

DACTHAL®

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: DACTHAL®
Other identifier: Chlorthal-dimethyl 750 WP
Recommended use: Herbicide
Restrictions on use: Agriculture

Supplier: Universal Crop Protection (Pty) Ltd.
Co. Reg. No.: 1983/008184/07
PO Box 801,
Kempton Park, 1620, South Africa
Telephone: (011) 396 2233
Fax: (011) 396 4666
Website: www.villacrop.co.za

Emergency telephone numbers:
24 Hr Transport / Spill emergency no:
(Hazcall24) +27 86 044 4411
(Client: Villa Crop Protection)
Griffon Poison Information Centre +27 82 446 8946
(Client: Villa Crop Protection)
Poisoning Emergency telephone numbers:
Griffon Poison Information Centre +27 82 446 8946
Poisons Information Centre +27 861 555 777

2. HAZARDS IDENTIFICATION

| UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008 | | |
|--|-------------------|--------------|
| Hazard classes | Hazard categories | H-statements |
| Environment | | |
| Aquatic Chronic | Aquatic Chronic 2 | H411 |

The most important adverse effects:
Physiochemical effects: None known.
Human health effects: None known.
Label elements:



Signal word: None.
Hazard statements:
H411: Toxic to aquatic life with long lasting effects.
Precautionary statements:
P273: Avoid release to the environment.
P391: Collect spillage.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards:

None known.

Toxicity:

Classification according to GHS: Unclassified

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Composition:

| Chemical name | CAS | Conc. (m/m%) | Classification EC 1272/2008 |
|--------------------|-----------|--------------|-----------------------------|
| Chlorthal-dimethyl | 1861-32-1 | 75 % | Aquatic Chronic 2 (H411) |

4. FIRST AID MEASURES

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure.

Inhalation: Avoid breathing dust. Move to fresh air. Call a physician if symptoms develop or persist.

Skin: Wash off immediately with soap and plenty of water. Take off contaminated clothing and wash before reuse. Get medical attention if irritation develops and persists.

Eyes: Immediately flush eyes with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion: Rinse mouth. Get medical attention if symptoms occur. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Have person sip a glass of water if able to swallow.

Anticipated acute effects: None known.

Anticipated delayed effects: None known.

Most important symptoms / effects: Direct contact with eyes may cause temporary irritation.

Advice to physician: Treat symptomatically and supportively. No specific antidote known.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂). Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable Extinguishing Media: None known.

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Specific hazards: Hazards or hazard products arising from combustion.

Special fire-fighting procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Remain upwind of fire. Avoid inhaling hazardous vapours and fumes from burning materials. Remove container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal. Contain fire control agents for later disposal. Avoid pollution of waterways by run-off from the site.

Personal protective equipment: Wear NIOSH / MSHA approved self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid contact with eyes. Do not breathe in spray mist or dust.

Protective equipment: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

Emergency procedures: Alert firefighting personnel, evacuate unprotected personnel and animals.

Environmental Precautions: Prevent spilled product from entering sewers, waterways or ground water. This product is classified as harmful to aquatic organisms. Any spillages or uncontrolled discharges into watercourses should be reported immediately to the police and the Department of Water / Environmental Affairs.

Methods and Materials for Containment: Contain spilled product.

Methods and Materials for Clean-up: Contain spilled product by picking up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal. Do not create a powder cloud by using a brush or compressed air. Label containers with the contents and dispose of according to local regulations. Do not place spilled material back in original container. Do not re-use spilled material. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. Collect washings and add to the drums already collected. Do not flush spilled material or

washings into drains or waterways. See section 13 for disposal considerations.

7. HANDLING AND STORAGE

Handling:

Precautions for safe handling: Avoid contact with eyes. Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. Keep containers closed when not in use. In the case of contact with the product refer to First Aid Measures – Section 4.

General occupational hygiene: Practice good hygiene when using this material. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Launder all clothing before it is re-used.

Storage:

Conditions for safe storage: Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original, labelled container, tightly closed in an isolated, dry, cool and well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs, feed and water supplies. Avoid cross contamination with other pesticides and fertilisers.

Incompatible substances and mixtures: Refer to product label.

Packaging material: Metal drums.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration

US. OSHA Table Z-3 (29 CFR 1910.1000)

| Components | Exposure limits | Type of exposure limit | Form |
|---------------|----------------------|------------------------|---------------------|
| Nuisance dust | 5 mg/m ³ | TWA | Respirable fraction |
| | 15 mg/m ³ | TWA | Total dust |

Engineering Controls:

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OELs or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire and other applicable regulations.

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Personal Protective Equipment:

Respiratory Protection: For most well-ventilated conditions, no respiratory protection should be needed. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand Protection: The use of chemically protective gloves is usually recommended when working with chemicals to prevent against skin contact.

Eye Protection: Wear safety glasses with side shields (or goggles). Contact lenses are not protective eye devices.

Skin and Body Protection: Long-sleeved shirt and long pants or coveralls, socks and closed toe shoes are required.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Fine off-white (grey) to tan powder.

Odour: Slightly aromatic odour.

Odour threshold: Not available.

pH (1% aqueous dilution): 7 - 8.

Melting point: 156 °C.

Freezing Point: Not available.

Boiling Point: A.i. decomposes at 360 – 370 °C.

Flash Point: Not applicable to solids.

Flammability: Not applicable to solids.

Upper / lower explosion limits: Not applicable to solids.

Vapour Pressure (mm Hg): Not available.

Relative Vapour Density: Not available.

Bulk density: 0.25 g/cm³

Solubility: Disperses in water.

n-octanol / water partition coefficient: 4.28
(Chlorthal-dimethyl)

Auto-ignition temperature: Not applicable to solids.

Decomposition temperature: Not available.

Viscosity: Not applicable to solids.

10. STABILITY AND REACTIVITY

Chemical stability: The product is stable for two years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50 °C, preferably below 30 °C, and not for prolonged periods in direct sunlight.

Reactivity: None known.

Possibility of hazardous reactions: Unlikely to occur.

Conditions to avoid: Contact with incompatible materials.

Incompatible materials: Strong acids. Strong bases.

Hazardous decomposition products: No hazardous decomposition products are known. This product may emit hazardous fumes of hydrogen chloride, carbon oxides, and unidentified organic compounds when it is heated excessively or burned.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral LD₅₀ > 10,000 mg/kg (rat)

Dermal LD₅₀ > 10,000 mg/kg (rabbit)

Inhalation LC₅₀ > 5.7 mg/l (rat)

Skin Irritation / Corrosion: Prolonged skin contact may cause temporary irritation.

Eye Damage / Irritation: Direct contact with eyes may cause temporary irritation.

Skin Sensitization: Not a sensitizer.

Respiratory Sensitization: Not a respiratory sensitizer.

Reproductive cell mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: A micro-contaminant in Dacthal, Hexachlorobenzene (HCB), has been found to be carcinogenic in several studies conducted for IARC and NTP. Chlorthal-Dimethyl has been classified by EPA as a Group C, possible human carcinogen.

Reproductive toxicity: Not calculated.

Specific target organ toxicity – single exposure: Not calculated.

Specific target organ toxicity – repeated exposure: Not calculated.

Aspiration hazard: Not calculated.

Chronic Effects: Prolonged inhalation may be harmful.

POTENTIAL ADVERSE EFFECTS:

Skin: Mild but reversible skin irritation.

Eyes: Mild but reversible eye irritation.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

Chlorthal-dimethyl technical:

Fish:

LC₅₀ (96 h)

Bluegill

(*Lepomis macrochirus*) >100 mg/l

Crustacea:

EC₅₀ (48 h) 20-35 mg/l

ENVIRONMENTAL EFFECTS

Plants: Not available.

Persistence and degradability: Not determined.

Bio-accumulative potential: Not determined.

Mobility in soil: Not determined.

Other adverse effects: Not determined.

13. DISPOSAL CONSIDERATIONS

Waste: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Comply with local legislation applying to waste disposal. The product may be taken to a registered waste disposal site or incineration plant.

Container: Emptied containers retain product residues. Turn the bag inside out. Hold the bag over the spray or mixing tank and rise the bag with running water for thirty seconds. Shake the rinsate off into the tank. Repeat the rinsing twice. Cut the bag into pieces and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the bag to any other parties that may use it as container for foodstuffs. Observe all labelled safeguards until container is destroyed.

14. TRANSPORT INFORMATION

UN Number: 3077

Road Transport ADR/IRD:

Class: 9

Packaging group: III

UN Proper Shipping Name: Environmentally hazardous substance, solid, N.O.S (Chlorthal-dimethyl)

Maritime Transport IMDG/IMO:

Class: 9

Packaging group: III

UN Proper Shipping Name: Environmentally hazardous substance, solid, N.O.S (Chlorthal-dimethyl)

Marine Pollutant (Y/N): Yes

Air transport IATA/ICAO:

Class: 9

Packaging group: III

UN Proper Shipping Name: Environmentally hazardous substance, solid, N.O.S (Chlorthal-dimethyl)

Special / Environmental Precautions: Wedge drums tightly to avoid movement.

Transport in bulk: Refer to MARPOL 73/78, Annex II and the IBC code.

15. REGULATORY INFORMATION

Safety, health and environmental regulations / legislation for the mixture:

OHSA 1993 Regulations for Hazardous Chemical Substances.

Relevant information regarding restrictions: None.

EU regulation: Regulation EC1272/2008 (EU-GHS/CLP)

Other national regulations: None.

Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

Packaging: Packed in 25 kg plastic bags labelled according to South African regulations and guidelines.

Other hazard statements, abbreviations and explanations:

H402: Harmful to aquatic life.

IATA: International Air Transport Association.

IBC: International Bulk Chemical.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization.

LD₅₀ value: The median lethal dose or the amount of a toxic agent that is sufficient to kill 50 percent of a population within a certain period of time.

OEL/RL: Occupational exposure limit-recommended limit.

TWA: Time-weighted average – The average exposure over a specified period, usually a nominal eight hours.

ST/STEL: Short-term exposure limits.

Disclaimer: The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide

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general guidance as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.