

ISSUED: 17 August 2018

SAFETY DATA SHEET

Section 1: IDENTIFICATION of CHEMICAL PRODUCT and COMPANY

Product Name:	Q-Drench Multi-Combination Drench for Sheep
Product Identifier:	1 g/L abamectin, 37.5 g/L closantel, 40 g/L levamisole hydrochloride and 25 g/L albendazole aqueous suspension.
Product Code:	503160 (1 L); 502870 (5 L); 502875 (10 L); 503670 (11L)
Recommended Use:	Oral parasiticide for sheep.
Restrictions on Use:	For animal treatment only.
Company Identification:	Jurox Pty Limited
Address:	85 Gardiner Street, Rutherford, NSW 2320, Australia
Email:	customerservice@jurox.com.au
Customer Centre:	1800 023 312
National Poisons Information Centre:	13 1126 (24 hours)
Emergency Telephone Number:	1800 023 312 (9am – 5pm, Monday to Friday)

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 4	H302	Harmful if swallowed
Acute Toxicity (Dermal) Category 4	H312	Harmful in contact with skin.
Acute Toxicity (Inhalation) Category 4	H332	Harmful if inhaled
Reproductive Toxicity Category 1B	H360	May damage fertility or the unborn child.
Acute Aquatic Hazard Category 2	H401	Toxic to aquatic life
Chronic Aquatic Hazard Category 2	H411	Toxic to aquatic life with long lasting effects

Signal word: DANGER

GHS Pictograms:



Exclamation
Mark



Health
hazard



Aquatic
hazard

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.
P261 Avoid breathing vapours.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves and protective clothing.
P273 Avoid release to the environment.

Response

P301+P312 IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.
P330 Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of water.
P312 Call a POISON CENTRE or doctor if you feel unwell.
P362+P364 Take off contaminated clothing and wash it before reuse.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTRE or doctor if you feel unwell.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P391 Collect spillage.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/national regulations.

N.B.: The above statements are determined by Work Health and Safety regulations and may not reflect Signal Headings and First Aid and Safety statements on product labelling, which are determined by a competent authority during assessment for registration.

Other hazards: None known.

Section 3: COMPOSITION / INFORMATION on INGREDIENTS

INGREDIENT	CAS No.	CONTENT
Levamisole hydrochloride	16595-80-5	4 %
Closantel	57808-65-8	3.75 %
Albendazole	54965-21-8	2.5 %
Abamectin	71751-41-2	0.1 %
Ingredients not contributing to the hazards	-	~ 90 %

Section 4: FIRST AID MEASURES

General Information: Consult the National Poisons Centre on 13 1126 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. Symptoms of closantel intoxication include loss of appetite, ataxia (uncoordinated movements), weakness, visual disturbance and blindness. 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 patient from contaminated area. Other measures are usually not necessary. 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.

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 or rash.

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: No specific antidote. Treat symptomatically. If vomiting is induced, suggest endotracheal and/or oesophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Only induce vomiting if conscious. NOTE: wear a protective glove when inducing vomiting by mechanical means.

Section 5: FIRE FIGHTING MEASURES

Flash Point: No data.

Hazardous Combustion Products: If involved in a fire, may emit noxious and corrosive fumes.

Extinguishing Media: There is no restriction on the type of extinguisher which may be used. Use extinguishing media suitable for surrounding area.

Protective Equipment: Protective gloves and breathing apparatus.

HAZCHEM Code: 3Z

Section 6: ACCIDENTAL RELEASE MEASURES

Spills and Disposal: Wear gloves and appropriate protective clothing, footwear and eye protection. For small spills, exclude non-essential people from the area. Contain spill and sweep up / absorb with inert material such as soil, sand or absorbent granules and place in a sealable waste container. Ventilate area and wash spill site after pick-up is complete. Dispose of waste safely in an approved landfill. For large spills, exclude non-essential people from the area. Prevent spillage from entering drains or water courses. Contain spill with sand, earth or vermiculite 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 with care to avoid exposure, taking all recommended precautions. Avoid contact with skin, eyes and inhalation of vapours. Use in a well-ventilated area. Use personal protective equipment as required. DO NOT allow material to contact humans, exposed food or food utensils. Do not eat, drink or smoke while handling this product.

Storage: Keep out of reach of children. Store below 30°C, in original container, tightly closed in a safe place, away from direct sunlight and away from foodstuffs. Protect containers against physical damage and check regularly for leaks.

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

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 or its ingredients.

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

Personal Protective Equipment (PPE):

Eye protection: Protective glasses or goggles are recommended when handling bulk quantities of this product.

Skin protection: When handling bulk product, prevent skin contact by wearing chemical protective gloves e.g. PVC.

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

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off-white suspension	Lower flammability limits:	Not available
Odour:	Not available	Vapour Pressure:	Not available
Odour threshold:	Not available	Vapour density:	Not available
pH:	5.0 – 5.5	Relative density:	Not applicable
Melting Point:	Not applicable	Specific Gravity:	Not available
Boiling Point:	Not available	Solubility in Water:	Miscible with water
Flash Point:	Not available	Partition coefficient:	Not available
Evaporation Rate:	Not available	Auto-ignition temperature:	Not available
Flammability:	Not flammable	Decomposition temperature:	Not available
Upper flammability limits:	Not available	Viscosity:	Not applicable

Section 10: STABILITY AND REACTIVITY

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

Chemical 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: Decomposition may produce toxic fumes of carbon dioxide (CO₂).

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 4**. Toxic effects may result from the accidental ingestion of levamisole hydrochloride; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual.

Levamisole hydrochloride: Oral LD₅₀: 180 mg/kg (rat), 223 mg/kg (mouse).

Closantel: Oral LD₅₀: 262 mg/kg (rat).

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

Abamectin: Oral LD₅₀: 11 mg/kg (rat), 14 mg/kg (mouse).

Dermal: No data for the mixture is available. Based on available data for the ingredients, the mixture is classified as **Acute Toxicity (Dermal) Category 4**.

Levamisole hydrochloride: No data.

Closantel: No data.

Albendazole: No data.

Abamectin: Skin LD₅₀: 2000 mg/kg (rabbit).

Inhalation: No data for the mixture is available. Based on available data for the ingredients, the mixture is classified as **Acute Toxicity (Inhalation) Category 4**.

Levamisole hydrochloride: No data.
Closantel: No data.
Albendazole: No data.
Abamectin: Inhalation LC₅₀: 1100mg/m³ (rat).

Aspiration hazard: No data available.

Skin Corrosion / Irritation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a skin irritant.

Serious Eye Damage / Irritation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be an eye irritant.

Respiratory or Skin Sensitisation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a skin sensitiser or respiratory sensitiser.

Germ Cell Mutagenicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be mutagenic. Levamisole has been classified as a possible mutagen by the European Agency for the Evaluation of Medicinal Products [EMA]. *In vitro* and *in vivo* studies in humans at a dose of 2 mg/kg levamisole by injection shows chromosome gaps and breaks in human lymphocytes.

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 1B**. A comprehensive series of developmental studies in mice, rats, rabbits, and sheep showed albendazole to be teratogenic. The malformations included visceral, craniofacial and bone defects (including shortened limbs). The lowest NOEL for any of the studies was 5 mg/kg bw/day for albendazole administered orally to rats or rabbits.

STOT: Single exposure: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a specific target organ toxicant after single exposure. Studies in dogs have shown that orally administered abamectin can elicit dose-dependant CNS effects, including tremors and ataxia.

STOT: Repeat exposure: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a specific target organ toxicant after repeat exposure. Chronic exposure to levamisole can lead to agranulocytosis. This can be fatal, particularly if infection occurs but it is reversible. It occurs at relatively low doses even when given on non-consecutive days. No NOEL can be identified and if one exists it is probably extremely small.

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 **Acute Aquatic Hazard Category 2** and **Chronic Aquatic Hazard Category 2**.

Fish

Levamisole hydrochloride: No data.
Closantel: No data.
Albendazole: No data.
Abamectin: LC₅₀ (96h): 0.0036 mg/L, LOEC (chronic): 0.0000093 mg/L.

Crustacea

Levamisole hydrochloride: No data.

Closantel: No data.

Albendazole: No data.

Abamectin: EC₅₀ (48h): 0.00034 mg/L, NOEC (21 days): 0.00003 mg/L.

Algae and other aquatic plants

Levamisole hydrochloride: No data.

Closantel: No data.

Albendazole: No data.

Abamectin: EC₅₀ (96h): 7.3 – 9.9 mg/L.

Dung beetles

Abamectin is highly toxic to dung beetle larvae, with adult emergence reduced by 55 to 65% from dung collected two and four weeks post-treatment respectively. Abamectin is not toxic to mature egg-laying adults at concentrations likely to be found in dung. However, there is increased mortality and impaired development of larvae with sub-lethal effects on the morphology of some species in dung voided within 2-3 weeks of treatment, and increased mortality and delayed reproductive development in newly emerged adults of some species feeding on dung voided within 1 to 2 weeks of treatment. Dung of treated animals is highly toxic to dipteran larvae, inhibiting development for periods of 2 to 8 weeks post-treatment. The duration of these toxic effects on dung insects is consistent with the profile of excretion of the substance in faeces. The substance is also toxic to earthworms (14 day LC₅₀ 33 mg/kg soil).

Bees

Abamectin: LD₅₀: 0.002 ug/bee.

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
Levamisole hydrochloride	HIGH	HIGH	LOW (LogKOW = 1.84)	LOW (KOC = 8652)
Closantel	HIGH	HIGH	LOW (LogKOW = 8.11)	LOW (KOC = 300200)
Albendazole	HIGH	HIGH	LOW (LogKOW = 3.14)	LOW (KOC = 1871)
Abamectin	No data	No data	No data	No data

Section 13: DISPOSAL INFORMATION

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

Container Disposal: Crush or puncture and bury in an approved landfill if an approved recycling system is not available.

Section 14: TRANSPORT INFORMATION

Dangerous Goods Classification: Not considered a Dangerous Good for land, sea and air transport.

Section 15: REGULATORY INFORMATION

Poison Schedule (SUSMP): S6

APVMA No.: 56573

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.

Section 16: OTHER INFORMATION

This information is based on data believed by Jurox Pty 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 Pty 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:

- AICS** Australian Inventory of Chemical Substances.
- APVMA** Australian Pesticides and Veterinary Medicines Authority.
- CAS No.** Chemical Abstracts Service Registry Number.
- CNS** Central nervous system.
- 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.
- GHS** Globally Harmonized System of Classification and Labelling of Chemicals.
- 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.
- LOEC** The Lowest Observed Effect Concentration, being the lowest concentration of a substance that produces a significant ecotoxic effect in an organism or organism population.
- NICNAS** National Industrial Chemicals Notification and Assessment Scheme.
- NOAEL** No-observed-adverse-effect-level. The level of exposure where there is no increase in the frequency or severity of any adverse effects in the exposed population when compared to its appropriate control.
- NOEC** No-observable-effect-concentration.
- PPE** Personal Protective Equipment.
- PVC** Polyvinyl chloride.
- SDS** Safety Data Sheet.
- STOT** Specific Target Organ Toxicity.
- SUSMP** Standard for the Uniform Scheduling of Medicines and Poisons.
- SWA** Safe Work Australia.

References:

ChemID Plus
 EPA New Zealand Chemical Classification and Information Database (CCID)
 HSDB (Hazardous Substances Data Bank)

This version issued: 17 August 2018 and is valid for 5 years from this date.

Supersedes: This SDS supersedes the version issued on 31 January 2014.

Revision History:

Date of Revision	Reason
12 July 2018	Section 1: Inclusion of product identifier and company email address. Section 2: Update to GHS hazard classification to remove skin sensitization classification and include acute toxicity dermal and inhalation classifications. Section 11 and Section 12: Addition of toxicological data.

END OF SDS