

1. IDENTIFICATION

Product Identifier

Product Name **KELPIE® CLETH-D 240 EC HERBICIDE**
 Product Code(s) **A15780L**

Other Means of Identification

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (CONTAINS CLETHODIM)

Recommended Use: Herbicide

Details of Manufacturer or Importer

SINOCHEM INTERNATIONAL AUSTRALIA PTY LTD
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 Melbourne, Victoria, 3004
 Australia

Telephone +61 3 9520 8888

Emergency Phone Number Australia: 1800 033 111

2. HAZARD IDENTIFICATION

Classification of the Hazardous Chemical: Flammable liquid Category 4
 Aspiration hazard Category 1
 STOT (single exposure) Category 3

Signal Word: DANGER

Hazard Statement(s): H227 Combustible liquid.
 H304 May be fatal if swallowed and enters airways.
 H336 May cause drowsiness and dizziness.

Precautionary Statement(s):

Prevention:

P102 Keep out of reach of children.
 P210 Keep away from heat / sparks / open flames / hot surfaces. No smoking.
 P261 Avoid breathing mist / vapours / spray.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P280 Wear protective gloves / protective clothing / eye protection / face protection.

Response:

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P331 Do NOT induce vomiting.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P321 Specific treatment (see First Aid Measures on Safety Data Sheet).
 P363 Wash contaminated clothing before re-use.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312 Call a POISON CENTER or doctor/physician if you feel unwell.
 P370+P378 In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish.

Storage:

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.

Disposal:

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

Hazard Symbols:



3. COMPOSITION AND INFORMATION ON INGREDIENTS

Substance: Active Ingredient: Clethodim

Mixture:

Identity of Chemical Ingredient	CAS Number	Proportion (w/w)
Clethodim (min 90% w/w)	99129-21-2	226.7 g/L
Mixed aromatics containing <0.1% benzene	-	>60%
Alcohols, C12-14, ethoxylated	68439-50-9	<10%
Ingredients determined not to be hazardous	-	to 100 %

4. FIRST-AID MEASURES

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

Description of Necessary First Aid Measures:

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. If patient finds breathing difficult and

develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Eye contact:

If in eyes, wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Skin contact:

If skin contact occurs, remove contaminated clothing and wash skin with soap and water. If irritation occurs, seek medical advice.

Ingestion:

Rinse mouth with water. If swallowed, do NOT induce vomiting. Never give anything by the mouth to an unconscious patient. Seek immediate medical assistance.

Symptoms Caused by Exposure:

No known symptoms.

Medical Attention and Special Treatment:

Treat symptomatically. Product aspirated into the lungs may cause chemical pneumonitis.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Small fires: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Large fires: Alcohol-resistant foam or Water spray.

Specific Hazards Arising from the Chemical:

This product may burn and/or decompose if exposed to fire. Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide, carbon dioxide, ammonia and oxides of nitrogen.

Special Protective Equipment and Precautions for Fire Fighters:

Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers. Fight fire from safe location. This product should be prevented from entering drains and watercourses.

Hazchem Code:

•3Z

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Isolate spill or leak area immediately. Clear area of all unprotected personnel. Shut off all possible sources of ignition.

Refer to protective measures listed in sections 7 and 8.

Environmental Precautions:

Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and Materials for Containment and Clean Up:

Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and 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). Collect and seal in properly labelled containers or drums for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Classified as a C1 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.

Avoid skin and eye contact and breathing in vapour, mists and aerosols. Thoroughly clean equipment after use. Keep out of reach of children. When using do not eat, drink or smoke.

Take precautionary measures against static discharges.

Conditions for Safe Storage, Including any Incompatibilities:

Store in the closed, original container in a well-ventilated area, as cool as possible and away from children, animals, food, feedstuffs, seed and fertilisers. Do not store for prolonged periods in direct sunlight. Store away from sources of heat or ignition. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control Parameters:

Exposure Standards:

Contains no substances with occupational exposure limit values.

Biological Monitoring:

No specific biological monitoring required.

Engineering Controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Personal Protective Equipment:

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES, RESPIRATOR.



Eye/face protection:

Tightly fitting safety goggles.
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

Skin and body protection:

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace.

Wear as appropriate: overalls.

Hand protection:

Wear protective gloves.

Always wash hands before smoking, eating, drinking or using the toilet.

The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break-through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Respiratory protection:

If determined by a risk assessment an inhalation risk exists, wear an organic vapour/particulate respirator or an air supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Colour:	Light Yellow
Odour:	Faint
Specific gravity:	Not available
pH:	4.0 – 7.0
Melting point / freezing point:	Not available
Boiling Point/Range (°C):	Not available
Flash point (°C):	>60°C (closed cup)
Flammability (solid, gas):	Not applicable

Flammability limit in air:	Not available
Upper flammability or explosive limits:	Not available
Lower flammability or explosive limits:	Not available
Vapor pressure:	Not available
Vapor density:	Not available
Relative density:	Not available
Water solubility:	Emulsifies in water
Solubility(ies):	Not available
Partition coefficient:	Not available
Auto-ignition temperature (°C):	Not available
Decomposition temperature:	Not available
Kinematic viscosity:	Not available
Dynamic viscosity:	Not available

10. STABILITY AND REACTIVITY

Reactivity:

Chemical stability: Stable under normal conditions of use.

Possibility of hazardous Reactions: Hazardous polymerisation will not occur.

Conditions to avoid: Avoid exposure to heat, sources of ignition, and open flame. Avoid exposure to direct sunlight. Avoid exposure to air.

Incompatible materials: Incompatible with strong oxidising agents.

Hazardous decomposition products: Oxides of carbon. Oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

Health Effects from Likely Routes of Exposure:

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 central nervous system depression. If the victim is showing signs of central system depression (like those of drunkenness) there is greater likelihood of the patient breathing in vomit and causing damage to the lungs.
Eye contact:	May be an eye irritant.
Skin contact:	Contact with skin may result in irritation.
Inhalation:	Vapours may cause drowsiness and dizziness.

Acute toxicity:	No LD ₅₀ data available for the product. However, for the active constituent: Oral toxicity: LD ₅₀ (rat): 1000-2000 mg/kg Dermal toxicity: LD ₅₀ rabbit: >5000 mg/kg Inhalation toxicity: LC ₅₀ (4h), rat: >5.05 mg/L Eye irritation: Eye irritation clearing in 7 days or less. Skin irritation: Moderate irritation at 72 hours (rabbit). Skin sensitisation: This material was not a skin sensitiser in the Buehler Guinea Pig Sensitisation Test.
Chronic effects:	Studies with high doses of clethodim technical in mice, rats and dogs, indicated decreased body weights, increased liver size (increased liver weights and hypertrophy) and anaemia (decreased hemoglobin, hematocrit, or erythrocyte counts).
Mutagenicity:	Clethodim technical does not present any genetic hazard to intact animal systems.
Carcinogenicity:	No treatment related increases in neoplasms were observed in any study with clethodim technical.
Reproductive toxicity:	No reproductive toxicity was observed in a study with rates exposed to clethodim technical for two generations. Developmental toxicity in rats and rabbits was observed only at maternally toxic dose levels of clethodim technical.
Specific Target Organ Toxicity (STOT) - single exposure:	Specific target organ toxicant single exposure – Category 3
Specific Target Organ Toxicity (STOT) - repeated exposure:	No data available
Aspiration hazard:	This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage

12. ECOLOGICAL INFORMATION

Ecotoxicity:	Based on data for clethodim technical:		
Toxicity to fish:	Bluegill sunfish	96 hr LC ₅₀ :	120 mg/L
	Rainbow trout	96 hr LC ₅₀ :	67 mg/L
Toxicity to daphnia and other aquatic invertebrates:	<i>Daphnia magna</i>	48 hr LC ₅₀ :	120 mg/L
Toxicity to algae:	Fresh water algae	5 day EC ₅₀ :	57.8 mg/L
Toxicity to soil dwelling organisms:	Earthworm	Acute LC ₅₀ :	454 mg/kg soil
Toxicity to bees:	Honey bee (<i>Apis mellifera</i>)	Acute LD ₅₀ :	>100 µg/bee (contact)
Toxicity to birds:	Bobwhite quail (oral, single dose)	LD ₅₀ :	> 2,000 mg/kg
	Mallard duck (dietary)	LC ₅₀ :	> 6,000 mg/kg diet
Persistence/degradability:	Half-life, soil	1 - 3 days	
	Half-life, water	300 days	pH 7, abiotic degradation

Mobility in Soil:

Koc 1.08 – 93 mL/g

Bioaccumulative Potential: No data available

Other Adverse Effects: No information available

13. DISPOSAL CONSIDERATIONS

Safe Handling and Disposal Methods: Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.

Disposal of Contaminated Packaging: 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 deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots in compliance with relevant local, state or territory government regulations. Do not burn empty containers or product.

For refillable container, empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

14. TRANSPORT INFORMATION

ADG

UN number: 3082
 Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS CLETHODIM)
 Class: 9
 Packing group: III
 Hazchem Code: •3Z
 Remarks: Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported by road or rail in packagings, IBC's, or any other receptacle not exceeding 500 kg(L).

IATA-DGR

UN number: 3082
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(CONTAINS CLETHODIM)
Class: 9
Packing group: III
Packing instruction (cargo aircraft): 964
Packing instruction (passenger aircraft): Y964
Environmentally hazardous: Yes

IMDG-Code

UN number: 3082
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(CONTAINS CLETHODIM)
Class: 9
Packing group: III
EmS Code: F-A
S-F
Marine pollutant: Yes

15. REGULATORY INFORMATION

APVMA Product Registration Number: 81059
Poisons Schedule (SUSMP): Schedule 5

16. OTHER INFORMATION

Date of preparation or review:

Full text of abbreviations and acronyms:

ADG Australian Dangerous Goods Code
APVMA Australian Pesticides & Veterinary Medicines Authority
EmS Emergency Schedule
IATA International Air Transport Association
ICAO International Civil Aviation Organization
IMDG International Maritime Dangerous Goods
LD₅₀ Lethal Dose to 50% of a test population (Median Lethal Dose)
LC₅₀ Lethal Concentration to 50 % of a test population
MARPOL International Convention for the Prevention of Pollution from Ships
NO(A)EL No Observed (Adverse) Effect Level
n.o.s. Not Otherwise Specified
OECD Organization for Economic Co-operation and Development
PBT Persistent, Bioaccumulative and Toxic substance
SDS Safety Data Sheet
STEL Short Term Exposure Limit - the airborne concentration of a particular substance calculated as a time-

weighted average over 15 minutes, 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 of, nor cause undue discomfort to, nearly all workers.

SUSMP Standard for the Uniform Scheduling of Medicines and Poisons

TWA The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

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