



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 web: 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, 6163, AUSTRALIA  
**Telephone** (08) 9337 4933  
**Fax** (08) 9337 8316  
**Emergency** (08) 9337 4933 (B/H)  
**Email / Web** www.davidgray.com.au

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

**Uses** PESTICIDE, SPRAY APPLICATIONS.

### 2. HAZARDS IDENTIFICATION

**CLASSIFIED AS HAZARDOUS ACCORDING TO NOHSC CRITERIA**  
**CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE**

**Risk And Safety Phrases** Risk and Safety Phrases are standardised phrases allocated to Hazardous Substances. Risk phrases convey a general description of the physicochemical, environmental and health hazards of a substance. Safety phrases provide information on safe storage, handling, disposal, personal protection and first aid.

#### 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.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

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

### 4. FIRST AID MEASURES

**Eye** Hold eyelids apart and flush continuously with water. Continue until advised to stop by the Poisons Information Centre, a doctor, or for at least 15 minutes. Keep patient calm.

**Inhalation** If poisoning occurs, contact a doctor or Poisons Information Centre (PIC). If over exposure occurs, leave area of exposure immediately. Give one atropine tablet every 5 minutes until dryness of the mouth occurs. Seek urgent medical attention.

**Skin** Remove contaminated clothing, gently flush affected areas with water. Give 1 atropine tablet every 5 minutes until dryness of the mouth occurs. Seek immediate medical advice. Launder contaminated clothing before reuse.

Colour  
Rating  
**AMBER**



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### 4. FIRST AID MEASURES cont.

**Ingestion** If poisoning occurs, contact a Doctor or Poisons Information Centre on 13 11 26 (Australia Wide). If swallowed, give one atropine tablet every 5 minutes until dryness of the mouth occurs - if poisoned through skin absorption or through lungs, remove any contaminated clothing, wash skin thoroughly and give atropine tablets as above. Get to a doctor or hospital quickly.

**Advice To Doctor** Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

**Flammability** Highly flammable liquid. May evolve toxic gases (phosphorus/ carbon/ sulfur oxides, sulfides, 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.

**Fire and Explosion** Highly flammable-explosive vapour. Evacuate area and contact emergency services. Toxic gases (hydrocarbons, carbon/ sulfur oxides) may be evolved. Remain upwind and notify those downwind of hazard. Wear full protective equipment (see spill above) including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

**Extinguishing** Dry agent, carbon dioxide or foam. Prevent contamination of drains or waterways. Absorb runoff with sand or similar.

**Hazchem Code** 3WE

### 6. ACCIDENTAL RELEASE MEASURES

**Spillage** If spilt (bulk), contact emergency services. Wear splash-proof goggles, PVA/viton gloves, a Type A (Organic vapour) respirator or an Air-line respirator, coveralls, PVC/rubber apron and boots. Ventilate & clear area of all unprotected personnel. Use water spray to reduce vapours. Absorb with sand or similar (non-combustible) & place in sealable containers for disposal. Prevent spill entering drains or waterways.

### 7. HANDLING AND STORAGE

**Handling** 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 (eg. if container is damaged).

**Storage** Store out of direct sunlight and out of the reach of children, in a cool, dry area, removed from moisture, oxidising agents, acids, alkalis, iron, mild/galvanised steel, zinc, heat 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.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Ventilation** Do not inhale vapours. Use in well ventilated areas. In poorly ventilated areas, 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

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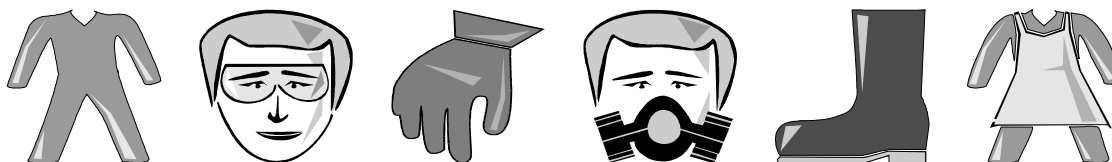
Product Name **DAVID GRAYS TRICHLORPHON 600 CATERPILLAR & WHITE BUTTERFLY SPRAY**

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION cont.

exposure standard.

**Exposure Standards** ETHANOL (64-17-5)  
ES-TWA : 1000 ppm (1880 mg/m<sup>3</sup>)  
WES-TWA : 1000 ppm (1880 mg/m<sup>3</sup>)

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



### 9. PHYSICAL AND CHEMICAL PROPERTIES

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

### 10. STABILITY AND REACTIVITY

**Reactivity** Incompatible with alkalis, oxidising agents, acids, iron, zinc, stainless/galvanised steel and heat sources.

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

### 11. TOXICOLOGICAL INFORMATION

**Health Hazard Summary** Toxic. Avoid eye or skin contact and vapour generation or inhalation. Cholinesterase inhibitor with the potential for depression of plasma and red cell cholinesterase activity. Experimental carcinogen and teratogen effects are reported. Converts to very toxic dichlorvos at physiological pH conditions. Cumulative poison with repeated minor exposures.

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### 11. TOXICOLOGICAL INFORMATION cont.

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

**Inhalation** Toxic. Over exposure may result in respiratory irritation, weakness, nausea, vomiting and diarrhoea. At high levels; dizziness, incoordination, excessive salivation - sweating, breathing difficulties, cyanosis and respiratory paralysis. Cholinesterase inhibitor.

**Skin** Irritant - toxic. Contact may result in itching, pain, redness and skin rash. Readily absorbed through intact skin with symptoms as for inhalation. The dermal LD50 (rat) is 9250 mg/kg for this product.

**Ingestion** Toxic. Ingestion may result in nausea, vomiting, abdominal pain, diarrhoea, fatigue, and profuse sweating and/or salivation. Large doses 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) : 2000 ppm/10 hours (rat)  
LD50 (Ingestion) : 3450 mg/kg (mouse)

TRICHLORFON (52-68-6)  
LC50 (Inhalation) : 1300 mg/m3 (rat)  
LD50 (Skin) : 1710 mg/kg (mouse)  
LD50 (Ingestion) : 160 mg/kg (rabbit)  
Health Surveillance : Required [NOHSC:1005(1994)]

### 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 (or preferably pressure) rinse containers before disposal. Add risings to spray tank.

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

### 14. TRANSPORT INFORMATION

**Transport** Class 3 Flammable liquid. Do not transport with chemicals of class; 1 (Explosives), 2.1/ 2.3 (Flammable/ Toxic gases), 4.2 (Spontaneously combustibles), 5.1 (Oxidising agents), 5.2 (Organic peroxides), 6 (Toxics), 7 (Radioactives) and foodstuffs.

**UN Number** 2784

**Shipping Name** ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash point less than 23 C

**DG Class** 3

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### 14. TRANSPORT INFORMATION cont.

Subsidiary Risk(s) 6.1  
Packing Group II  
Hazchem Code 3WE

### 15. REGULATORY INFORMATION

**AICS** All chemicals listed on the Australian Inventory of Chemical Substances (AICS).  
**Poison Schedule** Classified as a Schedule 6 (S6) Poison using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

### 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.

**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.

**COLOUR RATING SYSTEM:** Chem Alert reports are assigned a colour rating of Green, Amber or Red for the 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.

#### 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. Information provided by Risk Management Technologies is summarised for ease of use. Additional technical information is available by calling +61 8 9322 1711.

#### 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.

#### ABBREVIATIONS:

mg/m<sup>3</sup> - Milligrams per cubic metre  
ppm - Parts Per Million  
TWA/ES - Time Weighted Average or Exposure Standard.

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### 16. OTHER INFORMATION cont.

pH - relates to hydrogen ion concentration - this value will relate to a scale of 0 - 14, where 0 is highly acidic and 14 is highly alkaline.

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

M - moles per litre, a unit of concentration.

IARC - International Agency for Research on Cancer.

**Report Reviewed** 17th November 2005

**Date Printed** 17th November 2005

**Report Status** Chem Alert reports are compiled as an independent source of information by RMT's scientific department. The information is based on the latest chemical and toxicological research, and in compliance with relevant standards, guidance notes and legislation (where applicable). The Chem Alert report is not intended as a replacement to the manufacturer's original MSDS that is provided to Chem Alert subscribers for convenience. In many instances, Chem Alert reports are compiled on behalf of manufacturers, in which case they serve as the "Manufacturer's MSDS" and are clearly identified as such on the relevant reports.

**Prepared By** Risk Management Technologies  
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