



Material Safety Data Sheet

This material is hazardous according to criteria of NOHSC.
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail.

1. Identification of the substance/preparation and of the company/undertaking

Product Name: KELTHANE (R) MF MITICIDE

Synonyms: Crop Care MSDS No. 41915

(R) Kelthane is a Registered Trade Mark of Rohm & Haas.

Supplier: Crop Care Australasia Pty Ltd
ABN: 061 362 347
Street Address: 77 Tingira Street
Pinkenba, Queensland 4008
Australia

Telephone Number: +61 7 3867 9100
Facsimile: +61 7 3867 9110

Emergency Telephone: 1 800 033 111 (ALL HOURS)

2. Composition/information on ingredients

Product Description: Non-systemic miticide.
Brown liquid with a freshly cut hay odour.

Dicofol 115-32-2	43% (480 g/L)	R21/22 R38 R43
Ethyl alcohol 64-17-5	1-9%	R11
Surfactant 9036-19-5	1-9%	R22 R41 R38

3. Hazards identification

Risk Phrases: Harmful in contact with skin and if swallowed. Irritating to eyes and skin. May cause sensitisation by skin contact. Very toxic to aquatic organisms.

Poisons Schedule: S5 Caution.

Product Name: KELTHANE (R) MF MITICIDE
Substance No: 000504191501

Issued: 06/08/2001 **Version:** 1



Material Safety Data Sheet

4. First-aid measures

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126; New Zealand 03 474 7000).

- Inhalation:** Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.
- Skin Contact:** If skin contact occurs, immediately remove contaminated clothing and wash skin thoroughly. If swelling, redness, blistering or irritation occurs seek medical assistance.
- Eye Contact:** If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.
- Ingestion:** Rinse mouth with water. If swallowed, give a glass of water to drink. If vomiting occurs give further water. Seek medical advice. (Note: This first aid instruction supersedes any advice given previously, which may have included advice to 'Induce vomiting'. The change follows the National Registration Authority's adoption of recommendations made by the Therapeutic Goods Administration.)

Notes to physician: Treat symptomatically.

5. Fire-fighting measures

- Specific Hazards:** Flammable liquid. Avoid all ignition sources. All potential sources of ignition (open flames, pilot lights, furnaces, spark producing switches and electrical equipment etc) must be eliminated both in and near the work area. Do NOT smoke. Flameproof equipment is necessary in all areas where this chemical is being used. Nearby equipment must be earthed. Vapour may travel a considerable distance to source of ignition and flash back.
- Fire-fighting advice:** On burning will emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.
- Suitable Extinguishing Media:** Water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

6. Accidental release measures

SMALL SPILLS: Wear protective equipment to prevent skin and eye contact. Avoid breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert

Product Name: *KELTHANE (R) MF MITICIDE*
Substance No: *000504191501*

Issued: *06/08/2001* **Version:** *1*



Material Safety Data Sheet

material). Collect and seal in properly labelled containers for disposal.

LARGE SPILLS: Shut off all possible sources of ignition. Wear protective equipment to prevent skin and eye contact. Avoid breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). If contamination of crops or waterways has occurred advise emergency services or State Department of Agriculture.

7. Handling and storage

Handling advice: Avoid skin and eye contact and breathing in vapour. Keep out of reach of children.

Storage advice: Do NOT store near naked flames. Store in the closed, original container in a cool, well-ventilated area. Do NOT store for prolonged periods in direct sunlight.

8. Exposure controls/personal protection

Occupational Exposure Limits:

No value assigned for this specific material by the National Occupational Health and Safety Commission. However, supplier recommended Exposure Standard:

Dicofol*: 8hr TWA = 0.1 mg/m³, 15 min STEL = 0.3 mg/m³, Sk

*Supplier recommended.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) – the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health or, not cause undue discomfort to, nearly all workers.

`Sk' Notice – absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

Engineering Control Measures:

Product Name: *KELTHANE (R) MF MITICIDE*
Substance No: *000504191501*

Issued: *06/08/2001*

Version: *1*



Material Safety Data Sheet

IN THE WORKPLACE: Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. Use with local exhaust ventilation or while wearing organic vapour/particulate respirator. Keep containers closed when not in use.

Personal Protective Equipment:

Orica Personal Protection Guide No. 1, 1998: H - OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES (Short), RESPIRATOR.

MANUFACTURE, PACKAGING AND TRANSPORT: Wear overalls, chemical goggles and impervious gloves. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

PREPARATION AND USE OF PRODUCT: Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. Avoid contact with eyes and skin. Do not inhale spray mist. When opening the container and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves, face shield or goggles. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use wash gloves, face shield or goggles and contaminated clothing.

9. Physical and chemical properties

Physical state:	Liquid
Colour:	Brown
Odour:	Freshly cut hay.
Odour Threshold:	>100
Solubility:	Dispersible in water.
Specific Gravity:	1.12
Relative Vapour Density (air=1):	<1
Vapour Pressure (20 °C):	N Av
Flash Point (°C):	38
Flammability Limits (%):	3.5-19.0
Autoignition Temperature (°C):	N Av
% Volatile by Volume:	N Av
Solubility in water (g/L):	N Av
Melting Point/Range (°C):	N Av
Boiling Point/Range (°C):	N Av
Decomposition Point (°C):	N Av
Sublimation Point (°C):	N App
pH:	N App
Viscosity:	N Av
Partition Coefficient:	LogPow (Dicofol): 4.3

10. Stability and reactivity

Stability: Incompatible with acids , alkalis , iron and mild steel . Product is stable for at least 2 years under ambient storage conditions.

Product Name: **KELTHANE (R) MF MITICIDE**
Substance No: **000504191501**

Issued: **06/08/2001**

Version: **1**



Material Safety Data Sheet

11. Toxicological information

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: Swallowing can result in nausea, vomiting and abdominal pain. Swallowing large amounts may result in in-coordination and fatigue, fever, convulsions and coma.

Eye contact: A moderate eye irritant.

Skin contact: Contact with skin will result in irritation. A skin sensitiser. Repeated or prolonged skin contact may lead to allergic contact dermatitis. Some component/s of this material can be absorbed through the skin with resultant toxic effects.

Inhalation: Breathing in mists or aerosols may produce respiratory irritation.

Long Term Effects:

Evidence from animal tests indicate that repeated or prolonged exposure to chlorinated insecticides could result in liver and nervous system effects and possible adrenal, kidney and heart injury.

Toxicological Data:

No LD50 data available for the product. However, for the constituent DICOFOL (Kelthane technical):

Oral LD50 (rat):	578-595 mg/kg.
Oral LD50 (mice):	669-675 mg/kg.
Dermal LD50 (rat):	>5,000 mg/kg.
Dermal LD50 (rabbit):	2,000-5,000 mg/kg.
Inhalation LC50 (rat):	>5 mg/L/4hr.
SKIN:	Moderate irritant (rabbit). A skin sensitiser (guinea pig).
EYES:	Moderate irritant (rabbit).

Dicofol caused increased liver growth and enzyme induction in the liver, adrenals and urinary bladder at 50 ppm in a rat 2-year dietary study. The No Observable Effect Level was 5 ppm (0.22 mg/kg bw/day).

No evidence of carcinogenicity was observed in long-term studies in rats. A 2-year carcinogenicity study in mice showed an increased incidence of liver tumours in male mice only, at a dietary level of 264 ppm (40 mg/kg bw/day).

Negative in a battery of mutagenicity assays.

No developmental nor reproductive effects in the rat and rabbit, in the absence of maternal toxicity.

ADI (Acceptable Daily Intake) for humans is 0.001 mg/kg bw/day.

12. Ecotoxicological information

Avoid contaminating waterways.

For DICOFOL:

Product Name: *KELTHANE (R) MF MITICIDE*
Substance No: *000504191501*

Issued: *06/08/2001*

Version: *1*



Material Safety Data Sheet

Environmental fate, persistence and degradation:

Dicofol undergoes soil photodegradation. The half life in silt loam is 30 days.
Aqueous photodegradation: Half life at pH5 - sensitised conditions is 1-4 days.
Soil adsorption Koc 8073 (sandy loam), 5917 (clay loam).

Aquatic toxicity:

Very toxic to aquatic organisms. Risk of bioaccumulation in an aquatic species is high.
Log Octanol/Water Partition Coefficient: 4.3

48hr EC50 (Daphnia magna):	0.14 mg/L.
96hr LC50 (rainbow trout):	0.12 mg/L.
96hr EC50 (algae):	0.075 mg/L.

Terrestrial toxicity:

Non-toxic to bees.

Eggshell thinning and reduced offspring survival has been noted in the mallard duck, American kestrel, ring dove and screech owl exposed to dicofol. The NOEL was 3 ppm.

Dietary LD50 (mallard duck):	1,652 ppm (8 day).
Dietary LD50 (bobwhite quail):	3,010 ppm (8 day).
Oral LD50 (ug/bee):	>50 ug/bee.
Contact LD50 (ug/bee):	>10 ug/bee.

13. Disposal considerations

Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and tree roots. Empty containers and product should not be burnt.

14. Transport information

Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail.

UN No:	1170
Class-primary	3 Flammable Liquid
Packing Group:	III
Proper Shipping Name:	ETHANOL SOLUTION

Hazchem Code:	2[Y]
IERG:	3A1

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Product Name: **KELTHANE (R) MF MITICIDE**
Substance No: **000504191501**

Issued: **06/08/2001** Version: **1**



Material Safety Data Sheet

This material is classified as a Marine Pollutant (P) according to the International Maritime Dangerous Goods Code.

UN No: 1170
Class-primary: 3.1 Flammable Liquid
Packing Group: III
Proper Shipping Name: ETHANOL SOLUTION

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

UN No: 1170
Class-primary: 3 Flammable Liquid
Packing Group: III
Proper Shipping Name: ETHANOL SOLUTION

15. Regulatory information

Classification: This material is hazardous according to criteria of NOHSC.

Xn: Harmful
Xi: Irritant

Risk Phrase(s): R21/22: Harmful in contact with skin and if swallowed.
R36/38: Irritating to eyes and skin.
R43: May cause sensitisation by skin contact.

Safety Phrase(s): S2: Keep out of the reach of children.
S13: Keep away from food, drink and animal foodstuffs.
S24/25: Avoid contact with skin and eyes.

Poisons Schedule: S5 Caution.

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS) or are National Registration Authority (NRA) approved active constituents.

16. Other information

Supplier Material Safety Data Sheet; 1995.

Product Name: *KELTHANE (R) MF MITICIDE*
Substance No: 000504191501

Issued: 06/08/2001

Version: 1



Material Safety Data Sheet

In 'Handbook of Pesticide Toxicology'. Ed. Hayes Jr and Laws Jr. Academic Press, 1991.
ADI List, Commonwealth Department of Health and Family Services. 2001.

Reason(s) for Issue:

Change in First Aid Measures

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Crop Care Australasia Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Crop Care representative or Crop Care Australasia Pty Ltd at the contact details on page 1.

Crop Care Australasia's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

Product Name: *KELTHANE (R) MF MITICIDE*
Substance No: *000504191501*

Issued: *06/08/2001*

Version: *1*