

SAFETY DATA SHEET

Product Name: Tempor

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Reviewed on: 23rd January 2009

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND SUPPLIER

Product name: Tempor
Product code: A7517
Recommended use: Pour-on for the control of lice on cattle (insecticide).
Company details: Merial Ancare
Address: Level 3, Merial Building
 Osterley Way
 Manukau City
 New Zealand
Telephone number: Phone: +64 9 980 1600 Fax: +64 9 980 1601
Emergency telephone number: Merial Ancare Freephone: 0800 800 822
 National Poisons Centre : 0800 764 766 (0800 POISON)
 Fire Service, Ambulance : Dial 111
Date of preparation: 10 May 2006

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Liquid
Product components:

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
Temephos	3383-96-8	200
Other		to 1L

SECTION 3: HAZARDS IDENTIFICATION

Hazard classifications: 6.1E, 6.3B, 6.4A, 6.9A, 9.1A, 9.3B, 9.4B
Priority and secondary identifiers: WARNING KEEP OUT OF REACH OF CHILDREN
 WARNING Dangerous to the environment
Risk and safety phrases: 6.1E May be harmful if swallowed or absorbed through skin. Handle with care.
 6.3B May cause mild skin irritation. Avoid skin contact.
 6.4A May cause eye irritation. Avoid contact with eyes.
 6.9A Temephos may affect the nervous system. Handle with care.
 9.1A Very toxic to aquatic organisms. Avoid contamination of any water supply with product or empty container.
 9.3B Toxic to terrestrial vertebrates. Avoid release to the environment.
 9.4B Toxic to terrestrial invertebrates. Avoid release to the environment.

SECTION 4: FIRST AID MEASURES

Necessary first aid measures: For advice contact the National Poisons Centre on 0800 POISON (0800 764 766), or a doctor immediately.
Ingestion: If swallowed seek medical attention. Do NOT induce vomiting.
Eyes: If splashed in eyes wash out immediately with water.
Skin: If skin or hair contact occurs remove contaminated clothing and flush skin and hair with running water.
Inhalation: Remove to fresh air.
Workplace facilities: No special facilities required.
Required instructions: Observe good work practices and avoid skin contact. Wash hands and exposed skin before meals and after use. Do not eat or drink while using. Launder protective clothing separately from other

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Notes for medical personnel: clothing, and before each reuse.
Temephos is an organophosphate insecticide (a cholinesterase inhibitor). Give atropine. Pralidoxime chloride (2-PAM: PROTOPAM chloride) may be effective as an adjunct to atropine.

SECTION 5: FIRE FIGHTING MEASURES

Type of hazard: Non flammable, Non combustible, Non explosive
Fire hazard properties: Tempor Cattle is not flammable, but may burn. Hazardous fumes when heated to decomposition.
Regulatory requirements: Not applicable
Extinguishing media and methods: Treat the fire as for the other materials present. Do not allow water to enter drains.
Hazchem code: 2X
Recommended protective clothing: When fighting a major fire wear full protective clothing including breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Emergency procedures: Wear suitable protective clothing. Restrict access to contaminated area. Contain the spill and prevent further dispersion. Retrieve intact containers from site. Place damaged containers into containment devices. Absorb spills with inert material and place in waste containers. Wash the area with water and absorb with further inert material. Collect spilled material and place in sealable containers for subsequent disposal. Avoid contamination of water courses or sewers. Dispose of waste safely.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: Apply with well-maintained and calibrated equipment. Handle with care.
Regulatory requirements: N/A
Handling practices: N/A
Approved handlers: Not required
Conditions for safe storage: Store in original container, tightly closed, away from foodstuffs. Keep out of reach of children.
Store site requirements: This substance is subject to a requirement for an emergency management plan and secondary containment, whenever it is held in quantities of 100L or more. See Hazardous Substances (Emergency management) regulations 25 to 42.
Packaging: Packaging Schedule 3 (UN Packing Group III) for quantities >1L (Hazardous Substances Packaging Regulations 2001)

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Workplace exposure standards: Dusts 10mg/m³
Application in the workplace: Prevent exposure by using engineering controls, personal protective equipment and work practices that prevent skin contact.
Exposure standards outside the workplace: TELs and EELs are not set at this time.
Engineering controls: Ensure that ventilation maintains dust levels below WES.

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Personal protection:	Clothing should consist of overalls with long sleeves and impervious gloves.
References:	N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specify product data:	<u>Formulation type:</u> Oily solution <u>Appearance:</u> Brown liquid <u>Specific gravity:</u> ~0.946 – 0.985 g / mL <u>Boiling Point:</u> ca. > 180° C <u>Vapour Pressure:</u> NA <u>Solubility in Water:</u> Insoluble in water
Required specifications:	N/A
Further specifications:	N/A
Specific advice:	N/A

SECTION 10: STABILITY AND REACTIVITY

Stability of the substance:	Stable under normal conditions of use and storage.
Conditions to avoid:	No specific conditions to avoid.
Material to avoid:	No specific materials to avoid.
Hazardous decomposition products:	No hazardous products are expected, except when heated to decomposition.
Hazardous polymerization:	Components are not expected to form hazardous polymers.
Specific data:	N/A

SECTION 11: TOXICOLOGICAL INFORMATION

Data and interpretation:	May be harmful if swallowed or absorbed through skin. May cause mild skin irritation. May cause eye irritation. Danger of serious damage to health by prolonged exposure if swallowed or absorbed through skin. Temephos may affect the nervous system.
Summaries data:	<u>Temephos:</u> Symptoms of acute exposure are similar to other organophosphates and may include nausea, salivation, headache, loss of muscle coordination, and difficulty breathing. Temephos produces signs and symptoms typical of cholinesterase inhibition at moderate levels of exposure. Reported oral LD ₅₀ values of temephos range from 1226 to 13,000mg/kg in rats and 460 to 4700mg/kg in mice. Dermal LD ₅₀ (rabbit) is 970mg/kg. Temephos has the potential to cause significant toxic effects (depression of the activity of the enzyme cholinesterase in the blood and the brain) in mammals exposed over long periods of time. Humans ingested 256 mg/person/day for 5 days and 64mg/person/day (equivalent to 0.91 mg/kg/day) for 4 weeks without any symptoms or detectable effects on blood cholinesterase activity. In subchronic toxicity studies in rats and dogs, the most sensitive toxicological endpoint is cholinesterase inhibition. Dose related inhibition of plasma, red blood cell (RBC) and brain cholinesterase (ChE) activity occurs following repeated exposures of various durations. The severity of cholinergic symptoms correlates with the level of inhibition of plasma and RBC ChE activity. Rats are the more sensitive species to ChEI and male rats are the more sensitive sex. In rats, dietary temephos reduced plasma and RBC ChE activity at doses as low as 0.46 mg/kg.

SECTION 12: ENVIRONMENTAL INFORMATION

Potential environmental	Very toxic to aquatic organisms. Toxic to terrestrial vertebrates.
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interactions:	Toxic to terrestrial invertebrates.
Data organisation :	<p><u>Temephos</u> - Temephos is an organophosphate insecticide that is very toxic to the environment.</p> <p>LD₅₀ Mallard duck, oral 79mg/kg (95% confidence limits 38.5-163 mg/kg), 4-7 months old /sample purity 92%/</p> <p>LD₅₀ Northern bobwhite quail oral 27.4 mg/kg</p> <p>LD₅₀ Japanese quail oral 84.1 mg/kg (95% confidence limits 60.6-116 mg/kg) / sample purity 92%/</p> <p>LD₅₀ House sparrow 35.4 mg/kg (95% confidence limits 8.85-141 mg/kg) / sample purity 92%/</p> <p>LD₅₀ California quail, oral 18.9 mg/kg (95% confidence limits 15.0-23.8 mg/kg) / sample purity 92%/</p> <p>LC₅₀ Pteronarcy 0.010 mg/l (95% confidence limit 0.007-0.015 mg/l).</p> <p>LC₅₀ Rainbow trout 3.49 mg/l (95% confidence limit 2.33-5.23 mg/l)</p> <p>LC₅₀ Fathead minnow 34.1 mg/l (95% confidence limit 19.7-59.2 mg/l)</p> <p>LC₅₀ Coho salmon 0.35 mg/l (95% confidence limit 0.23-0.33 mg/l)</p> <p>LC₅₀ Rainbow trout 0.16 mg/l (95% confidence limit 0.10-0.24 mg/l)</p> <p>LC₅₀ Cut throat trout 1.27ppm (96hr)</p> <p>EC₅₀ <i>Daphnia magna</i> 0.011ppb (48hr)</p> <p>LC₅₀ Bluegill 1.14 mg/l (95% confidence limit 0.80-1.53 mg/l)</p> <p>LD₅₀ Bee topical 1.55 µg/bee</p>
	<p>Temephos is essentially immobile in soil. It is expected to hydrolyze in basic soils. Low to moderate persistence in soil. In water, temephos will adsorb to sediment and suspended organic matter. Aerobic biodegradation may occur but it is expected to be a slow process. Bioconcentration in fish and aquatic organisms. Photolyzed in water. Low persistence in water.</p>
Environmental risk and safety phrases:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Temephos 20%)

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal information :	Preferably dispose of the product by use. Otherwise dispose of product and packaging at an approved landfill or other approved facility. Burn empty container in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitable landfill. Do NOT use container for any other purpose.
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SECTION 14: TRANSPORT INFORMATION

Relevant information:	<p>Dangerous Goods for transport.</p> <p>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Temephos 20%)</p> <p>UN Number: 3082</p> <p>Dangerous Goods Class: 9</p>
Other requirements:	<p>The maximum quantity per package of this substance allowed for carriage on public transport is 1L.</p> <p>N/A</p>

SECTION 15: REGULATORY INFORMATION

Regulatory status:	Registered pursuant to the ACVM Act 1997, No. A7517 See www.nzfsa.govt.nz/acvm for registration conditions
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	Approved pursuant to the HSNO Act, Approval Code HSR002239 See www.ermanz.govt.nz for approval conditions
HSNO and ACVM controls:	SDS is required for quantities greater than or equal to 0.1L Refer to Section 3
List exposure limits:	None set

SECTION 16: OTHER INFORMATION

Additional information:	For product information visit the Merial website www.merial.co.nz While the information set forth is believed to be accurate as of the date hereof, Merial NZ LTD. makes no warranty with respect hereto and disclaims all liability from reliance thereon.
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