1. IDENTIFICATION OF SUBSTANCE & COMPANY

Product information

Product name	Tetravet Spray
Other names	NA
ACVM approval	A006892
HSNO approval	HSR100757
Approval description	Veterinary Medicine (Limited Pack Size, Finished Dose) Group Standard 2012
UN number	1986
Proper Shipping Name	ALCOHOL, FLAMMABLE, TOXIC, N.O.S. (contains methanol)
Packaging group	II (and exceptions)
Hazchem code	3WE
Uses	For the treatment and control of topical infections in all species except fibre producing animals.

Company Details

Company	**Bayer New Zealand Ltd**
Address	3 Argus Place, Hillcrest, Auckland 0627 New Zealand.
Telephone	0800 652 488
Facsimile	0800 229 838

Emergency Telephone Number: 0800 734 607

2. HAZARD IDENTIFICATION

Approval

This product has been approved under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR100757, Veterinary Medicine (Limited Pack Size, Finished Dose) Group Standard 2012), and is classified as follows:

Classes	Hazard Statements
3.1B	Highly flammable liquid and vapour.
6.1C (oral)	Toxic if swallowed.
6.1C (dermal)	Toxic in contact with skin.
6.1C (inhalation)	Toxic if inhaled.
6.4A	Causes eye irritation.
6.8B	Suspected of damaging fertility or the unborn child
6.9A	Causes damage to organs through prolonged or repeated exposure
9.1B	Toxic to aquatic life with long lasting effects.
9.3C	Harmful to terrestrial vertebrates.

SYMBOLS

DANGER



Other Classifications

ACVM registration number: A006892

There are no other Classifications that are known to apply.

Precautionary Statements

Keep out of reach of children.
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces ignition sources. No smoking.*
Keep container tightly closed*.
Ground/bond container and receiving equipment*.
Use explosion-proof electrical equipment*.
Use only non-sparking tools*.
Take precautionary measures against static discharge*.
Wear protective gloves/eye/face protection.
Read label before use.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Do not breathe vapours.
Use only outdoors or in a well-ventilated area.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Avoid release to the environment.
Collect spillage.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.

* These precautionary statements apply when a flammable zone is required to be established.
See Section 15 – Regulatory Information

Further precautionary statements can be found in Section 4 – First Aid.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS/ Identification	Concentration
Oxytetracycline hydrochloride	2058-46-0	25.0g/L
Gentian violet	548-62-9	2.0g/L
Methanol	67-56-1	balance

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

4. FIRST AID

General Information

You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service). If medical advice is needed, have product container or label at hand. IF exposed or concerned: Get medical advice.

Recommended first aid facilities Ready access to running water is required. Accessible eyewash is required.

Exposure

Swallowed IF SWALLOWED: Immediately call a doctor. Rinse mouth.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Apply continuous irrigation with water for at least 15 minutes holding eyelids apart. If eye irritation persists: Get medical advice.

Skin contact IF ON SKIN: Gently wash with plenty of soap and water. Immediately call a doctor. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

Inhaled IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a doctor.
If coughing, dizziness or shortness of breath is experienced, remove the patient to fresh air immediately. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor.

Advice to Doctor

Treat symptomatically

5. FIREFIGHTING MEASURES

Fire and explosion hazards:	Vapours may form an explosive mixture in air which can be ignited by many sources such as pilot lights, open flames, electrical motors, switches and static electricity.
Suitable extinguishing substances:	Carbon dioxide, extinguishing powder, foam.
Unsuitable extinguishing substances:	Unknown.
Products of combustion:	Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
Protective equipment:	Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.
Hazchem code:	3WE

6. ACCIDENTAL RELEASE MEASURES

Containment	If greater than 1000L is stored, secondary containment and emergency plans to manage any potential spills must be in place.In all cases design storage to prevent discharge to stormwater.
Emergency procedures	In the event of spillage alert the fire brigade to location and give brief description of hazard. Stop the source of the leak, if safe to do so. Shut off all possible sources of ignition. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Do not use sawdust on concentrate. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).
Clean-up method	Use absorbent (soil, sand or other inert material). Rags are not recommended for the clean-up of spills, as they may create fire or environmental hazard. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.
Disposal	Mop up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
Precautions	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation.

7. STORAGE & HANDLING

Storage	Avoid storage of harmful substances with food. Store out of reach of children. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames. Avoid contact with incompatible substances as listed in Section 10.
Handling	Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements. Avoid skin and eye contact and inhalation of vapour, mist or aerosols.

8. EXPOSURE CONTROLS / PERSONAL PROTECTIVE EQUIPMENT

Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by the NZ Department of Labour for this product. There is a general limit of 10mg/m^3 for dusts and mists when limits have not otherwise been established.

	Ingredient	WES-TWA	WES-STEL
NZ Workplace Exposure Stds (OSH – 2013)	Methanol	200ppm, 262mg/m^3	250ppm, 328mg/m^3

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety in Employment Act 1992 (HSE). Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

Eyes



To protect eyes, it is required that goggles, safety glasses or full face mask be worn. Avoid wearing contact lenses.

Skin



Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves. Nitrile gloves are recommended. Neoprene and Latex gloves provide fair to limited protection and can be used for short term use. Replace frequently. Gloves should be checked for tears or holes before use. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking. Wash hands after handling.





Respiratory



A respirator with an organic vapour cartridge when airborne concentrations approach the WES (section 8) should be used. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order.
Supplied Air respirator should be considered in the event of excessive exposure (e.g. higher than WES).

WES Additional Information

Not applicable

9. PHYSICAL & CHEMICAL PROPERTIES

Appearance	clear, bright blue solution
Odour	wood alcohol odour (methanol)
pH	neutral
Vapour pressure	98mmHg (property of methanol)
Viscosity	no data
Boiling point	~64°C (for methanol)
Volatile materials	97.3%
Freezing / melting point	no data
Solubility	soluble in water
Specific gravity / density	0.8 (water = 1)
Flash point	12°C (methanol)
Danger of explosion	not explosive
Auto-ignition temperature	no data
Upper & lower flammable limits	For methanol: LEL: 6%, UEL: 36.5%
Corrosiveness	non corrosive

10. STABILITY & REACTIVITY

Stability	Stable
Conditions to be avoided	Flammable substance. Keep away from sources of ignition at all times. Containers should be kept closed in order to avoid contamination.
Incompatible groups	Avoid contact with strong oxidisers, strong alkalies and strong mineral acids.
Substance Specific Incompatibility	none known
Hazardous decomposition products	Carbon dioxide, carbon monoxide, various hydrocarbons and nitrogen oxides.
Hazardous reactions	none known

11. TOXICOLOGICAL INFORMATION

Summary

IF SWALLOWED: may cause gastrointestinal irritation with pain, fatigue, nausea, vomiting. May affect the CNS (similar to ethanol), brain, blood, metabolism, respiration, liver, kidneys. May cause metabolic acidosis and affect the eyes (visual disturbances including blindness)

IF IN EYES: slight to moderate irritation may occur.

IF ON SKIN: non irritating, however methanol can beabsorbed through the skin producing toxic effects including visual disturbances. Prolonged or repeated skin contact may cause defatting or dryness of the skin.

IF INHALED: high vapour concentrations may irritate the respiratory tract. Vapours may affect behaviour and the nervous system, gastrointestinal tract, respiration and lungs, blood and heart. Inhalation may cause metabolic acidosis and severe visual effect which may lead to blindness.

CHRONIC: Prolonged or repeated exposure may have similar symptong as those of inhalation or ingestion. Methanol may accumulate in the body.

Supporting Data

Acute	**Oral**	This mixture is considered toxic if swallowed based on the toxicity of methanol. Data considered includes: oxytetracycline hydrochloride 3883mg/kg (mouse), gentian violet 96mg/kg (mouse), Methanol LD_{50} (oral): 870mg/kg (mouse), 5628mg/kg (rat), 300mg/kg (human).
	Dermal	Methanol is considered to be toxic by dermal contact by EPA and international agencies. Methanol LD_{50} (dermal): 15800mg/kg (rabbit), 393 mg/kg bw (primates).
	Inhaled	Methanol is considered to be toxic if inhaled by EPA and international agencies. Data considered includes: Methanol LC_{50} (inhalation): 64000ppm/4H (rat), 52mg/L/4h (monkey).
	Eye	The mixture is considered to be an eye irritant. Methanol is considered to be an eye irritant. .
	Skin	The mixture is not considered to be a skin irritant.
Chronic	**Sensitisation**	No ingredient present at concentrations > 0.1% is considered a sensitizer.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No ingredient present at concentrations > 0.1% is considered a carcinogen.
	Reproductive / Developmental	The mixture is classed by EPA as a suspected reproductive or developmental toxicant. Methanol present in greater than 0.1% is suspected to be a reproductive or developmental toxicant and is classed as 6.8B. Animal studies have shown that exposure to methanol may affect offspring, e.g. increased fetal deaths, reduced fetal weight and fetal malformations.
	Systemic	The mixture is considered to be a known or presumed target organ toxicant, because at least one of the ingredients present in greater than 1% is known or presumed to be a target organ toxicant. Chronic overexposure to methanol may cause eye damage in humans.
	Aggravation of existing conditions	None known.

12. ECOLOGICAL DATA

Summary

This mixture is considered ecotoxic in the aquatic environment and harmful to terrestrial vertebrates.

Supporting Data

Aquatic	Using EC_{50}'s for ingredients, the calculated EC_{50} for the mixture is between 1 mg/L and 10 mg/L and at least one of the components is either bioaccumulative or persistent in the aquatic environment. Data considered includes: Oxytetracycline: 0.207mg/L (72hr, Microcystis aeruginosa), 61.1 mg/l (48hr, Penaeus vannamei (Whiteleg shrimp)), Gentian violet 0.1mg/L (48hr, Oryzias latipes (fish)), 1mg/L (48hr, Penaeus monodon (Jumbo tiger prawn)), 2mg/L (24hr, Blue-green algae).
Bioaccumulation	No data
Degradability	No data
Soil	EPA has not classified the mixture as ecotoxic in the soil environment.
Terrestrial vertebrate	The mixture has been classified by EPA as harmful to terrestrial vertebrates. Using LD_{50}'s for ingredients, the calculated LD_{50} (oral, rat) for the mixture is between 500 and 2,000 mg/kg. See acute toxicity above.
Terrestrial invertebrate	No evidence of toxicity towards terrestrial invertebrates.
Biocidal	no data
Environmental effect levels	No EELs are available for this mixture or ingredients

13. DISPOSAL CONSIDERATIONS

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
Contaminated packaging	Rinse containers with water before disposal. Preferably re-cycle container, otherwise send to landfill or similar.

14. TRANSPORT INFORMATION

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a hazardous substance for transport.

UN number:	1986	**Proper shipping name:**	ALCOHOL, FLAMMABLE, TOXIC, N.O.S. (contains methanol)
Class(es):	3	**Packing group:**	II (and exceptions)
Precautions:	Flammable, Toxic Ecotoxic	**Hazchem code:**	3WE

15. REGULATORY INFORMATION

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR100757, Veterinary Medicine (Limited Pack Size, Finished Dose) Group Standard 2012.

Specific Workplace Controls (as per HSNO approval referenced to Controls Matrix)

Key workplace requirements are:	
SDS	To be available within 10 minutes in workplaces storing > any quantity.
Labelling	No removal of labels and/or decanting of product into other containers can occur.
Emergency plan	Required if > 1000L is stored.
Approved handler	Required if > 500L is handled or stored.
Tracking	Not required.
Bunding & secondary containment	Required if > 1000L is stored.
Signage	Required if > 250L is stored.
Location test certificate	Required if > 250 L (closed containers) or >50 L (open containers) is stored in any one location.
Flammable zone	Must be established if > 100 L (closed containers) 25 L (decanting) 5 L (open occasionally) 1 L (open containers in continuous use) is stored in any one location.
Fire extinguisher	If > 250 L present.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health, Safety in Employment Act and Regulations, local Council Rules and Regional Council Plans.

ACVM registration number: A006892

16. OTHER INFORMATION

Abbreviations

Approval Code	Approval HSR100757, Veterinary Medicine (Limited Pack Size, Finished Dose) Group Standard 2012 Controls, EPA. www.epa.govt.nz
ACVM	Agricultural Compounds and Veterinary Medicines
ARTG	Australian Register of Therapeutic Goods
CAS Number	Unique Chemical Abstracts Service Registry Number
Ceiling	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
Controls Matrix	List of default controls linking regulation numbers to Matrix code (e.g. T1, I16).
EC_{50}	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
ERMA	Environmental Risk Management Authority (now EPA)
EPA	Environmental Protection Agency (previously known as ERMA)
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD_{50}	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC_{50}	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
MBIE	Ministry of Business, Innovation and Employment (NZ)
MSDS (SDS)	Material Safety Data Sheet (or Safety Data Sheet)
STEL	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
WES	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed.

References

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID) http://www.epa.govt.nz/hs/compliance/chemicals.html for specific chemicals.
EPA Transfer Gazettes	Classifications and controls assigned for specific ingredients (consolidated gazette, 2004)
Controls Matrix	Part of the EPA New Zealand User Guide to the HSNO Control Regulations
WES 2013	The NZ Workplace Exposure Standards Effective from 2013, published by MBIE and available on their web site – www.osh.dol.govt.nz.
Other References:	Suppliers SDS

Review

Date	**Reason for review**
March 2013	Not applicable – new SDS
June 2015	Update of transport requirements

Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely HSNO classifications, are based on our experience, EPA Guidelines and international classifications. This SDS is copyright Datachem and must not be edited without the permission of the copyright holder or used for other than intended purpose. To contact the SDS author, email info@datachem.co.nz or phone: ***(09) 940 30 80.***