

SAFETY DATA SHEET



1. Identification

Product identifier	DiroCHEK®
Other means of identification	
Synonyms	DiroCHEK® Canine heartworm antigen test kit
Recommended use of the chemical and restrictions on use	
Recommended use	Veterinary product used as diagnostic aid
Restrictions on use	Not for human use
Details of manufacturer or importer	
Company Name (AU)	Zoetis Australia Pty Ltd ABN 94 156 476 425 Level 6, 5 Rider Boulevard Rhodes NSW 2138 AUSTRALIA
Tel	1800 814 883
Fax	(02) 8876 0444
Email	productsupport.au@zoetis.com
Emergency Phone	1800 814 883 (all hours)
Police and Fire Brigade	Dial 000
If ineffective	Dial Poisons Information Centre (13 1126 from anywhere in Australia)

2. Hazard(s) identification

Classification of the hazardous chemical

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Reproductive toxicity (the unborn child)	Category 1B
	Specific target organ toxicity following single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity following repeated exposure	Category 2 (kidney, liver)
Environmental hazards	Not classified.	

Label elements, including precautionary statements

Hazard symbol(s)



Health hazard

Exclamation mark

Signal word

Danger

Hazard statement(s)

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May damage the unborn child. May cause damage to organs (kidney, liver) through prolonged or repeated exposure.

Precautionary statement(s)

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapour. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear eye protection/face protection. Wear protective gloves. Use personal protective equipment as required.

Response	IF exposed or concerned: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor/physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards which do not result in classification	None known.
Supplemental information	Handle as potentially infectious.

3. Composition/information on ingredients

Mixture

Identity of chemical ingredients	CAS number and other unique identifiers	Concentration of ingredients (%)
1,2-propylene Carbonate	108-32-7	5-10
N-methyl-2-pyrrolidone	872-50-4	5-10
2,2-oxybisethanol diethylene glycol	111-46-6	1-5

Other components below reportable levels.

4. First-aid measures

Description of necessary first aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist. For breathing difficulties, oxygen may be necessary.
Skin contact	Wash off with soap and plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Remove contact lenses, if present and easy to do. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Ingestion	Rinse mouth. Call a physician or poison control centre immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.
Personal protection for first-aid responders	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. For personal protection, see section 8 of the SDS.
Symptoms caused by exposure	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Oedema. Jaundice. Prolonged exposure may cause chronic effects.
Medical attention and special treatment	Provide general supportive measures and treat symptomatically. Symptoms may be delayed.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for fire fighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Hazchem code None.

General fire hazards No unusual fire or explosion hazards noted.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained.
For emergency responders	Keep unnecessary personnel away. Ensure adequate ventilation. Wear appropriate protective equipment and clothing during clean-up. Handle as potentially infectious. Do not breathe mist or vapour. Avoid contact with eyes, skin, and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Methods and materials for containment and cleaning up Ensure adequate ventilation. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Handle as potentially infectious. The standard biosafety practices for handling infectious materials should be followed. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Clean surface thoroughly to remove residual contamination.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling

Do not use in areas without adequate ventilation. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Handle as potentially infectious. The standard biosafety practices for handling infectious materials should be followed. Avoid breathing mist or vapour. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash thoroughly after handling. Avoid release to the environment. Do not empty into drains. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Store locked up. Store away from direct sunlight. Keep away from heat and sources of ignition. Keep tightly closed in a dry, cool and well-ventilated place. @ 2 - 7°C (36 - 45°F). Do not freeze. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls and personal protection

Control parameters Follow standard monitoring procedures.

Occupational exposure limits

Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)

Components	Type	Value
2,2-oxybisethanol diethylene glycol (CAS 111-46-6)	TWA	100 mg/m ³
		23 ppm
N-methyl-2-pyrrolidone (CAS 872-50-4)	STEL	309 mg/m ³
	TWA	75 ppm 103 mg/m ³ 25 ppm

Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

Components	Type	Value
2,2-oxybisethanol diethylene glycol (CAS 111-46-6)	TWA	100 mg/m ³
		23 ppm
N-methyl-2-pyrrolidone (CAS 872-50-4)	STEL	309 mg/m ³

Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

Components	Type	Value
		75 ppm
	TWA	103 mg/m ³
		25 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
2,2-oxybisethanol diethylene glycol (CAS 111-46-6)	TWA	101 mg/m ³
		23 ppm
N-methyl-2-pyrrolidone (CAS 872-50-4)	STEL	80 mg/m ³
		20 ppm
	TWA	40 mg/m ³
		10 ppm

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value	Form
1,2-propylene Carbonate (CAS 108-32-7)	TWA	8.5 mg/m ³	
		2 ppm	
2,2-oxybisethanol diethylene glycol (CAS 111-46-6)	TWA	44 mg/m ³	Vapour and aerosol.
		10 ppm	Vapour and aerosol.
N-methyl-2-pyrrolidone (CAS 872-50-4)	TWA	82 mg/m ³	Vapour and aerosol.
		20 ppm	Vapour and aerosol.

Biological limit values

Germany. TRGS 903, BAT List (Biological Limit Values)

Components	Value	Determinant	Specimen	Sampling Time
N-methyl-2-pyrrolidone (CAS 872-50-4)	150 mg/l	5-Hydroxy-N-methyl-2-pyrrolidone	Urine	*

* - For sampling details, please see the source document.

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
N-methyl-2-pyrrolidone (CAS 872-50-4)	100 mg/l	5-Hydroxy-N-methyl-2-pyrrolidone	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

Australia OELs: Skin designation

N-methyl-2-pyrrolidone (CAS 872-50-4) Can be absorbed through the skin.

Appropriate engineering controls Ensure adequate ventilation, especially in confined areas. General ventilation normally adequate. Provide eyewash station and safety shower.

Individual protection measures, for example personal protective equipment (PPE)

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other	Wear suitable protective clothing. Use protective clothing (uniforms, lab coats, disposable coveralls, etc.) in both production and laboratory areas.
Respiratory protection	No personal respiratory protective equipment normally required. In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Not applicable.
Hygiene measures	Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Liquid.
Colour	Not available.
Odour	Not available.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	> 93.0 °C (> 199.4 °F) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit – upper (%)	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other physical and chemical parameters	
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials. High temperatures. Sunlight. Keep away from heat, spark, open flames and other sources of ignition. Do not allow material to freeze.
Incompatible materials	Strong oxidising agents. Halogens. Nitrates. Peroxides. Phenols.

Hazardous decomposition products

Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition. Amines. Nitrogen compounds. Carbon oxides.

11. Toxicological information

Information on possible routes of exposure

Inhalation May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

Skin contact Causes skin irritation. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Eye contact Causes serious eye irritation.
N-methyl-2-pyrrolidone Species: Rabbit
Severity: Moderate

Ingestion May be harmful if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms related to exposure Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Oedema. Jaundice.

Acute toxicity Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Components	Species	Test Results
2,2-oxybisethanol diethylene glycol (CAS 111-46-6)		
Acute		
Dermal		
LD50	Rabbit	11890 mg/kg
N-methyl-2-pyrrolidone (CAS 872-50-4)		
Acute		
Dermal		
LD50	Rabbit	8000 mg/kg
Oral		
LD50	Mouse	7725 mg/kg
	Rat	3914 mg/kg
Chronic		
Inhalation		
NOEL	Rat	0.4 mg/l, 2 years Not carcinogenic
Subacute		
Oral		
NOAEL	Mouse	2500 ppm, 28 days Kidney
	Rat	6000 ppm, 28 days None identified
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/irritation	Causes serious eye irritation.	
Eye contact		
N-methyl-2-pyrrolidone	Species: Rabbit	Severity: Moderate
Respiratory or skin sensitisation		
Respiratory sensitisation	Not a respiratory sensitizer.	
Skin sensitisation	This product is not expected to cause skin sensitisation.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Mutagenicity		
N-methyl-2-pyrrolidone	Bacterial Mutagenicity (Ames) Result: negative Species: Salmonella	

Carcinogenicity	Due to partial or complete lack of data the classification is not possible.
Reproductive toxicity	May damage the unborn child.
Developmental effects N-methyl-2-pyrrolidone	0.36 mg/l Embryo / Fetal Development, Maternal Toxicity Not Teratogenic Result: NOEL Species: Rat Organ: Inhalation
	237 mg/kg Embryo / Fetal Development, Maternal Toxicity Fetotoxicity Not Teratogenic Result: NOAEL Species: Rat Organ: Dermal
Reproductivity N-methyl-2-pyrrolidone	237 mg/kg/day Reproductive & Fertility, Maternal toxicity Fetotoxicity Result: NOEL Species: Rat Organ: Dermal
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure.
Aspiration hazard	Not an aspiration hazard.
Other information	Handle as potentially infectious.

12. Ecological information

Ecotoxicity Based on available data, the classification criteria are not met for hazardous to the aquatic environment. The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Avoid release to the environment.

Components	Species	Test Results
2,2-oxybisethanol diethylene glycol (CAS 111-46-6)		
Aquatic		
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>) > 32000 mg/l, 96 hours
Persistence and degradability	No data is available on the degradability of this product.	
Bioaccumulative potential	No data available for this product.	
Mobility in soil	No data available for this product.	
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	

13. Disposal considerations

Disposal methods	Avoid release to the environment. Handle as potentially infectious. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater. Dispose of contents/container in accordance with local/regional/national/international regulations.
Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

ADG

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

Safety, health and environmental regulations

National regulations This Safety Data Sheet was prepared in accordance with the Australia Model Code of Practice for the preparation of safety data sheets for hazardous chemicals.

Australia Medicines & Poisons Appendix A

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix B

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix D

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix E

N-methyl-2-pyrrolidone (CAS 872-50-4)

Australia Medicines & Poisons Appendix F

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix G

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix H

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix I

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix J

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix K

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 10

2,2-oxybisethanol diethylene glycol (CAS 111-46-6)

Australia Medicines & Poisons Schedule 2

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 3

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 4

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 5

2,2-oxybisethanol diethylene glycol (CAS 111-46-6)

N-methyl-2-pyrrolidone (CAS 872-50-4)

Australia Medicines & Poisons Schedule 6

2,2-oxybisethanol diethylene glycol (CAS 111-46-6)

N-methyl-2-pyrrolidone (CAS 872-50-4)

Australia Medicines & Poisons Schedule 7

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 8

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 9

Poisons schedule number not allocated.

High Volume Industrial Chemicals (HVIC)

Not listed.

Importation of Ozone Depleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10)

Not listed.

National Pollutant Inventory (NPI) substance reporting list

Not listed.

Prohibited Carcinogenic Substances

Not regulated.

Prohibited Substances (National Model Regulation for the control of Workplace Hazardous Substances, Schedule 2 NOHSC:1005 (1994) as amended)

Not listed.

Restricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)

Not listed.

Restricted Carcinogenic Substances

Not regulated.

International regulations**Stockholm Convention**

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date	30-November-2016
Revision date	13-May-2019
Disclaimer	Zoetis Inc. believes that the information contained in this Safety Data Sheet is accurate, and while it is provided in good faith, it is without warranty of any kind, expressed or implied. If data for a hazard are not included in this document there is no known information at this time. The information in the sheet was written based on the best knowledge and experience currently available.
Revision information	This document has undergone significant changes and should be reviewed in its entirety.