



SAFETY DATA SHEET

Title: TROIKA COMBINATION DRENCH FOR SHEEP			Document: SDS-NZ043	
			Rev: 1.1	PAGE 1 OF 10
Status: Current	Issue Date: 11-Mar-2020	Effective Date: 11-Mar-2020	Review Date: 11-Mar-2025	

Section 1: IDENTIFICATION of CHEMICAL PRODUCT and COMPANY

Product Name:	TROIKA Combination Drench for Sheep
Product Identifier:	A combination oral anthelmintic containing abamectin (1 g/L), albendazole (25 g/L) and levamisole hydrochloride (40 g/L), dosed at 1 mL/5kg.
Product Code:	503695 (15 L)
Recommended Use:	For the treatment and control in sheep of susceptible gastrointestinal roundworms (including strains with single or dual resistance to macrocyclic lactones, benzimidazoles, levamisole or closantel, and strains of <i>Haemonchus contortus</i> with emerging resistance to closantel). It is also effective against lungworm, tapeworms, adult liver fluke, nasal bot and itch mite.
Restrictions on Use:	For animal treatment only.
Company Identification:	Jurox New Zealand Limited
Address:	8 Kordel Place, East Tamaki, Auckland 2013, New Zealand
Email:	customerservice@jurox.co.nz
Customer Centre:	0800 587 696 (9am – 5pm, Monday to Friday)
National Poisons Information Centre:	0800 POISON (0800 764 766) (24 hr)
Emergency Telephone Number:	0800 CHEMCALL (0800 243 622) (24 hr)

Section 2: HAZARDS IDENTIFICATION

Hazard Classifications: This product has been assessed according to GHS and is classified as follows:

GHS Category	Hazard code	Hazard Statement
Acute toxicity (Oral): Category 5	H303	May be harmful if swallowed
Skin sensitization: Category 1	H317	May cause an allergic skin reaction
Germ cell mutagenicity: Category 2	H341	Suspected of causing genetic defects
Reproductive toxicity: Category 1	H360	May damage fertility or the unborn child
Specific target organ toxicity (repeated exposure): Category 2	H373	May cause damage to organs through prolonged or repeated exposure
Aquatic toxicity (acute): Category 1	H400	Very toxic to aquatic life



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Signal word: DANGER

GHS Pictograms:



Exclamation
Mark



Health
hazard



Environment

Precautionary statements:

Prevention

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe vapours.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

P308 + P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTRE/doctor if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Storage

P405	Store locked up.
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Disposal

P501	Dispose of contents/container in accordance with label directions.
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Other hazards: None known.

Section 3: COMPOSITION / INFORMATION on INGREDIENTS

INGREDIENT	CAS No.	CONTENT
Levamisole hydrochloride	16595-80-5	4.0%
Albendazole	54965-21-8	2.5%
Abamectin	71751-41-2	0.1%
Benzyl alcohol	100-51-6	< 10%
Ingredients not contributing to the hazards	-	> 90%



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Section 4: FIRST AID MEASURES

General Information: Consult the National Poisons Centre on 0800 POISON (0800 764 766) or a doctor immediately in every case of suspected chemical poisoning. Never give fluids or induce vomiting if a patient is unconscious or convulsing regardless of cause of injury. If medical advice/attention is needed, have this SDS, product container or label at hand.

Symptoms and Effects of Exposure: Symptoms of exposure to levamisole include high fever, swollen glands, painful sores on the mouth or anus, and lingering infections, including sore throat, mouth sores, skin infections, abscesses, thrush, or pneumonia. Common side effects of exposure to albendazole include nausea, abdominal pains and headaches. Clinical symptoms of severe abamectin intoxication include mydriasis, sedation, emesis, tremors, convulsions, coma and death.

Inhalation: If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary. If respiratory symptoms occur, remove patient to fresh air. Lay patient down and keep warm and rested. If breathing is shallow or has stopped, ensure airway is clear and apply resuscitation. If breathing is difficult, give oxygen and seek medical assistance immediately.

Ingestion: If swallowed do NOT induce vomiting. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. For advice, contact a doctor or the National Poisons Centre on 0800 POISON (0800 764 766).

Skin: If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.

Eye: If eye contact occurs: Immediately flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing for at least 20 minutes. If eye irritation persists, get medical advice/attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Recommended First Aid Facilities: Ready access to running water and soap is required. Accessible eyewash is required.

Advice to Doctor: Treat symptomatically. Toxicity following accidental ingestion may be minimised by emesis-induction within half an hour of exposure. Since abamectin is thought to bind to glutamate-gated ion channels, it is probably wise to avoid drugs that also interact with other ligand-gated chloride channels, including those that enhance GABA activity in patients with potentially toxic abamectin exposure. Avoid drugs that enhance GABA activity (barbiturate, benzodiazepines, valproic acid, etc.).



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Section 5: FIRE FIGHTING MEASURES

Flash Point: No data.

Hazardous Combustion Products: If involved in a fire, may emit poisonous and corrosive fumes. Expansion on heating may lead to violent rupture of containers.

Extinguishing Media: Alcohol resistant foam is the preferred medium. If not available use Normal Protein Foam, Dry Chemical Powder, BCF (where regulations permit), carbon dioxide, water spray or fog (large fires only).

Protective Equipment: Protective gloves and breathing apparatus.

HAZCHEM Code: 3Z.

Section 6: ACCIDENTAL RELEASE MEASURES

Spills and Disposal: Wear gloves and appropriate protective clothing. Avoid breathing vapours and contact with skin and eyes. Clean up all spills immediately. For small spills, contain spill and absorb with inert material such as sand, earth, inert material or vermiculite and place in a sealable waste container. For large spills, exclude non-essential people from the area. Contain and absorb spill with sand, earth, inert material or vermiculite. Prevent spillage from entering drains or water courses and call emergency services.

Protective Clothing: For appropriate personal protective equipment see section 8.

Environmental Precautions: Prevent from entering drains, waterways or sewers. If spill does enter waterways contact local authority.

Section 7: HANDLING AND STORAGE

Handling: Handle this product to avoid exposure, taking all recommended precautions. Avoid all personal contact including inhalation of vapours. Use in a well-ventilated area. Do not allow clothing wet with material to stay in contact with skin. Use personal protective equipment as required. Do not eat, drink or smoke while handling product.

Approved handlers: Approved handlers are required for any quantity of this product.

Signage: Signage required where quantities greater than 100 L are present.

Storage: Store in original container, tightly closed and in a locked, dry, cool area away from foodstuffs.

Other Information: Avoid contact with incompatible substances as listed in Section 10. Always read the label before use.



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Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

This SDS describes personal protective measures relating to long term industrial and manufacturing exposure and emergency situations, such as accidents and spills. See product label for personal protective measures during normal use of the marketed product.

Exposure Limits: No exposure limits have been assigned for this product. Known exposure limits for ingredients are as follows:

INGREDIENT	TEEL-1	TEEL-2	TEEL-3
Benzyl alcohol	30 ppm	52 ppm	740 ppm

Engineering Controls: Handle in a well-ventilated area. Ensure that the work environment remains clean.

Personal Protective Equipment (PPE):

Eye protection: Safety glasses with side shields or chemical goggles are recommended when using this product.

Skin protection: Prevent skin contact by wearing chemical protective gloves e.g. PVC. Wear safety gumboots, e.g. rubber.

Respiratory protection: Not required for the normal use of this product.

Other: When handling bulk quantities of this product, overalls, PVC apron, barrier cream, skin cleansing cream and eye wash unit may be required.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off-white suspension	Lower flammability limits	Not applicable
Odour:	Not available	Vapour Pressure:	Not available
Odour threshold:	Not available	Vapour density:	Not available
pH:	3.5 – 5.5	Relative density:	Not available
Melting Point:	Not available	Specific Gravity:	Approx. 1.02
Boiling Point:	Not available	Solubility in Water:	Aqueous suspension
Flash Point:	Not available	Partition coefficient:	Not available
Evaporation Rate:	Not available	Auto-ignition temperature:	Not available
Flammability:	Not applicable	Decomposition temperature:	Not available
Upper flammability limits:	Not applicable	Viscosity:	Not available



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Section 10: STABILITY AND REACTIVITY

Reactivity: This product is unlikely to react or polymerise under normal storage conditions.

Stability: When stored appropriately this product should show no significant degradation within the expiry period shown on the label.

Conditions to Avoid: Extreme temperatures.

Incompatible Materials: Oxidising agents.

Hazardous Decomposition Products: Combustion products include carbon dioxide, nitrogen oxides, phosphorus oxides and other pyrolysis products typical of burning organic material.

Section 11: TOXICOLOGICAL INFORMATION

Acute Toxicity:

Ingestion: No data for the mixture is available. Based on available data for the ingredients, the mixture is classified as **Acute toxicity (Oral): Category 5**. Accidental ingestion of the material may be damaging to the health of the individual. Extremely large oral doses may produce intestinal cramps, loss of appetite, lethargy, lung bleeding, oedema, liver and epicardial bleeding, nausea, vomiting and diarrhoea.

Levamisole hydrochloride: Oral LD₅₀: 180 mg/kg (rat);

Albendazole: Oral LD₅₀: 2400 mg/kg (rat);

Abamectin: Oral LD₅₀: 1.5 mg/kg (rat);

Benzyl alcohol: Oral LD₅₀: 1230 mg/kg (rat).

Inhalation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be acutely toxic by the inhalation route. Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

Levamisole hydrochloride: No data;

Albendazole: No data;

Abamectin: Inhalation LC₅₀: 1.1 mg/l/4h (rat);

Benzyl alcohol: Inhalation LC₅₀: > 4.178 mg/l/4h (rat).

Dermal: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be acutely toxic by the dermal route. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the bloodstream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

Levamisole hydrochloride: No data;

Albendazole: No data;

Abamectin: Dermal LD₅₀: > 330 mg/kg (rat);

Benzyl alcohol: Dermal LD₅₀: 2000 mg/kg (rabbit).

Skin Corrosion / Irritation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not thought to cause skin corrosion or irritation.

Serious Eye Damage / Irritation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not thought to cause serious eye damage/irritation. Direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness.



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Respiratory or Skin Sensitisation: No data for the mixture is available. Based on available data for the ingredients, the mixture is classified as **Skin Sensitisation: Category 1**. The liquid may be able to be mixed with fats or oils and may degrease the skin, producing a skin reaction known as non-allergic contact dermatitis. Sensitisation may result in allergic dermatitis responses including rash, itching, hives or swelling of extremities.

Germ Cell Mutagenicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is classified as **Germ Cell Mutagenicity: Category 2**.

Carcinogenicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be carcinogenic.

Reproductive Toxicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is classified as **Reproductive Toxicity: Category 1**. There is some evidence from animal testing that exposure to abamectin and albendazole may result in toxic effects to the foetus.

STOT: Single exposure: No data for the mixture is available. Based on available data for the ingredients, the mixture is not thought to be a Specific Target Organ Toxicant after single exposure.

STOT: Repeat exposure: No data for the mixture is available. Based on available data for the ingredients, the mixture is classified as **Specific target organ toxicity (repeated exposure): Category 2**. Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. The commonest and most severe effect induced by levamisole is agranulocytosis. Albendazole has been shown to affect the blood and haematopoietic system after prolonged oral dosage to dogs.

Aspiration Hazard: No data available.

Narcotic Effects: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to have any narcotic effects.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is classified as **Aquatic toxicity (acute): Category 1**.

Fish

Levamisole hydrochloride: LC₅₀ (96h): 8.038 mg/L;
Albendazole: LC₅₀ (96h): 9.860 mg/L;
Abamectin: No data;
Benzyl alcohol: LC₅₀ (96h): 10 mg/L, NOEC (336h): 5.1 mg/L.

Crustacea

Levamisole hydrochloride: No data;
Albendazole: No data;
Abamectin: No data;
Benzyl alcohol: EC₅₀ (48h): 230 mg/L.



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Algae and other aquatic plants

Levamisole hydrochloride: EC₅₀ (96h): 17.231 mg/L;

Albendazole: EC₅₀ (96h): 0.819 mg/L;

Abamectin: EC₅₀ (96h): 7.3096 mg/L;

Benzyl alcohol: EC₅₀ (96h): 76.828 mg/L.

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
Levamisole hydrochloride	HIGH	HIGH	LOW (logKOW = 1.84)	LOW (KOC = 8652)
Albendazole	HIGH	HIGH	LOW (logKOW = 3.1358)	HIGH (KOC = 1871)
Abamectin	No data	No data	No data	No data
Benzyl alcohol	LOW	LOW	LOW (logKOW = 1.1)	LOW (KOC = 15.66)

Section 13: DISPOSAL INFORMATION

Product Disposal: Dispose of product only by using according to label or at an approved landfill.

Container Disposal: Triple (or preferably pressure) rinse empty container, crush or puncture, and bury in a suitable landfill, or if appropriate, recycle.

Section 14: TRANSPORT INFORMATION

RAIL/ROAD:	UN Number:	3082
	Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains ABAMECTIN)
	DG Class:	9
	HAZCHEM Code:	3Z
	Packing Group:	III
SEA (IMDG Code):	Marine Pollutant:	No
	UN Number:	3082
	Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains ABAMECTIN)
	DG Class:	9
	HAZCHEM Code:	3Z
	Packing Group:	III
	Marine Pollutant:	No



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AIR: (ICAO/IATA): **UN Number:** 3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, LIQUID, N.O.S. (Contains
ABAMECTIN)
DG Class: 9
HAZCHEM Code: 3Z
Packing Group: III
Marine Pollutant: No

Section 15: REGULATORY INFORMATION

ACVM No.: A010241

HSNO Approval No: HSR008042

HSNO Classification: 6.1E (O), 6.5B, 6.6B, 6.8A, 6.9B, 9.1A.

Section 16: OTHER INFORMATION

This information is based on data believed by Jurox New Zealand Limited to be accurate at the time of writing but is subject to change without notice. It is given in good faith, but no warranty expressed or implied is made as to its accuracy, completeness otherwise and no assumption of liability from howsoever arising is made by Jurox New Zealand Limited by reason of the provision of this information. Every person dealing with the materials referred to herein does so at his/her own risk absolutely and must make independent determinations of suitability and completeness of information from all sources to ensure their proper use.

Legend:

ACVM	Agricultural Compounds and Veterinary Medicines.
BCF	Bromochlorodifluoromethane (fire extinguisher).
CAS No.	Chemical Abstracts Service Registry Number.
CCID	Chemical Classification and Information Database.
EC₅₀	The median effect concentration, being a statistically derived concentration of a substance that can be expected to cause an adverse reaction in 50% of organisms or a 50% reduction in growth or in the growth rate of organisms.
EPA	Environmental Protection Authority.
GABA	Gamma-aminobutyric acid.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals.
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters.
HSNO	Hazardous Substances and New Organisms Act, 1996.
KOC	Soil-Water Partition Coefficient. The ratio of a chemical's concentration that is adsorbed in the soil to the concentration of chemical in solution.
KOW	Octanol Water Partition Coefficient. The ratio of a compound's concentration in a known volume of n-octanol to its concentration in a known volume of water after the octanol and water have reached equilibrium.
LC₅₀	The median lethal concentration, being a statistically derived concentration of a substance that can be expected to cause death in 50% of animals.
LD₅₀	The median lethal dose, being a statistically derived single dose of a substance that can be expected to cause death in 50% of animals.
NOEC	No observable effect concentration.
N.O.S.	Not otherwise specified.
PPE	Personal Protective Equipment.
PVC	Polyvinyl chloride.



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SDS	Safety Data Sheet.
STOT	Specific Target Organ Toxicity.
TEELs	Temporary Emergency Exposure Limits. Guidelines designed to predict the response of members of the general public to different concentrations of a chemical during an emergency response incident.
TEEL-1	The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic, nonsensory effects. However, these effects are not disabling and are transient and reversible upon cessation of exposure.
TEEL-2	The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting, adverse health effects or an impaired ability to escape.
TEEL-3	The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience life-threatening adverse health effects or death.

References:

ChemID Plus

Chemwatch

EPA New Zealand Chemical Classification and Information Database (CCID)

HSDB (Hazardous Substances Data Bank)

Revision History:

Date of Revision	Reason
24 June 2019	Minor changes made to sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 & 15.
11 March 2020	Update to DG info.

END OF SDS