

Section 1 - Identification of The Material and Supplier

The Hunter River Company Pty Ltd
7/20 St Johns Avenue
Gordon NSW 2072 AUSTRALIA

Phone: 02 9499 7370 (office hours)
Fax: 02 9475 0702

Chemical nature: Topical product containing chlorfenvinphos
Trade Name: **Exiguard Buffalo Fly Insecticide**
APVMA Code: 84897
Product Use: Animal insecticide for use as described on the product label.
Creation Date: **November, 2017**
This version issued: **June, 2019** and is valid for 5 years from this date.
Poisons Information Centre: Phone 13 1126 from anywhere in Australia

Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is classified as: Xi, Irritating, T, Toxic, F, Flammable. Hazardous according to the criteria of SWA. Dangerous according to Australian Dangerous Goods (ADG) Code, IATA and IMDG/IMSBC criteria.

SUSMP Classification: S7

ADG Classification: Class 6.1: Toxic Substances. Sub Risk: Class 3, Flammable liquids.

UN Number: 3017, ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash point not less than 23 °C



GHS Signal word: DANGER

Flammable Liquids Category 3
 Acute Toxicity Oral Category 3
 Aspiration Hazard Category 1
 Acute Toxicity Dermal Category 3
 Skin Irritation Category 2
 Skin Sensitisation Category 1
 Eye irritation Category 2B
 Acute Toxicity Inhalation Category 3
 Specific Target Organ Toxicity - Single Exposure Category 3

HAZARD STATEMENT:

H226: Flammable liquid and vapour.
 H301: Toxic if swallowed.
 H304: May be fatal if swallowed and enters airways.
 H311: Toxic in contact with skin.
 H315: Causes skin irritation.
 H317: May cause an allergic skin reaction.
 H320: Causes eye irritation.
 H331: Toxic if inhaled.
 H335: May cause respiratory irritation.

PREVENTION

P201: Obtain special instructions before use.
 P202: Do not handle until all safety precautions have been read and understood.
 P261: Avoid breathing fumes, mists, vapours or spray.
 P262: Do not get in eyes, on skin, or on clothing.
 P264: Wash contacted areas thoroughly after handling.
 P270: Do not eat, drink or smoke when using this product.
 P271: Use only outdoors or in a well ventilated area.
 P272: Contaminated work clothing should not be allowed out of the workplace.
 P280: Wear protective gloves, protective clothing and eye or face protection.

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RESPONSE

P361: Remove all contaminated clothing immediately.

P363: Wash contaminated clothing before reuse.

P301+P310: IF SWALLOWED: Immediately call a POISON CENTRE or doctor.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position 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.

P308+P313: If exposed or concerned: Get medical advice.

P333+P313: If skin irritation or rash occurs: Get medical advice.

P337+P313: If eye irritation persists: Get medical advice.

P370+P378: In case of fire, use carbon dioxide, dry chemical, foam. Water fog or fine spray is the preferred medium for large fires.

STORAGE

P405: Store locked up.

P410: Protect from sunlight.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

DISPOSAL

P501: Dispose of contents and containers as specified on the registered label.

Emergency Overview

Physical Description & Colour: Amber to brown liquid

Odour: Characteristic odour.

Major Health Hazards: Exposure to Chlorfenvinphos causes typical anticholinesterase symptoms - inhibition of acetylcholinesterase activity results in accumulation of acetylcholine at muscarinic and nicotinic receptors leading to peripheral and central nervous system effects. These effects usually appear within a few minutes to a few hours after exposure depending on the extent of exposure. Very toxic if swallowed, toxic by inhalation and in contact with skin, irritating to eyes, respiratory system and skin, irritating to respiratory system and skin, possible skin sensitiser, if aspirated, may cause lung damage. Signs and symptoms associated with mild exposures to organophosphate and carbamate pesticides include: headache, fatigue, dizziness, loss of appetite with nausea, stomach cramps and diarrhoea; blurred vision associated with excessive tearing; contracted pupils of the eye; excessive sweating and salivation; slowed heartbeat, often fewer than 50 per minute; rippling of surface muscles just under the skin. These symptoms may be mistaken for those of flu, heat stroke or heat exhaustion, or upset stomach. Moderately severe organophosphate and carbamate insecticide poisoning cases exhibit all the signs and symptoms found in mild poisonings, but in addition, the victim: is unable to walk; often complains of chest discomfort and tightness; exhibits marked constriction of the pupils (pinpoint pupils); exhibits muscle twitching; has involuntary urination and bowel movement. Severe poisonings are indicated by incontinence, unconsciousness and seizures.

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc, g/L	TWA (mg/m ³)	STEL (mg/m ³)
Chlorfenvinphos	470-90-6	200	not set	not set
Solvent naphtha (petroleum), light arom.	64742-95-6	>600	not set	not set
Other non hazardous ingredients	secret	to 1 L	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

If swallowed, splashed on skin or inhaled, contact a Poisons Information Centre or a doctor at once. Remove any contaminated clothing and wash skin thoroughly. Hospital treatment may be necessary.

Inhalation: If inhalation occurs, contact a Poisons Information Centre. Urgent hospital treatment is likely to be needed. Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial

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if administered by trained personnel, preferably on a doctor's advice. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.

Skin Contact: Flush contaminated area with lukewarm, gently flowing water for at least 20-30 minutes, by the clock. DO NOT INTERRUPT FLUSHING. If necessary, keep emergency vehicle waiting (show paramedics this MSDS and take their advice). Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts). If breathing has stopped, trained personnel should begin artificial respiration or, if the heart has stopped, cardiopulmonary resuscitation (CPR) immediately.

Eye Contact: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

Ingestion: If swallowed, do NOT induce vomiting; rinse mouth thoroughly with water and contact a Poisons Information Centre, or call a doctor at once. Give activated charcoal if instructed.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is little risk of an explosion from this product if commercial quantities are involved in a fire.

Fire decomposition products from this product are likely to be irritating if inhaled.

Extinguishing Media: In case of fire, use carbon dioxide, dry chemical, foam. Water fog or fine spray is the preferred medium for large fires. Try to contain spills, minimise spillage entering drains or water courses.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade. There is little danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is liquid-tight chemical protective clothing and breathing apparatus.

Flash point: Approx 43°C.

Upper Flammability Limit: No data.

Lower Flammability Limit: No data.

Autoignition temperature: No data.

Flammability Class: Flammable liquids Category 3 (GHS); Flammable.

Section 6 - Accidental Release Measures

Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. Evacuate the spill area and deny entry to unnecessary and unprotected personnel. Wear full protective chemically resistant clothing including eye/face protection, gauntlets and self contained breathing apparatus. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include PVC and Nitrile. Eye/face protective equipment should comprise, as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8).

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Because of the toxicity of this product, special personal care should be taken in any cleanup operation. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this SDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

Section 7 - Handling and Storage

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Storage: This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Store in a cool, well ventilated area. Check containers periodically for leaks. Containers should be kept closed in order to minimise contamination. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. If you keep more than 1000kg or L of Dangerous Goods of

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Packaging Group III, you may be required to license the premises or notify your Dangerous Goods authority. If you have any doubts, we suggest you contact your Dangerous Goods authority in order to clarify your obligations. Check packaging - there may be further storage instructions on the label.

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

Exposure limits have not been established by SWA for any of the significant ingredients in this product.

The ADI for Chlorfenvinphos is set at 0.0005mg/kg/day. The corresponding NOEL is set at 0.05mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, March 2017.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

Eye Protection: Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

Skin Protection: It is essential that all skin areas are adequately covered by impermeable gloves, overalls, hair covering, apron and face shield. See below for suitable material types.

Protective Material Types: We suggest that protective clothing be made from the following materials: PVC, nitrile.

Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

Eyebaths or eyewash stations and safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	Amber to brown liquid
Odour:	Characteristic odour.
Boiling Point:	Not available.
Freezing/Melting Point:	No specific data. Liquid at normal temperatures.
Volatiles:	No data.
Vapour Pressure:	No data.
Vapour Density:	No data.
Specific Gravity:	No data.
Water Solubility:	No data.
pH:	No data.
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	No data.
Coeff Oil/water Distribution:	No data
Autoignition temp:	No data.

Section 10 - Stability and Reactivity

Reactivity: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

Conditions to Avoid: Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

Incompatibilities: oxidising agents.

Fire Decomposition: Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form oxides of phosphorus and other phosphorus compounds. May form hydrogen chloride gas, other compounds of chlorine. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation: This product will not undergo polymerisation reactions.

Section 11 - Toxicological Information

Toxicity: Exposure to Chlorfenvinphos causes typical anticholinesterase symptoms - inhibition of acetylcholinesterase activity results in accumulation of acetylcholine at muscarinic and nicotinic receptors leading to

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peripheral and central nervous system effects. These effects usually appear within a few minutes to a few hours after exposure depending on the extent of exposure. When Chlorfenvinphos was evaluated for acute lethality in animals, death occurred within 12 hours in tested rats, rabbits, and dogs and was usually preceded by the characteristic signs of cholinergic response - salivation, lachrymation, muscle fasciculation, diarrhoea, emesis, tremors, irregular respiration, and prostration.

Chlorfenvinphos is extremely toxic to rodents and dogs by the oral route in acute doses. The oral LD₅₀ values for rats, rabbits, and dogs have been estimated to be 9.7, 300, 50.5 mg/kg, respectively.

No studies were located regarding the following health effects in humans or animals after acute-, intermediate-, or chronic-duration inhalation exposure to Chlorfenvinphos: Reproductive Effects, Developmental Effects, Genotoxic Effects, Cancer.

Solvent Naphtha (petroleum), Light Arom. is a SWA Class 2 Mutagen, likely to be mutagenic to humans.

Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Chlorfenvinphos	>=7%Conc<25%: T+; R28; R21
<ul style="list-style-type: none"> Acute toxicity – category 2 Hazardous to the aquatic environment (acute) – category 1 Hazardous to the aquatic environment (chronic) – category 1 	
Solvent Naphtha (petroleum), Light Arom.	Conc>=10%: T; R45; R46; R65
<ul style="list-style-type: none"> Carcinogenicity – category 1B Germ cell mutagenicity – category 1B Aspiration hazard – category 1 	

Potential Health Effects

Inhalation:

Short Term Exposure: Symptoms are described fully above.

Long Term Exposure: No data for health effects associated with long term inhalation.

Skin Contact:

Short Term Exposure: Symptoms are described fully above.

Long Term Exposure: No data for health effects associated with long term skin exposure.

Eye Contact:

Short Term Exposure: This product is an eye irritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment may cause permanent damage.

Long Term Exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short Term Exposure: Symptoms are described fully above.

Long Term Exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:

SWA: Solvent Naphtha (petroleum), Light Arom. is classified by SWA as a Category 1b Carcinogen. See the SWA website for further details. A web address has not been provided as addresses frequently change.

NTP: No significant ingredient is classified as carcinogenic by NTP.

IARC: No significant ingredient is classified as carcinogenic by IARC.

Section 12 - Ecological Information

If released to water, moderate adsorption to particulate matter will transport Chlorfenvinphos from the water column and partition it to suspended solids and sediment. Chlorfenvinphos does not appear to partition extensively from water into aquatic organisms.

Biodegradation appears to be the dominant degradation process in natural waters. This is likely, as microbial degradation is the dominant degradation process in soils.

Chlorfenvinphos is most stable in water at ambient temperatures and neutral pH. In laboratory studies, Chlorfenvinphos hydrolysed slowly in water resulting in a half-life (first-order kinetics) of 170 days at pH 6 and 80 days at pH 8, both at 20-30°C.

Hydrolysis was also observed under conditions of high temperature and extreme pH (highly alkaline or highly acidic), resulting in a half-life of >400 hours (>33 days) at pH 9.1, and >700 hours (58 days) at pH 1.1 at 38°C.

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Hydrolysis probably does not contribute much to the initial disappearance of Chlorfenvinphos from natural waters. Based on hydrolysis studies conducted at 70°C, and correcting for temperature differences assuming an environmental temperature of 20°C, the aqueous hydrolysis half-life (first-order kinetics) value of Chlorfenvinphos is approximately 1 to 1.3 years.

Direct photolysis of Chlorfenvinphos is negligible, since the compound does not significantly absorb ultraviolet wavelength light >290 nm. No information was found in the literature regarding the photosensitized reaction of Chlorfenvinphos in water with ozone, hydroxyl radicals or singlet oxygen.

Section 13 - Disposal Considerations

Disposal: This product may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to separate the contamination in some way. Only if neither of these options is suitable, we suggest that you contact a specialist disposal company to arrange disposal. Disposal by untrained personnel may cause a dangerous incident.

Section 14 - Transport Information

Dangerous according to Australian Dangerous Goods (ADG) Code, IATA and IMDG/IMSBC criteria.

UN Number: 3017, ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash point not less than 23 °C

Hazchem Code: •3W

Special Provisions: 61, 223, 274

Limited quantities: ADG 7 specifies a Limited Quantity value of 5 L for this class of product.

Dangerous Goods Class: Class 6.1: Toxic Substances.

Sub Risk: Class 3, Flammable liquids.

Packing Group: III

Packing Instruction: P001, IBC03

Class 6 Toxic Substances shall not be loaded in the same vehicle or packed in the same freight container with Classes 1 (Explosives), 3 (Flammable Liquids where the Flammable Liquid is nitromethane), 5.1 (Oxidising Agents where the Toxic Substances are Fire Risk Substances), 5.2 (Organic Peroxides where the Toxic Substances are Fire Risk Substances), 8 (Corrosive Substances where the Toxic Substances are cyanides and the Corrosives are acids), Foodstuffs and foodstuff empties. They may however be loaded in the same vehicle or packed in the same freight container with Classes, 2.1 (Flammable Gases), 2.2 (Non-Flammable, Non-Toxic Gases), 2.3 (Toxic Gases), 3 (Flammable liquids, except where the flammable liquid is nitromethane), 4.1 (Flammable Solids), 4.2 (Spontaneously Combustible Substances), 4.3 (Dangerous When Wet Substances), 5.1 (Oxidising Agents except where the Toxic Substances are Fire Risk Substances), 5.2 (Organic Peroxides except where the Toxic Substances are Fire Risk Substances), 7 (Radioactive Substances), 8 (Corrosive Substances except where the Toxic Substances are cyanides and the Corrosives are acids), 9 (Miscellaneous Dangerous Goods)

Section 15 - Regulatory Information

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

The following ingredient: Chlorfenvinphos, is mentioned in the SUSMP.

Section 16 - Other Information

This SDS contains only safety-related information. For other data see product literature.

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail (7 th edition)
AICS	Australian Inventory of Chemical Substances
SWA	Safe Work Australia, formerly ASCC and NOHSC
CAS number	Chemical Abstracts Service Registry Number
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC	International Agency for Research on Cancer
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UN Number	United Nations Number

THIS SDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

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IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (Feb 2016)

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<http://www.kilford.com.au/> Phone (02)8321 8866

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