

Section 1 - Identification of The Material and Supplier

FMC Australasia Pty Ltd 12 Julius Ave North Ryde, NSW 2113	Emergency: 1800 033 111 (24 hours - Australia wide) Freecall 1800 624 597 (business hours) www.fmccrop.com.au
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Chemical nature: Benzoic Acid Derivative

Trade Name: **FMC Redact 750WG Herbicide**

APVMA Code: **68617**

Other Names: Chlorthal-dimethyl. Group D Herbicide. Benzoic acid derivative

Product Use: Agricultural herbicide for use as described on the product label.

Creation Date: **July, 2016**

This version issued: **September, 2016** 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: Not classified as hazardous according to the criteria of SWA.

Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

SUSMP Classification: None allocated.

ADG Classification: None allocated. Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

UN Number: None allocated

GHS Signal word: NONE. Not hazardous.

PREVENTION

- P102: Keep out of reach of children.
- P261: Avoid breathing dusts.
- P262: Do not get in eyes, on skin, or on clothing.
- P235+P410: Keep cool. Protect from sunlight.

RESPONSE

- P335: Brush off loose particles from skin.
- P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P302+P350: IF ON SKIN: Gently 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.
- P391: Collect spillage.
- P370+P378: In case of fire, use carbon dioxide, dry chemical, foam, water fog.

STORAGE

- P410+P403: Protect from sunlight. Store in a well-ventilated place.

DISPOSAL

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

Emergency Overview

Physical Description & Colour: Off- white to tan granules

Odour: Slight odour

Major Health Hazards: Chlorthal dimethyl (DCPA) has a very low toxicity to mammals. The LD₅₀ values for DCPA in rats range from greater than 3000 mg/kg to 12,500 mg/kg. DCPA in rabbits and beagle dogs has an LD₅₀ of greater than 10,000 mg/kg. The dermal LD₅₀ in rabbits is greater than 2000 mg/kg. DCPA is not a skin sensitizer. It is a mild eye irritant. The inhalation LC₅₀ (4-hour) is greater than 5.7 mg/L. No significant risk factors have been found for this product.

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Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc, %	TWA (mg/m ³)	STEL (mg/m ³)
Chlorthal-dimethyl	1861-32-1	750 g/kg	not set	not set
Other ingredients said to be non hazardous	Secret	to 100	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.

Inhalation: First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Skin Contact: Gently brush away excess particles. Irritation is unlikely. However, if irritation does occur, flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.

Eye Contact: Quickly and gently brush particles from eyes. No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

Ingestion: If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor.

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 no risk of an explosion from this product under normal circumstances if it is involved in a fire.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

Extinguishing Media: In case of fire, use carbon dioxide, dry chemical, foam, water fog.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade.

Flash point: No data

Upper Flammability Limit: No data.

Lower Flammability Limit: No data.

Autoignition temperature: No data.

Flammability Class: No data.

Section 6 - Accidental Release Measures

Accidental release: Minor spills do not normally need any special cleanup measures. In the event of a major spill, prevent spillage from entering drains or water courses. No special protective clothing is normally necessary because of this product. However it is good practice to wear overalls, goggles and gloves when handling chemicals. No special recommendations for clothing materials. Eye/face protective equipment should comprise as a minimum, protective glasses and, preferably, goggles. If there is a significant chance that dusts are likely to build up in cleanup area, we recommend that you use a suitable dust mask.

Stop leak if safe to do so, and contain spill. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Consider vacuuming if appropriate. 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.

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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: Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. 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**.

SWA Exposure Limits

TWA (mg/m³)

STEL (mg/m³)

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

The ADI for Chlorthal-dimethyl is set at 0.01mg/kg/day. The corresponding NOEL is set at 1mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, June 2014.

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: No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that dusts are minimised.

Eye Protection: Eye protection is not normally necessary when this product is being used. However, if in doubt, wear suitable protective glasses or goggles.

Skin Protection: The information at hand indicates that this product is not harmful and that normally no special skin protection is necessary. However, we suggest that you routinely avoid contact with all chemical products and that you wear suitable gloves (preferably elbow-length) when skin contact is likely.

Protective Material Types: There is no data that enables us to recommend any type except that it should be impermeable.

Respirator: If there is a significant chance that dusts are likely to build up in the area where this product is being used, we recommend that you use a suitable dust mask.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	Off- white to tan granules
Odour:	Slight odour
Boiling Point:	Not available.
Freezing/Melting Point:	No specific data. Solid at normal temperatures.
Volatiles:	No data.
Vapour Pressure:	No data.
Vapour Density:	Not applicable.
Specific Gravity:	Not applicable
Water Solubility:	No data.
pH:	No data.
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	Not applicable.
Coeff Oil/water Distribution:	No data
Viscosity:	Not applicable.
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: Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

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Incompatibilities: No particular Incompatibilities.

Fire Decomposition: Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. 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: Polymerisation reactions are unlikely; they are not expected to occur.

Section 11 - Toxicological Information

Toxicity: Acute toxicity: Chlorthal dimethyl (DCPA) has a very low toxicity to mammals. The LD₅₀ values for DCPA in rats range from greater than 3000 mg/kg to 12,500 mg/kg. DCPA in rabbits and beagle dogs has an LD₅₀ of greater than 10,000 mg/kg. The dermal LD₅₀ in rabbits is greater than 2000 mg/kg. DCPA is not a skin sensitizer. It is a mild eye irritant. The inhalation LC₅₀ (4-hour) is greater than 5.7 mg/L.

Chronic toxicity: A 3 mg dose in a rabbit eye produced mild irritation, which disappeared in 24 hours. Dogs given high doses of 800 mg/kg/day for a month showed some adverse effects in the liver. In longer-term studies with rats (90 days), similar doses (about 750 mg/kg/day) caused no adverse effects. In a 2-year study with rats, a dose of around 50 mg/kg/day was responsible for changes in the adrenal weights of the females and in the kidney weights of the males.

Reproductive effects: Rats fed high doses of DCPA (500 mg/kg/day) showed no changes in fertility, gestation, live births, or lactation. The study was conducted over one full generation. These data suggest that the compound does not cause reproductive effects.

Teratogenic effects: Available data indicate that DCPA is not teratogenic. Pregnant rabbits fed moderate doses (up to 300 mg/kg) of DCPA on days 8 to 16 of gestation showed no skeletal or organ abnormalities in the offspring.

Mutagenic effects: No mutagenicity was seen in a number of tests, including mutation frequency and activity, cytogenetic tests, DNA repair, and dominant lethal tests. This evidence indicates that DCPA is not mutagenic.

Carcinogenic effects: No carcinogenic effects were noted in rats in a 2-year study where diets contained up to 500 mg/kg/day of DCPA. Thus, DCPA does not appear to be carcinogenic.

Organ toxicity: Long-term studies in test animals have indicated the liver and adrenal glands as target organs.

Fate in humans and animals: Much of the compound that is ingested is not absorbed. Cows excreted nearly all of a small dose of DCPA within 5 days, and dogs absorbed only small amounts (3%) of the compound. The remaining amount was eliminated within 4 days. When dairy cows were fed diets with up to 200 ppm of DCPA for 24 days, 0.26 ppm of the compound or its metabolites were found in milk, while 30 to 90 ppm for 9 or 23 days resulted in residues of 0.036 ppm and 0.066 ppm in milk. Residues in other tissues were generally less than 1 ppm. There is no data to hand indicating any particular target organs.

Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Chlorthal-dimethyl	No risk phrases at concentrations found in this product
LD ₅₀ Oral, Rat >5,000mg/kg	LD ₅₀ Dermal, Rabbit = >2,000mg/kg
LC ₅₀ Inhalation, = 5.7mg/L/4hr	

Potential Health Effects

Inhalation:

Short Term Exposure: Significant inhalation exposure is considered to be unlikely. Available data indicates that this product is not harmful. However product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.

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

Skin Contact:

Short Term Exposure: Significant dermal exposure is considered to be unlikely. Available data indicates that this product is not harmful. It should present no hazards in normal use. However product may be mildly irritating, but is unlikely to cause anything more than mild discomfort which should disappear once contact ceases.

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

Eye Contact:

Short Term Exposure: Exposure via eyes is considered to be unlikely. This product may be mildly irritating to eyes, but is unlikely to cause anything more than mild discomfort which should disappear once product is removed.

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

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Ingestion:

Short Term Exposure: Significant oral exposure is considered to be unlikely. However, this product may be mildly irritating to mucous membranes but is unlikely to cause anything more than mild transient discomfort.

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

Carcinogen Status:

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

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

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

Section 12 - Ecological Information

This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

Effects on birds: DCPA appears to be moderately toxic to some young wildfowl, and practically non-toxic to the young of other species and to adult birds. The LD₅₀ in young bobwhite quail is 5500 mg/kg. Young mallards and young quail were more sensitive to the herbicide than adult birds. Diets containing about 250 mg/kg caused heavier mortality to young ducks in the first 5 days. Older birds had a higher survival rate.

Effects on aquatic organisms: DCPA is slightly toxic to practically non-toxic to fish depending on the species. It is practically non-toxic to bluegill sunfish and slightly toxic to rainbow trout. The compound is practically non-toxic to estuarine and marine organisms (invertebrates and some fish). The available data suggest that DCPA poses no hazard to endangered aquatic species.

Effects on other organisms: At high doses of DCPA, there was only 3% bee mortality. Thus, DCPA is only slightly toxic to bees.

Environmental Fate:

Breakdown in soil and groundwater: DCPA is moderately persistent. The half-life is from 14 to 100 days in most soils. However, moisture is essential for degradation. In one study, there was no apparent build up of pesticide residues in soil even after repeated application. The DCPA concentration declined slowly to 75 or 80% in 28 days. Later sampling showed a continued decline of DCPA and its breakdown products. The DCPA metabolite, tetrachloro-terephthalic acid (TTA or diacid), is much more water soluble than the parent compound, and is subject to leaching in some soils. This metabolite has been detected in groundwater in the onion growing areas of eastern Oregon and in several other states in the U.S.A. as well.

Breakdown in water: There is virtually no degradation of DCPA in water ranging from moderately acidic to moderately alkaline (pH 5.0 to pH 9.0). Breakdown is due to the action of sunlight and the half-life is greater than 1 week.

Breakdown in vegetation: Plants may metabolize DCPA to the same two breakdown products that are seen in soils, with the proportion varying in different species. DCPA affects the seed and pre-emergence stage, but has little effect on crops or weeds after they have emerged. Limited information suggests that plants may remove the chlorine molecules of DCPA. In one study, pine trees took up nearly 1% of the soil applied chemical. The majority of the compound taken up by the trees remained in the root system, where it was rapidly diluted.

Section 13 - Disposal Considerations

Disposal: Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

Section 14 - Transport Information

UN Number: This product is not classified as a Dangerous Good by ADG, IATA or IMDG/IMSBC criteria. No special transport conditions are necessary unless required by other regulations.

Section 15 - Regulatory Information

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

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 (7th edition)

AICS

Australian Inventory of Chemical Substances

SAFETY DATA SHEET

Issued by: FMC Australasia Pty Ltd

Emergency: 1800 033 111 (24 hours - Australia wide)

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)



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)
R-Phrase	Risk Phrase
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.

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" (December 2011)

SAFETY DATA SHEET