b>Component ingredients have recorded:</b></p> <p><b>Potassium dichromate:</b> Allergy Asthma <b>6.5A</b>, Skin Sensitisation <b>6.6B</b>, Corrosive to Skin <b>8.2C</b> and Corrosive to the Eyes <b>8.3A</b>, Human Mutagen <b>6.6B</b>, Human Carcinogen <b>6.7A</b>, Human reproductive toxicant harmful to the unborn child <b>6.8A</b>, harmful to the lung (STOT) following prolonged ingestion <b>6.9A</b> Source: New Zealand EPA CCID data and the ECHA data base.</p> <p><b>FD&amp;C Yellow No. 5 Food Dye:</b> Evidence of Allergic Asthma <b>6.5A</b> in asthmatics and people with aspirin intolerance Source: NLM TOXNET database.</p> <p><b>FD&amp;C Blue No. 2 Food Dye:</b> Evidence of Allergic Asthma <b>6.5A</b> when consumed orally and Skin Reactions and contact sensitisation <b>6.5B</b>. Suspected of being a human cell mutagen from in vitro studies. Source: New Zealand EPA CCID data.</p>
<b>Acute toxicity via Oral:</b>	Based on available data the product is classified as <b>6.1B</b> when considering the component ingredients, as there is no actual data for the product.
<b>Acute toxicity via Dermal:</b>	Based on available data for the product's components it is considered the classification criteria is not met, there is no actual data for the product.
<b>Acute toxicity via Inhalation:</b>	Based on available data the product is classified as <b>6.1B</b> when considering the component ingredients, as there is no actual data for the product. However, all data relates to dusts and mists which is not relevant for the liquid form of the product.
<b>Skin Corrosivity / Skin Irritation</b>	No data available for product. Product component Potassium dichromate is considered skin corrosive. Based on available data the product is classified as a skin irritant <b>6.3A</b> when considering the component ingredients. Potassium dichromate and FD&C Blue No. 2 Food Dye are recorded as skin irritants.
<b>Eye Corrosivity / Eye Irritation</b>	No data available for product. Product components are considered eye corrosive <b>8.3A</b> . Potassium dichromate is a known to cause eye corrosion. Based on available data the product is classified as eye irritant <b>6.4A</b> when considering the level of that component ingredient.
<b>Respiratory or Skin Sensitisation:</b>	No data available for product. Classified as <b>6.5B</b> , as the components Potassium dichromate and FD&C Blue No. 2 Food Dye are classified as a skin sensitizer by the NZ EPA.
<b>Germ Cell Mutagenicity:</b>	Potassium dichromate is classified as a Mutagen and due to the level present, the product is a Suspected Mutagen <b>6.6B</b> .
<b>Carcinogenicity:</b>	Potassium dichromate is classified as a Carcinogen and due to the level present, the product is a Suspected Carcinogen <b>6.7B</b> .
<b>Reproductive Toxicity:</b>	Potassium dichromate is suspected human reproductive toxicant that can be harmful to the unborn child. The product is assigned <b>6.8A</b> .
<b>Specific Target Organ Toxicity – single exposure:</b>	Not classified as causing specific organ damage from single exposure.
<b>Specific Target Organ Toxicity – repeated exposure:</b>	The component Potassium dichromate is classified as causing organ damage from repeated exposure <b>6.9A</b> . Studies have shown that tissues can accumulate considerable quantity before pathological changes result. Oral or inhalation exposure would require prolonged ingestion. Most damage is from dusts and mists – not a risk for the liquid product.
<b>Aspiration Hazard:</b>	Not classified as causing an aspiration hazard.
<b>Acute and chronic health effects:</b>	None recorded for product



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### Section 11: Toxicological Information (continued)

<b>Skin Contact short term exposure:</b>	Available data indicates product could be irritating to skin. Symptoms include redness, skin burning sensation and a rash.
<b>Skin Contact long term exposure:</b>	Product has potential for contact sensitisation. Potassium dichromate and FD&C Blue No. 2 Food Dye have been linked with skin sensitization following repeat exposure. Resulting in allergic contact dermatitis.
<b>Eye Contact short term exposure:</b>	Product may cause Ocular tissue irritation, resulting in serious eye damage when the product is in contact with the eye. Symptoms include discomfort and a burning sensation. Resolving if the product is promptly removed from the tissue.
<b>Eye Contact long term exposure:</b>	No data for product has been recorded for health effects from multiple accidental contact events in the eye.
<b>Ingestion effects:</b>	Product may be irritating to mucous membranes causing transient discomfort and can have a laxative effect causing diarrhoea. Swallowing small amounts should not be harmful. However, there is risk of Acute Toxicity for a child if they accidentally swallowing a complete bottle of vaccine due to the Potassium dichromate concentration.
<b>Respiratory sensitisation short term exposure:</b>	No data for product. Respiratory reactions have been noted following oral ingestion of the component product ingredients. Generally, the liquid form of product means there is little risk from inhalation of the product.
<b>Respiratory sensitisation long term exposure:</b>	No data recorded for repeat exposure health effects associated with long term inhalation.
<b>Aspiration hazard exposure effect:</b>	No data linking the product as an aspiration hazard.
<b>Specific Target Organ Toxicity effect:</b>	No data linking product as a specific toxicant to any organs of the body. Data from components suggests ingestion of large quantities of the product could cause respiratory tract damage and predispose to cancer.



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### Section 12: Ecological Information

<b>Toxicity to aquatic and terrestrial plants and animals:</b>	<p><b>No data available for product Aquatic toxicity:</b></p> <p><b>Potassium dichromate CAS No. 7778-50-9</b> Acute crustacea toxicity <math>EC_{50} = 0.0199</math> mg/L 48 hours <i>Daphnia magna</i>, source NZ EPA CCID</p> <p><b>FD&amp;C Yellow No. 5 Food Dye CAS No. 1934-21-0</b> Acute fish toxicity <math>LC_{50} &gt;120</math> mg/L 96 hours species not specified, source ECHA Acute crustacea toxicity <math>EC_{50} &gt;120</math> mg/L 48 hours species <i>Daphnia magna</i>, source ECHA</p> <p><b>FD&amp;C Blue No. 2 Food Dye CAS No. 860-22-0</b> Acute fish toxicity <math>LC_{50} 10</math> mg/L 24 hours species <i>Oncorhynchus kisutch</i>, source NZ EPA CCID Acute toxicity in the rat <math>LD_{50} 2000</math> mg/kg, source NZ EPA CCID</p>
<b>Persistence and degradability:</b>	Accidental releases of the product at recommended mixed concentration into waste water and sewage treatment facilities will not disturb the biodegradability of activated sludge.
<b>Bioaccumulation potential:</b>	No indication of bio-accumulation potential.
<b>Mobility in soil:</b>	No data available.
<b>Ecotoxicity Hazard Statements:</b>	Product does not trigger the hazard threshold for Ecotoxicity in the Aquatic environment, Soil environment and is not a hazard for Terrestrial Vertebrates or Terrestrial Invertebrates.

### Section 13: Disposal Considerations

<b>Disposal method:</b>	Preferably dispose of the product by use. Unused product must be disposed of through an appropriate hazardous waste company. Containers may be recycled if they are clean and free of any residue.
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### Section 14: Transport Information

<b>UN Number:</b>	This product is not classified as a Dangerous Good by the NZTA or IATA.
<b>HAZCHEM Code:</b>	1Y (recommended)
<b>Special Precautions for transport:</b>	Transport in original packaging with lid sealed in a chilly bin to maintain temperature at 2 to 7°C.

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## Section 15: Regulatory Information

<b>ERMA Register Approval Number:</b>	Not applicable
<b>HSNO Controls:</b>	Approval HSR100757: Veterinary Medicines Limited Pack Size, Finished Dose Group Standard 2017
<b>Approved Handlers Certificate:</b>	Not required
<b>Workplace Exposure Standards (WES):</b>	Not applicable
<b>ACVM controls:</b>	Registered pursuant to the ACVM Act 1997, No. A007156. See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> for registration conditions.
<b>Health and Safety at Work (Hazardous Substances) Regulations 2017</b>	Not subject to a Hazardous Substances Emergency Response Plan.

## Section 16: Other Information

<b>Additional Information:</b>	This product is to be used only in accordance with the directions provided on the product label.	
<b>Warning:</b>	<p>The information provided in this Safety Data Sheet is based on current knowledge of the Health and Safety Hazard of the product detailed in this SDS.</p> <p>While all information supplied in this SDS is believed to be accurate this does not constitute a warranty by Pacificvet Limited for the information. The company disclaims any liability resulting from the use of this information.</p> <p>The product user is responsible for the appropriate and intended handling, use and disposal of the product.</p> <p>If clarification or further information is need to ensure that an appropriate risk assessment can be made prior to use of the product in the workplace, the user should contact Pacificvet Limited.</p> <p>The information contained in this SDS is only safety related information, for all other product information please refer to the product label.</p>	
<b>Version issued:</b>	19th September 2018 and is valid for 5 years from this date.	
<b>Revision history:</b>	Date of Revision	Reason