

**AMBER**



DAVID GRAY & CO. PTY LIMITED  
2 Rawlinson Street O'CONNOR WA 6163  
PO BOX 2084 PALMYRA DC WA 6961  
Ph: (08) 9337 4933 Fax: (08) 9337 8316  
email: [general@davidgray.com.au](mailto:general@davidgray.com.au) web: [www.davidgray.com.au](http://www.davidgray.com.au)

## MATERIAL SAFETY DATA SHEET

Product Name **DAVID GRAYS TRICHLORPHON 600 CATERPILLAR & WHITE BUTTERFLY SPRAY**

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Supplier Name** DAVID GRAY & CO PTY LIMITED  
**Address** 2 Rawlinson Street, O'Connor, WA, AUSTRALIA, 6961  
**Telephone** (08) 9337 4933  
**Fax** (08) 9337 8316  
**Emergency** (08) 9337 4933 (B/H)  
**Email** [general@davidgray.com.au](mailto:general@davidgray.com.au)  
**Web Site** <http://www.davidgray.com.au/>

**Synonym(s)** 07845 (12X200ML) - MANUFACTURER'S CODE • 07951(6X500ML) - MANUFACTURER'S CODE • DIMETHYL 2,2,2-TRICHLORO-1-HYDROXYETHYLPHOSPHONATE • TRICHLORPHON 600 CATERPILLAR & WHITE BUTTERFLY SPRAY

**Use(s)** PESTICIDE • SPRAY APPLICATIONS

**MSDS Date** 21 Jun 2010

### 2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO ASCC CRITERIA

#### RISK PHRASES

R11 Highly flammable.  
R23/25 Toxic by inhalation and if swallowed.

#### SAFETY PHRASES

S16 Keep away from sources of ignition - No smoking.  
S24 Avoid contact with skin.  
S46 If swallowed, contact a doctor or Poisons Information Centre immediately and show container or label.  
S7 Keep container tightly closed.

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

**UN No.** 2784                      **DG Class** 3                      **Subsidiary Risk(s)** 6.1 (Toxic)  
**Packing Group** II                      **Hazchem Code** 3WE

### 3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS No.	Content
ETHANOL	C2-H6-O	64-17-5	30-60%
TRICHLORFON	C4-H8-Cl3-O4-P	52-68-6	60%

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## 4. FIRST AID MEASURES

<b>Eye</b>	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
<b>Inhalation</b>	If inhaled, remove from contaminated area. If poisoning occurs, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or doctor. Give one atropine tablet every 5 minutes until dryness of the mouth occurs. Apply artificial respiration if not breathing.
<b>Skin</b>	If skin contact occurs, remove any contaminated clothing and flush skin with running water. If poisoned, give 1 atropine tablet every 5 minutes until dryness of the mouth occurs. Remove from contaminated area. Seek immediate medical advice.
<b>Ingestion</b>	For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, give one atropine tablet every 5 minutes until dryness of the mouth occurs. Seek medical attention immediately.
<b>Advice to Doctor</b>	Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

<b>Flammability</b>	Highly flammable. May evolve toxic gases (phosphorus/ carbon/ sulphur oxides, sulphides, hydrocarbons) when heated to decomposition. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, pilot lights, heaters, naked lights etc. when handling. Earth containers when dispensing fluids.
<b>Fire and Explosion</b>	Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.
<b>Extinguishing</b>	Dry agent, carbon dioxide or foam. Prevent contamination of drains or waterways.
<b>Hazchem Code</b>	3WE

## 6. ACCIDENTAL RELEASE MEASURES

<b>Spillage</b>	Contact emergency services where appropriate. Use personal protective equipment. Clear area of all unprotected personnel. Ventilate area where possible. Use water spray to reduce vapours. Contain spillage, then cover / absorb spill with non-combustible absorbant material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Prevent spill entering drains or waterways.
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## 7. STORAGE AND HANDLING

<b>Storage</b>	Store in a cool, dry, well ventilated area, removed from moisture, oxidising agents, acids, alkalis, iron, mild/galvanised steel, zinc, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Large storage areas should have appropriate fire protection systems.
<b>Handling</b>	Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

## 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

### Exposure Stds

Ingredient	Reference	TWA		STEL	
Ethanol	ASCC (AUS)	1000 ppm	1880 mg/m <sup>3</sup>	--	--

**Biological Limits** No biological limit allocated.

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**Engineering Controls** Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Flammable/explosive vapours may accumulate in poorly ventilated areas. Vapours are heavier than air and may travel some distance to an ignition source and flash back. Maintain vapour levels below the recommended exposure standard.

**PPE** Wear splash-proof goggles, a PVC apron, rubber boots, rubber or PVC gloves, coveralls and a Type A (Organic vapour) respirator. When handling the concentrate only, wear PVA/viton gloves. If spraying, wear: a Type A-Class P1 (Organic gases/vapours and Particulate) respirator.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	CLEAR LIQUID	<b>Solubility (Water)</b>	SOLUBLE
<b>Odour</b>	ODOURLESS	<b>Specific Gravity</b>	1.08 - 1.10
<b>pH</b>	NOT AVAILABLE	<b>% Volatiles</b>	NOT AVAILABLE
<b>Vapour Pressure</b>	0.21 mPa @ 20°C (Trichlorphon)	<b>Flammability</b>	HIGHLY FLAMMABLE
<b>Vapour Density</b>	NOT AVAILABLE	<b>Flash Point</b>	13°C (Ethanol)
<b>Boiling Point</b>	78°C (Ethanol)	<b>Upper Explosion Limit</b>	19 % (Ethanol)
<b>Melting Point</b>	NOT AVAILABLE	<b>Lower Explosion Limit</b>	3.3 % (Ethanol)
<b>Evaporation Rate</b>	NOT AVAILABLE		
<b>Appearance</b>	CLEAR LIQUID	<b>Odour</b>	ODOURLESS

## 10. STABILITY AND REACTIVITY

**Material to Avoid** Incompatible with oxidising agents (eg. hypochlorites), acids (eg. nitric acid), alkalis (eg. hydroxides), iron, zinc, stainless/galvanised steel and heat sources.

**Hazardous Decomposition Products** May evolve toxic gases (phosphorus/ carbon/ sulphur oxides, sulphides, hydrocarbons) when heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

**Health Hazard Summary** Toxic - irritant. This product has the potential to cause adverse health effects. Use safe work practices to avoid eye or skin contact and inhalation. Cholinesterase inhibitor resulting in the accumulation of acetylcholine, causing rapid twitching of voluntary muscles and finally paralysis. Experimental carcinogen and teratogen effects are reported. Converts to very toxic dichlorvos at physiological pH conditions. Cumulative poison.

**Eye** Irritant. Contact may result in irritation, lacrimation, pain, redness and blurring or dimness of vision.

**Inhalation** Toxic. Over exposure may result in irritation of the nose and throat, coughing, weakness, nausea and vomiting. High level exposure may result in diarrhoea, dizziness, incoordination, excessive salivation, sweating, breathing difficulties, cyanosis and respiratory paralysis. Cholinesterase inhibitor.

**Skin** Irritant - toxic. Contact may result in irritation, redness, pain and rash. May be absorbed through skin with harmful effects. The dermal LD50 (rat) is 9250 mg/kg for this product.

**Ingestion** Toxic. Ingestion may result in nausea, vomiting, abdominal pain, diarrhoea, fatigue, and sweating and/or salivation. Ingestion of large quantities may result in breathing difficulties, muscle spasms and convulsions. The oral LD50 (rat) is 462 mg/kg for this product.

**Toxicity Data** ETHANOL (64-17-5)  
LC50 (Inhalation): 20000 ppm/10 hours (rat)  
LCLo (Inhalation): 21900 ppm (guinea pig)  
LD50 (Ingestion): 3450 mg/kg (mouse)  
LD50 (Intraperitoneal): 3600 ug/kg (rat)  
LD50 (Intravenous): 1440 mg/kg (rat)

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LD50 (Subcutaneous): 8285 mg/kg (mouse)  
LDLo (Ingestion): 1400 mg/kg (human)  
LDLo (Intraperitoneal): 3000 mg/kg (dog)  
LDLo (Intravenous): 1600 mg/kg (dog)  
LDLo (Skin): 20 g/kg (rabbit)  
LDLo (Subcutaneous): 19440 (infant)  
TCLo (Inhalation): 20000ppm/7 hours (1-22 days pregnant rat - reproductive)  
TDLo (Ingestion): 50 mg/kg (human)  
TRICHLORFON (52-68-6)  
Health Surveillance: Required [NOHSC:1005(1994)]  
LC50 (Inhalation): 1300 mg/m3 (rat)  
LD50 (Ingestion): 160 mg/kg (rabbit)  
LD50 (Intramuscular): 395 mg/kg (rat)  
LD50 (Intraperitoneal): 60 mg/kg (rabbit)  
LD50 (Intravenous): 290 mg/kg (mouse)  
LD50 (Skin): 1710 mg/kg (mouse)  
LD50 (Subcutaneous): 267 mg/kg (mouse)  
LDLo (Ingestion): 420 mg/kg (guinea pig)  
LDLo (Intramuscular): 500 mg/kg (rabbit)  
TCLo (Inhalation): 1710 ug/m3/90 days, intermittent (human)

**12. ECOLOGICAL INFORMATION**

**Environment** SOIL: Trichlorfon is very mobile in soils, which may lead to contamination of groundwater. Trichlorfon has been reported to persist in soil for up to two weeks. AQUATIC: It is not expected to bioaccumulate in fish. Trichlorfon will be hydrolysed in water to toxic dichlorvos.

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal** For small amounts absorb with sand, vermiculite or similar and dispose of to an approved landfill site only. Contact the manufacturer for additional information if larger amounts are involved. Triple rinse (or preferably pressure rinse) containers before disposal. Add rinsings to spray tank.

**Legislation** Dispose of in accordance with relevant local legislation.

**14. TRANSPORT INFORMATION****CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE**

<b>Shipping Name</b>	ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash point less than 23 C				
<b>UN No.</b>	2784	<b>DG Class</b>	3	<b>Subsidiary Risk(s)</b>	6.1 (Toxic)
<b>Packing Group</b>	II	<b>Hazchem Code</b>	3WE	<b>GTEPG</b>	3A1

**15. REGULATORY INFORMATION**

**Poison Schedule** Classified as a Schedule 6 (S6) Poison using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

**AICS** All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

**16. OTHER INFORMATION**

**Additional Information** ORGANOPHOSPHATES-CARBAMATE PESTICIDES-LARVICIDES: These agents act by combining with and inactivating the enzyme acetylcholinesterase (an enzyme involved in nerve muscle coordination). The inhibition of the cholinesterase appears to be reversible following cessation of exposure at sub lethal concentrations (acute exposure). The principal manifestations of poisoning with cholinesterase inhibitor pesticides are visual disturbances, respiratory difficulty and gastrointestinal hyperactivity.

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RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

## ABBREVIATIONS:

ADB - Air-Dry Basis.

BEI - Biological Exposure Indice(s)

CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.

CNS - Central Nervous System.

EC No - European Community Number.

IARC - International Agency for Research on Cancer.

M - moles per litre, a unit of concentration.

mg/m3 - Milligrams per cubic metre.

NOS - Not Otherwise Specified.

NTP - National Toxicology Program.

OSHA - Occupational Safety and Health Administration.

pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).

ppm - Parts Per Million.

RTECS - Registry of Toxic Effects of Chemical Substances.

TWA/ES - Time Weighted Average or Exposure Standard.

## HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

## PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this Chem Alert report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

COLOUR RATING SYSTEM: RMT has assigned all Chem Alert reports a colour rating of Green, Amber or Red for the sole purpose of providing users with a quick and easy means of determining the hazardous nature of a product. Safe handling recommendations are provided in all Chem Alert reports so as to clearly identify how users can control the hazards and thereby reduce the risk (or likelihood) of adverse effects. As a general guideline, a Green colour rating indicates a low hazard, an Amber colour rating indicates a moderate hazard and a Red colour rating indicates a high hazard.

While all due care has been taken by RMT in the preparation of the Colour Rating System, it is intended as a guide only and RMT does not provide any warranty in relation to the accuracy of the Colour Rating System. As far as is lawfully possible, RMT accepts no liability or responsibility whatsoever for the actions or omissions of any person in reliance on the Colour Rating System.

**Report Status**

This document has been compiled by RMT on behalf of the manufacturer of the product and serves as the manufacturer's Material Safety Data Sheet ('MSDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this MSDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this MSDS.

**Prepared By**

Risk Management Technologies  
5 Ventnor Ave, West Perth  
Western Australia 6005

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**Product Name**     **DAVID GRAYS TRICHLORPHON 600 CATERPILLAR & WHITE BUTTERFLY SPRAY**

Phone: +61 8 9322 1711  
Fax: +61 8 9322 1794  
Email: info@rmt.com.au  
Web: www.rmt.com.au

**SDS Date** 21 Jun 2010

**End of Report**