Section 1: IDENTIFICATION of CHEMICAL PRODUCT and COMPANY

Product Name: **Oztik Pour-On Tick Inhibitor for Cattle**

Product Identifier: 25 g/L fluazuron solution containing 415 g/L 1-methyl-2-pyrrolidone, 100 g/L 1-dodecyl-2-pyrrolidone, 100 g/L 1-octyl-2-pyrrolidone.

Recommended Use: A pour-on solution for the control of ticks on cattle.

Restrictions on Use: For animal treatment only.

Company Identification: Jurox Pty Limited (part of Zoetis)

Address: 85 Gardiner Street,
Rutherford, NSW 2320,
Australia

Email: customerservice@jurox.com.au

Customer Service: 1800 022 442 (Mon-Fri, 8:00am – 6:00pm AEST)

National Poisons Information Centre: 13 11 26 (24 hours)

Emergency Telephone Number: 1800 814 883 (all hours)

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
Flammable Liquid Category 4	H227	Combustible liquid.
Metal Corrosion Category 1	H290	May be corrosive to metals.
Skin Corrosion/Irritation Category 1B	H314	Causes severe skin burns and eye damage.
Serious Eye Damage Category 1	H318	Causes serious eye damage.
Skin Sensitizer Category 1	H317	May cause an allergic skin reaction.
Chronic Aquatic Hazard Category 1	H410	Very toxic to aquatic life with long lasting effects.

GHS Pictograms:

Corrosive

Exclamation mark

Aquatic pollutant

Signal Word: **Danger**

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.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P234	Keep only in original packaging.
P260	Do not breathe vapours/mists.
P264	Wash hands thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves, protective clothing and eye protection.
P273	Avoid release to the environment.

Response

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
P333+P313	If skin irritation or rash occurs: Get medical advice.
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.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.
P390	Absorb spillage to prevent material-damage.
P391	Collect spillage.

Storage

P403	Store in a well-ventilated place.
P405	Store locked up.

Disposal

P501	Dispose of contents / container in accordance with label directions.

N.B.: These 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
N-methyl-2-pyrrolidone	872-50-4	41.5%
N-(N-dodecyl)-2-pyrrolidone	2687-96-9	10.0%
N-(N-octyl)-2-pyrrolidone	2687-94-7	10.0%
Fluazuron	86811-58-7	2.5%
Ingredients not contributing to the hazards	-	36%

Section 4: FIRST AID MEASURES

General Information: Consult the National Poisons Centre on 13 11 26 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: Ingestion is likely to cause smarting and burning sensations, inflammation, burns and painful blisters of the mouth, throat and digestive tract. Exposure by inhalation is unlikely but the effects would be irritation of mucous membranes, nose, eyes and throat, coughing and difficulty in breathing. Based on tests with the components, the product is likely to cause a smarting and burning sensation on skin or eye contact. These symptoms could extend to inflammation, burns and/or painful burns on the skin. Eye contact could result in painful stinging of the eyes and lids, watering of the eyes, conjunctivitis, opaqueness of cornea and possibly to loss of sight.

Inhalation: May irritate the nose and throat if inhaled. 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: May produce chemical burns within the oral cavity and gastrointestinal tract if swallowed. Seek medical assistance immediately. If swallowed, DO NOT induce vomiting. Rinse mouth. Keep subject warm and at rest. For advice, contact the National Poisons Centre on 13 11 26 or a doctor. Urgent hospitalization may be needed.

Skin: If skin contact occurs, immediately flush body and clothes with large amounts of water, using safety shower if available. Wash skin and hair thoroughly with plenty of soap and water for at least 20 minutes or until advised to stop by the Poisons Information Centre. Transport to hospital or a doctor.

Eye: May produce chemical burns to the eye following direct contact. Vapours may be extremely irritating. If eye contact occurs, rinse cautiously with water for at least 20 minutes or advised to stop by the Poisons Information Centre or a doctor. Transport to hospital or a doctor.

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

Advice to Doctor: Treat as for corrosives.

Section 5: FIRE FIGHTING MEASURES

Flash Point: No data for mixture. Flashpoint for N-methyl-2-pyrrolidone is 92°C.

Hazardous Combustion Products: Combustible**.** Slight fire hazard when exposed to heat or flame. If involved in a fire, may emit noxious and corrosive fumes.

Extinguishing Media: Use dry chemical powder, BCF (where regulations permit) and carbon dioxide. Do not use water jet as an extinguisher, as this will spread the fire.

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

HAZCHEM Code: 2X

Section 6: ACCIDENTAL RELEASE MEASURES

Spills and Disposal: Slippery when spilt. Wear appropriate protective clothing. Exclude non-essential people from the area and move upwind. Contain spill and absorb with inert material such as soil, sand or absorbent granules and place in a sealable waste container. Neutralise residue. Ventilate area and wash spill site after pick-up complete. Dispose of waste safely in an approved landfill. For large spills, alert Fire Brigade and tell them location and nature of hazard.

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: Keep out of reach of children. Read safety directions before opening or using. Avoid contact with skin, eyes and inhalation of vapours. Avoid contact with clothing. Use personal protective equipment as required – see label. Do not eat, drink or smoke while handling 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 30ºC, tightly closed in a safe place, out of direct sunlight. Store in original container.

Other Information: Always read the label before use. See label for further information on handling and storage.

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)

Ingredient	TWA	STEL
N-methyl-2-pyrrolidone	25 ppm / 103 mg/m^3	309 mg/m^3 / 75 ppm

EMERGENCY LIMITS

Ingredient	TEEL-1	TEEL-2	TEEL-3
N-methyl-2-pyrrolidone	30 ppm	32 ppm	190 ppm

Engineering Controls: Handle in a well-ventilated area.

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.

Other: For the bulk product, overalls, PVC apron or protective suit. Have eyewash unit at hand. Ensure there is ready access to a safety shower.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, light yellow liquid	**Vapour Pressure:**	100 kPa
Odour:	Not available	**Vapour density:**	Not available
Odour threshold:	Not available	**Relative density:**	Not applicable
pH:	Not available	**Specific Gravity:**	1.04 – 1.05
Melting Point:	Not available	**Solubility in Water:**	Soluble
Boiling Point:	Not available	**Partition coefficient:**	Not applicable
Flash Point:	92°C	**Auto-ignition temperature:**	Not available
Evaporation Rate:	Not available		
Flammability:	Combustible	**Decomposition temperature:**	Not available
Upper flammability limits:	Not available	**Viscosity:**	Not available
Lower flammability limits:	Not available		

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: No data available.

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.

N-methyl-2-pyrrolidone: Oral (rat) LD_{50}: 3914 mg/kg, Oral (mouse) LD_{50}: 5130 mg/kg;
N-(N-dodecyl)-2-pyrrolidone: Oral (rat) LD_{50}: 2050 mg/kg, LDLo 5000 mg/kg;
N-(N-octyl)-2-pyrrolidone: Oral (rat) LD_{50}: 2050 mg/kg;
Fluazuron: Oral (rat) LD_{50}: >5000 mg/kg.

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.

N-methyl-2-pyrrolidone: Inhalation (rat) LC_{50}: 8291 mg/l/4H, LCLo: 1g/m^3;
N-(N-dodecyl)-2-pyrrolidone: No data;
N-(N-octyl)-2-pyrrolidone: No data;
Fluazuron: Inhalation (rat) LC_{50}: > 5.994 mg/l/4h.

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.

N-methyl-2-pyrrolidone: Dermal (rat) LD_{50}: 2500 - 5000 mg/kg;
N-(N-dodecyl)-2-pyrrolidone: Dermal (rabbit) LD_{50}: > 2000 mg/kg;
N-(N-octyl)-2-pyrrolidone: Dermal (rat) LD_{50}: > 4000 mg/kg;
Fluazuron: Dermal (rat) LD_{50}: > 2000 mg/kg.

Skin corrosion / Irritation: No data for the mixture is available. Based on available data for the ingredients, the mixture is classified as **Skin Corrosion/Irritation Category 1B**. N-methyl-2-pyrrolidone, N-(N-dodecyl)-2-pyrrolidone and N-(N-octyl)-2-pyrrolidone are severely irritating to the skin.

Serious eye damage / Irritation: No data for the mixture is available. Based on available data for the ingredients, the mixture is classified as **Serious Eye Damage Category 1**. N-methyl-2-pyrrolidone and N-(N-dodecyl)-2-pyrrolidone cause serious eye damage.

Respiratory or Skin Sensitisation: No data for the mixture is available. Based on available data for the ingredients, the mixture is classified as **Skin Sensitizer Category 1**. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.

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: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a reproductive toxicant.

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.

STOT: Repeat exposure: No data for the mixture is available. Based on available data for the ingredients, the mixture is not classified as a specific target organ toxicant after repeat exposure.

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 considered to be a **Chronic Aquatic Hazard Category 1**.

Fish
N-methyl-2-pyrrolidone: LC_{50} (96 hr): 464 mg/L;
N-(N-dodecyl)-2-pyrrolidone: LC_{50} (96 hr): 0.149 mg/L;
N-(N-octyl)-2-pyrrolidone: LC_{50} (96 hr): 3.583 mg/L, NOEC (35 days): 0.91 mg/L;
Fluazuron: LC_{50} (96 hr): 0.046 mg/L.

Crustacea
N-methyl-2-pyrrolidone: EC_{50} (48 hr): ca.4897 mg/L, NOEC (21 days): 12.5 mg/L;
N-(N-dodecyl)-2-pyrrolidone: EC_{50} (48 hr): 0.139 mg/L;
N-(N-octyl)-2-pyrrolidone: EC_{50} (48 hr): 7.59 mg/L
Fluazuron: No data.

Algae and other aquatic plants
N-methyl-2-pyrrolidone: EC_{50} (72 hr): > 500 mg/L;
N-(N-dodecyl)-2-pyrrolidone: EC_{50} (96 hr): 0.053 mg/L;
N-(N-octyl)-2-pyrrolidone: EC_{50} (96 hr): 6.2 mg/L;
Fluazuron: No data.

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
N-methyl-2-pyrrolidone	LOW	LOW	LOW (BCF = 0.16)	LOW (KOC = 20.94)
N-(N-dodecyl)-2-pyrrolidone	LOW	LOW	MEDIUM (LogKOW = 4.2)	LOW (KOC = 18430)
N-(N-octyl)-2-pyrrolidone	LOW	LOW	LOW (LogKOW = 3.33)	LOW (KOC = 1593)
Fluazuron	HIGH	HIGH	HIGH (LogKOW = 6.96)	LOW (KOC = 198100)

Section 13: DISPOSAL INFORMATION

Product Disposal: Dispose of product only by using according to APVMA-approved label or at an approved landfill. DO NOT burn product.

Container Disposal: Triple rinse containers with detergent and hot water before disposal. Dispose of rinsate in a disposal pit away from desirable plants and their roots and watercourses. Destroy empty containers by breaking, crushing or puncturing them. Dispose of containers at a local authority landfill that does not burn its refuse. If there is no local authority landfill readily available in the area, bury the containers at a depth of 500 mm or more at an approved disposal site. DO NOT burn empty containers.

Section 14: TRANSPORT INFORMATION

Dangerous Goods Classification: Not classed as a Dangerous Good for transport purposes by road, sea or air.

Section 15: REGULATORY INFORMATION

Poisons Schedule (SUSMP): S6

APVMA No.: 58799

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 do 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

ADG	Australian Code for the Transport of Dangerous Goods by Road & Rail, 7th 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.
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.
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.
LC_{50}	Lethal Concentration 50 - the concentration of a chemical which kills 50% of a sample population.
LD_{50}	The median lethal dose, being a statistically derived single dose of a substance that can be expected to cause death in 50% of animals.
LDLo	Lethal Dose Low. The lowest published lethal dose.
OEL	Occupational Exposure Standards.
PPE	Personal Protective Equipment.
PVC	Polyvinyl Chloride.
SDS	Safety Data Sheet.
STEL	Short Term Exposure Level.
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.

References

ChemIDPlus
HSDB (Hazardous Substance Data Bank)
EPA New Zealand Chemical Classification and Information Database (CCID)
VSDB (Veterinary Substances Database)

Revision History:

Date of Revision	Reason
14 September 2017	Updates to section 1, 2, 3, 5 & 11; Updates to Legend, and addition of Revision History in Section 16.
5 February 2019	Added product identifier to Section 1, added Metal Corrosion Category 1 classification to Section 2 and updated precautionary statements to reflect new classification. Added Hazchem code in Section 5. Added exposure limit data to Section 8.
01 March 2023	Minor revision to update to Zoetis Customer Service and emergency phone numbers.

END OF SDS