
SAFETY DATA SHEET

Section 1: IDENTIFICATION of CHEMICAL PRODUCT and COMPANY

Product Name:	Lice 'N' Simple Pour-On Equine Lousicide
Product Identifier:	25 g/L triflumuron pour-on lousicide
Product Code:	504070 (100 mL x 6)
Recommended Use:	A pour-on solution for the control of lice on horses.
Restrictions on Use:	For animal treatment only
Company Identification:	Jurox Pty Limited
Address:	85 Gardiner Street, Rutherford, NSW 2320, Australia
Customer Centre:	1800 023 312
Email:	customerservice@jurox.com.au
National Poisons Information Centre:	13 1126 (24 hours)
Emergency Telephone Number:	1800 023 312 (9am – 5pm, Monday to Friday)

Section 2: HAZARDS IDENTIFICATION

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

GHS Category	Hazard code	Hazard Statement
Flammable Liquid Category 4	H227	Combustible liquid.
Skin Corrosion/Irritation Category 2	H315	Causes skin irritation.
Eye Irritation Category 2A	H319	Causes serious eye irritation.
Reproductive Toxicity Category 1B	H360	May damage fertility or the unborn child.
Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation)	H335	May cause respiratory irritation.
Specific target organ toxicity - single exposure Category 3 (narcotic effects)	H336	May cause drowsiness or dizziness.
Acute Aquatic Hazard Category 2	H401	Toxic to aquatic life.

GHS Label Elements:

Signal word:

DANGER

Pictograms:



**Exclamation
mark**



**Health
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.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P370+P378 In case of fire: Use water spray or fog, foam, dry chemical powder or carbon dioxide to extinguish.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash before reuse.
P305+P351+ P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTRE or doctor/physician if you feel unwell.

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
Triflumuron	64628-44-0	< 10%
N-methyl-2-pyrrolidone	872-50-4	20 - 30%
Dipropylene glycol monomethyl ether	34590-94-8	> 60%
Ingredients not contributing to the hazards		< 10%

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.

Inhalation: 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. Rinse mouth. Keep subject warm and at rest. For advice, contact a doctor or the National Poisons Centre on 13 1126.

Skin: If skin contact occurs, wash affected area thoroughly with plenty of soap and water for at least 20 minutes. If skin irritation or rash occurs, get medical advice. Remove and wash/dispose of contaminated clothing promptly.

Eye: If eye contact occurs, rinse cautiously with water for at least 20 minutes. Continue rinsing. If eye irritation persists, get medical advice/attention.

Chronic: There is limited evidence that skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

Advice to Doctor: No specific antidote. Treat symptomatically. Triflumuron is a chitin inhibitor and of low oral toxicity to mammals. Effects of solvent ingestion or aspiration are likely to be a more important consideration. 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.

Section 5: FIRE FIGHTING MEASURES

Flash Point: 88°C (combustible).

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

Extinguishing Media: Water spray or fog, Foam, Dry chemical powder, Carbon dioxide.

Protective Equipment: Gas-tight chemical resistant suit, protective gloves and breathing apparatus.

HAZCHEM Code: None specified

Section 6: ACCIDENTAL RELEASE MEASURES

Spills and Disposal: Wear appropriate protective clothing. For small spills, wash area well with excess water. For large spills, exclude non-essential people from the area. Contain spill and 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 complete. Dispose of waste safely in an approved landfill.

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

Environmental Precautions: Prevent from entering drains, waterways or sewers. If contamination of drains and waterways occurs, advise local authority.

Section 7: HANDLING AND STORAGE

Handling: Read safety directions before opening or using. Avoid contact with skin, eyes and inhalation of vapours. Do not eat, drink or smoke while handling the product. After use and before eating, drinking or smoking wash hands, arms and face thoroughly with soap and water.

Storage: Keep out of reach of children. Store below 30°C (room temperature). Store in original container tightly closed in a dry, cool place. DO NOT store in direct sunlight. Keep away from flames and hot surfaces. DO NOT re-use the container. Store away from foodstuffs.

Other Information: Always read the label before use. See label for further information on handling and storage. Avoid contact with incompatible substances as listed in Section 10.

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:

Occupational Exposure Limits (OEL)

SOURCE	INGREDIENT	TWA	STEL
Australian Exposure Standards	Dipropylene glycol monomethyl ether	308 mg/m ³ / 50 ppm	Not available
Australian Exposure Standards	N-methyl-2-pyrrolidone	103 mg/m ³ / 25 ppm	309 mg/m ³ / 75 ppm

Emergency Limits

INGREDIENT	TEEL-1	TEEL-2	TEEL-3
Dipropylene glycol monomethyl ether	150 ppm	1700 ppm	9900 ppm
N-methyl-2-pyrrolidone	30 ppm	32 ppm	190 ppm

INGREDIENT	Original IDHL	Revised IDHL
Dipropylene glycol monomethyl ether	600 ppm	Not available
N-methyl-2-pyrrolidone	Not available	Not available

Engineering Controls: Handle in a well-ventilated area.

Personal Protective Equipment (PPE):

Eye protection: Safety glasses with eye side shields or chemical goggles.

Skin protection: Chemical protective gloves, e.g. PVC.
Safety footwear or safety gumboots, e.g. rubber.

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

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear colourless to pale yellow liquid.	Lower flammability limits:	Not available
Odour:	Not available	Vapour Pressure:	Not available
Odour threshold:	Not available	Vapour density:	Not available
pH:	5.0 – 7.0.	Relative density:	Not applicable
Melting Point:	Not available	Specific Gravity:	0.95 – 1.00.
Boiling Point:	Not available	Solubility in Water:	Miscible with water
Flash Point:	88°C.	Partition coefficient:	Not available
Evaporation Rate:	Not available	Auto-ignition temperature:	Not available
Flammability:	Combustible.	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 monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x).

Section 11: TOXICOLOGICAL INFORMATION**Acute Toxicity:**

Ingestion: 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 oral route. Dipropylene monomethyl ether (DPME) produces marked central nervous system depression in rats. Lethal doses produced failure of breathing within 48 hours.

Triflumuron: Oral LD₅₀; >5000 mg/kg (rat).

Dipropylene glycol monomethyl ether: Oral LD₅₀; 5135 mg/kg (rat), 7500 mg/kg (dog).

N-methyl-2-pyrrolidone: Oral LD₅₀; 3914 mg/kg (rat), 3500 mg/kg (rabbit).

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. Dipropylene glycol monomethyl ether (DPME) may cause drowsiness from which rapid recovery occurs, and in few cases brain and nerve impairment. Acute effects from inhalation of high vapour concentrations may be chest and nasal irritation with coughing, sneezing, headache and even nausea.

Triflumuron: Inhalation (rat) LC₅₀: >0.12 mg/l/4h.

Dipropylene glycol monomethyl ether: No data.

N-methyl-2-pyrrolidone: Inhalation (rat) LC₅₀: 8300 ppm/4hr, LCLo: 1000 mg/m³.

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.

Triflumuron: Dermal LD₅₀: No data available.

Dipropylene glycol monomethyl ether: Dermal LD₅₀; > 19020 mg/kg (rat).

N-methyl-2-pyrrolidone: Dermal LD₅₀ > 5000 mg/kg (rat), 8000 mg/kg (rabbit).

Aspiration hazard: No data available.

Respiratory Irritation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a respiratory irritant. Dipropylene glycol monomethyl ether may cause respiratory irritation in some persons. Acute effects from inhalation of high vapour concentrations of dipropylene glycol monomethyl ether may be chest and nasal irritation with coughing, sneezing, headache and even nausea.

Skin Corrosion/Irritation: Based on available data for the ingredients, the mixture is classified as a **Skin Corrosion/Irritation Category 2**. The material may cause mild but significant inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering. Continuous skin contact with dipropylene glycol monomethyl ether (DPME) may cause scaly skin. Testing on animals has shown that absorption through the skin may cause drowsiness, stomach distension and irritation as well as kidney damage, and high doses may be lethal. Prolonged contact with N-methyl-2-pyrrolidone (NMP) reportedly causes severe irritation and dermatitis with redness, cracking, swelling, blisters and oedema. Latex gloves are not sufficiently protective.

Serious Eye Damage / Irritation: Based on available data for the ingredients, the mixture is classified as **Eye Irritation Category 2A**. Undiluted dipropylene glycol monomethyl ether (DPME) may cause eye irritation with redness, pain and sometimes physical injury. These are reversible and there is no permanent damage. Direct contact with liquid N-methyl-2-pyrrolidone (NMP) may produce painful burning or stinging of the eyes and lids, watering and inflammation of the conjunctiva and temporary clouding of the cornea.

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 respiratory or skin 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.

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: Based on available data for the ingredients, the mixture is classified as a **Reproductive Toxicant Category 1B**. Reproductive and developmental studies in animals exposed to

N-methyl-2-pyrrolidone showed effects including reduced male and female fertility and reduced mean offspring weight at birth and through lactation, resorptions, malformations, reduced litter size and reduced postnatal survival. In animals, reproductive effects have been reported following exposure to N-methyl-2-pyrrolidone (NMP) and very high doses are toxic to the embryo. Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by human exposure to the N-methyl-2-pyrrolidone (NMP).

Specific Target Organ Toxicity (STOT): Single exposure: Based on available data for the ingredients, the mixture is classified as **Specific target organ toxicity - single exposure Category 3 - May cause respiratory irritation and may cause drowsiness or dizziness**. Dipropylene glycol monomethyl ether (DPME) is a respiratory irritant and has narcotic effects. N-methyl-2-pyrrolidone (NMP) is known to be a respiratory irritant. Triflumuron has been shown to have effects on the haemopoietic system in rats.

Specific Target Organ Toxicity (STOT): Repeat exposure: Based on available data for the ingredients, the mixture is not considered to be a specific target organ toxicant by repeat exposure. Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems.

Narcotic Effects: Due to the presence of dipropylene glycol monomethyl ether (DPME), this mixture may cause drowsiness or dizziness.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Based on available data for the ingredients, the mixture is classified as **Acute Aquatic Hazard Category 2**. Triflumuron is very toxic in the aquatic environment.

Fish

Triflumuron: No data

Dipropylene glycol monomethyl ether: Fish LC₅₀ (96 h): > 1930 mg/L.

N-methyl-2-pyrrolidone: Fish LC₅₀ (96 h) 464 mg/L

Crustacea

Triflumuron: Daphnia EC₅₀ (48 h) 0.225 mg/L

Dipropylene glycol monomethyl ether: Crustacea EC₅₀ (48 h): 1930 mg/L.

N-methyl-2-pyrrolidone: Crustacea EC₅₀ (48 h): ~ 4897 mg/L, NOEC (504 h): 12.5 mg/L.

Algae and other aquatic plants

Triflumuron: No data.

Dipropylene glycol monomethyl ether: Algae or other aquatic plants EC₅₀ (72 h): > 969 mg/L;

NOEC (72 h): 969 mg/L.

N-methyl-2-pyrrolidone: Algae or other aquatic plants EC₅₀ (72 h): >.500.mg/L, EC₉₀ (72 h): >.500.mg/L.

Triflumuron is toxic to bees.

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
Triflumuron	HIGH	HIGH	MED (LogKOW = 4.24)	LOW (KOC = 1146)
Dipropylene glycol monomethyl ether	HIGH	HIGH	LOW (BCF = 100)	LOW (KOC = 10)
N-methyl-2-pyrrolidone	LOW	LOW	LOW (BCF = 0.16)	LOW (KOC = 20.94)

Section 13: DISPOSAL INFORMATION

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

Container Disposal: Wrap with paper and place in garbage

Section 14: TRANSPORT INFORMATION

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

Hazchem Code: None specified.

Section 15: REGULATORY INFORMATION

Poison Schedule (SUSMP): S5

APVMA No.: 61009

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

SUSMP: Triflumuron and N-methyl-2-pyrrolidone are mentioned in SUSMP.

Section 16: OTHER INFORMATION**Legend:**

ADG	Australian Code for the Transport of Dangerous Goods by Road & Rail, 7 th Edition.
AICS	Australian Inventory of Chemical Substances.
APVMA	Australian Pesticides and Veterinary Medicines Authority.
BCF	Bioconcentration factor. The ratio of the concentration of a substance in an aquatic organism to the concentration of the substance in the surrounding water.
CAS No.	Chemical Abstracts Service Registry Number.
CNS	Central nervous system.
DPME	Dipropylene glycol monomethyl ether.
EC	European Commission.
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.
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters.
IDHL	Immediately Dangerous to Life or Health. An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.
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.
LCLo	Lethal Concentration Low. The lowest published lethal concentration.
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.
NICNAS	National Industrial Chemicals Notification and Assessment Scheme.
NOEC	No-observable-effect-concentration.
NMP	N-methyl-2-pyrrolidone
PPE	Personal Protective Equipment.
PVC	Polyvinyl Chloride.
SDS	Safety Data Sheet.
STEL	Short term exposure limit.
STOT	Specific Target Organ Toxicity.
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons.
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.
TWA	Time-Weighted Average. The average exposure over a specified period, usually a nominal eight hours.

References

ChemIDPlus

HSDB (Hazardous Substances Data Bank)

EPA New Zealand Chemical Classification and Information Database (CCID)

VSDB (Veterinary Substances Database)

This version issued: 20 June 2018 and is valid for 5 years from this date.

Supersedes: This SDS supersedes the version issued on 28 August 2017.

Revision History:

Date of Revision	Reason
28 August 2017	Updates to section 1, 2, 3, 4, 11, 12, 13 & 15; Updates to Legend and addition of Revision History in Section 16.
## May 2018	Updates to sections 1, 2, 3, 4, 7, 8, 10, 11, 12 & 14. Updates to Legend. Addition of toxicological data for dipropylene glycol monomethyl ether. Addition of OELs and Emergency Limits in Section 8.

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.

END OF SDS