



Safety Data Sheet

In accordance with Safe Work Australia

1. Product identifier & identity for the chemical

Product Identifier	Choice Clodinafop Herbicide
Active Constituent	240 g/L Clodinafop-Propargyl 60 g/L Cloquintocet-Mexyl solvents: 575 g/L Liquid Hydrocarbons 100 g/L N-Methyl-2-Pyrrolidone
Other means of Identification	Agricultural herbicide. GROUP A HERBICIDE Grow Choice product code number: 2011 AVPMA registered number: 65604
Recommended use of the chemical and restrictions on due	For the control of Wild Oats, Paradoxa Grass (Annual Phalaris), Canary Grass and Annual Ryegrass in Wheat. Highly active on Wild Oats and can be mixed with many broadleaf herbicides as per the Directions for Use Table.
Suppliers name, address and phone number:	Grow Choice Pty Ltd 113 Fitzroy Street TAMWORTH NSW 2340 Phone: 02 6766 3979 1800 817 676 Fax: 02 6766 2922 Email: admin@growchoice.com.au
Emergency phone number:	In Case Of Emergency Dial 000
Poisons Information Centre	Phone: 13 11 26 and speak to a Poisons Information Specialist. Fax: +61 2 9845 3597 http://www.chw.edu.au/poisons/contact.htm

2. Hazard Identification (continued on page 2)

- Classified as **HAZARDOUS** in accordance with the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004) 3rd Edition and the Globally Harmonized System of Classification and Labelling of Chemicals (the GHS).
- Considered **non-dangerous** for road and rail transport by the Australian Code for the Transport of Dangerous Goods Road and Rail (August 2014 edition)
- Considered **DANGEROUS** for transport by sea and air in accordance with the IMDG Code 37-14 (refer Section 14)

Summary of Hazardous Identifications

IMDG,IATA UN number: **UN3082**
Poisons Schedule number: **S6**

GHS classification

Eye Irritation – category 2A
Skin Irritation – category 2
Specific Target Organ Toxicity (single exposure) - category 3
Reproductive toxicity – category 1B
Aspiration Hazard – category 1
Acute Toxicity – Oral | Category 4
Sensitisation – Skin | Category 1
Specific Target Organ Toxicity (repeated exposure) - category 2
Hazardous to the aquatic environment (acute) - Category 1
Hazardous to the aquatic environment (chronic) - Category 1

GHS symbol



Signal word

DANGER AND WARNING

General Precautionary Statements.

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use

Prevention Statements

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood
Do not breathe and avoid breathing spray mist.
Wash hands and exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product.
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves, face shield and goggles, cotton overalls buttoned to the neck and wrist, work boots.
Use personal protective equipment as required.

Response Statements

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN: Wash with plenty of soap and water and seek medical advice and attention as soon as possible.
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.

IF exposed or concerned: Get medical advice/attention
 Call a POISON CENTER/doctor if you feel unwell.
 Get medical advice/attention if you feel unwell.
 Specific treatment (see on this label).
 If skin irritation or rash occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 Wash gloves, goggles, face shield and overalls after each day's use. Take off and wash contaminated clothing before reuse.

Storage Statements Refer Section 7
Disposal Statements P501: **Dispose of contents and container in accordance with local, regional and national regulations.**

3. Composition/information on ingredients

Chemical ingredients: CAS number and other unique identifiers: Concentration of ingredients:	Component	CAS No	Proportion (w/v)
	CLOQUINTOCET-MEXYL ACETATE	99607-70-2	60.0 g/L
	CLODINAFOP-PROPARGYL	105512-06-9	240.0 g/L
	PYRIDINE		
	N-METHYL-2-PYRROLIDONE	872-50-4	100.0 g/L
	HYDROCARBON LIQUID	64742-94-5	575.0 g/L

4. First Aid Measures

Swallow	If swallowed, DO NOT induce vomiting. Rinse mouth out with water if patient is conscious. Seek urgent medical attention.
Eye:	If product gets in eyes, remove contact lenses if wearing and wash it out immediately with water for several minutes. Seek medical attention.
Skin:	Remove contaminated clothing and wash affected areas thoroughly with soap and water. Seek medical attention if concerned.
Inhaled	Move affected person to fresh air and keep at rest until recovered. If inhaled remove to fresh air and keep at rest. Obtain medical advice if at all worried. If not breathing give artificial respiration and get medical attention as soon as possible.
Medical Attention and Special Treatment	In Case Of Emergency Dial 000 and/or Poisons Information Centre: Phone: 13 11 26 and speak to a Poisons Information Specialist with a copy of this SDS or chemical Label.
Advice to doctor	Treat systematically
Symptoms Caused by Exposure:	Inhalation: May cause respiratory irritation. Skin Contact: Causes skin irritation, itchiness and reddening. May cause an allergic skin reaction, skin rash and inflammation. Eye Contact: Causes serious eye irritation, stinging, reddening and watering. Ingestion: May cause irritation, reddening and burning sensation of the mouth and throat. May be harmful if swallowed and enters airways.

5. Fire Fighting Measures

Suitable extinguishing media	This product is non-flammable and non-explosive. The product may burn if involved in a fire. Use fire extinguishing methods suitable to surrounding conditions.
Specific hazards arising from the chemical	During a fire this product may release smoke and hazardous decomposition products. Hazardous combustion products include oxides of carbon, nitrogen, nitrogen oxides, other nitrogen compounds, hydrogen cyanide, hydrogen chloride, other chlorine compounds, smoke and water. Product is combustible.
Special protective equipment and precautions for fire fighters	Extinguish warehouse and factory fires using fine-water spray or foam. Closed containers may explode when exposed to extreme heat. Containers close to fire should be removed if safe to do so. Use water spray to cool fire exposed containers. When fighting a major fire wear self-contained breathing apparatus and protective equipment. Do not allow fire water to enter drains.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	In case of spillage it is important to take all steps necessary to: Instruct and ensure all bystanders to keep away from and upwind of spill/leak. Avoid eye and skin contact; Do not breath dust; Ensure adequate ventilation; Refer to Section 8 for Personal Protection Equipment (PPE).
Environmental precautions	Avoid contamination of waterways.
Methods and materials for containment and cleaning up	Reposition any leaking containers so as to minimise leakage. Dam and absorb spill with an absorbent material (eg sand or soil) or proprietary absorbent such as vermiculite. Shovel the absorbed spill into drums. Collect in a suitable, closed container to dispose and clean the spilled area with water.

7. Handling and Storage (continued on page 4)

Precautions for safe handling	Safe work practices are recommended. Avoid contact with eyes and skin. When opening the container and preparing spray wear appropriate PPE (refer Section 8). Do not spray under high wind conditions. Hygiene measures: When using products, do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash hands thoroughly with soap and water after use and before eating, drinking, smoking/using tobacco, chewing gum,
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using the toilet or applying cosmetics.
 After each day's use, wash gloves, face shield or goggles and contaminated clothing.
 Avoid contact with eyes and skin.
 Keep out of reach of children, unauthorised persons and animals.
 Store in tightly sealed original containers in a dry secure place away from fertilizers, feed and food.
 Store out of direct sunlight and extreme temperature.
 Always read the label and any attached leaflet before use.

Conditions for safe storage, including any incompatibilities:

8. Exposure controls/personal protection

Exposure Standards:

872-50-4 2-Pyrrolidinone, 1-methyl-

NES	STEL: 309 mg/m ³ , 75 ppm TWA: 103 mg/m ³ , 25 ppm Sk
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Control parameters – exposure standards, biological monitoring

Swallowing is unlikely under normal conditions of usage. Skin uptake of **clodinafop-propargyl technical** and **cloquintocet-mexyl technical** can occur. Inhalation of spray mist is a possible route of exposure. This product is diluted with water prior to use as a spray. This diluted form is less toxic y all routes of exposure.

Appropriate engineering controls

Control process conditions to avoid contact. Use in a well-ventilated area only. Use local exhaust ventilation to keep exposure levels below the exposure limits above. Keep stored in original container in a cool, well ventilated area, keeping the lid closed at all-times whilst in storage.

Personal protective equipment (PPE):

When opening the container, preparing the spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC chemical resistant and face shield or goggles.

When using the prepared spray cotton overalls buttoned to the neck and wrist and a washable hat and optional once chemical is prepared for use, elbow length PVC chemical resistant and face shield or goggles if protected from spray drift/contamination.

Face and Eye Protection: Face shield or goggles.

Clothing: Cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat.

Gloves: Elbow-length chemical resistant PVC gloves.

Respiratory: If airborne concentrations are likely to exceed the exposure standards above or if exposed to dust, an AS/NZS 1715/1716 approved respirator should be worn.

Recommended to use Australian and New Zealand Standard PPE:

Overalls	AS 3765, Clothing for protection against Hazardous chemicals
Gloves:	AS/NZS 2161, Industrial safety gloves and mittens (not electrical and medical gloves)
Goggles and face shield	As/NZS 1337, Eye protectors for industrial applications.
Footwear	AS/NZS 2210, Occupational protective footwear
Respirators	AS NZS 1715 Selection, Use and Maintenance of Respiratory Protective Devices AS/NZS 1716, Respiratory Protective Devices

Requirements concerning special training

Check State and/or Territory regulations that require people who use pesticides in their job or business to have adequate training in the application of the materials.

9. Physical and chemical properties

Appearance	Light to dark brown liquid.
Odour	Aromatic solvent odour
pH (1% deion. Water);	4 – 8
Melting point	< - 100C
Flash point	>700C (closed cup)
Flammability	Non-flammable
Behavior in water	Emulsifiable
Viscosity	22.67 mPas at 200C
Surface tension	34.0 -34.4 mN/m
Corrosiveness	Not corrosive
Combustibility	combustible
Explosive properties	Not explosive
Specific gravity	1.06 – 1.10 g/cm ³ (at 200C)

10. Stability and Reactivity

Hazardous Hazardous polymerisation is not possible. Stable at ambient temperature and under normal conditions of use as per the directions within this SDS and Directions for Use.

Polymerization

Materials and Conditions to Avoid. Strong oxidising agents, strong acids and strong bases. Heat, sparks, open flames, hot surfaces and direct sunlight.

Hazardous Reaction Oxides of carbon, nitrogen, nitrogen oxides, other nitrogen compounds, hydrogen cyanide, hydrogen chloride, other chlorine compounds, smoke and water.

11. Toxicological information

ACUTE:

Toxicity

Swallowed:	LOW TOXICITY Tests on rats using an almost identical Clodinafop 240 EC formulation indicate low toxicity following single oral doses of the undiluted product (LD ₅₀ > 2,276 mg/kg)
Dermal Absorption	LOW TOXICITY Tests on rats using an almost identical Clodinafop 240 EC formulation indicate low toxicity due to skin contact with the undiluted product. (LD ₅₀ > 4,000 mg/kg)
Inhaled	LOW TOXICITY Tests on rats using similar Clodinafop 240 EC formulation indicate low toxicity due to inhalation of the undiluted product. (LC ₅₀ (4 h) > 3,500 mg/m ³)

Irritation:

(Based on studies with rabbits.)

Eye:

MODERATE IRRITANT

Skin:

MODERATE IRRITANT

Skin Sensitisation:

(Based on test with guinea pigs using an almost identical Clodinafop 240 EC formulation) **POTENTIAL SKIN SENSITISER** (i.e. contact allergenic material)

CHRONIC:

Clodinafop-propargyl technical has been extensively tested on laboratory mammals and in test-tube systems. No evidence of mutagenic, teratogenic or reproductive effects was obtained.

Clodinafop-propargyl technical Induced liver toxicity and benign and malignant liver tumors in mice fed high daily doses over their lifetime. Rats fed high doses showed mild liver toxicity but did not develop tumors while no liver effects were observed for dogs fed high doses. The liver tumor finding occurring at high doses is believed due to **Clodinafop-propargyl** inducing proliferative effects genetically pre-existing in mice and has no relevance to humans because the cellular changes which underlie it are rodent-specific and have been shown experimentally not to occur in primates.

Cloquintocet-mexyl technical has been extensively tested and no evidence of mutagenic, carcinogenic teratogenic, or reproductive effects was obtained. The **aromatic hydrocarbon mixture** may cause central nervous system depression and narcosis.

12. Ecological information

Ecotoxicity	Clodinafop-propargyl technical is practically non-toxic to birds, crustaceans, earthworms, soil microorganisms and bees, and highly toxic to fish (LC ₅₀ (96 h) = 0.4 mg/L for rainbow trout. The formulated product is moderately toxic to fish and aquatic invertebrates (LC ₅₀ (96 h) = 4.9 mg/L for trout)
Persistence and degradability	
Bio accumulative potential	
Mobility in soil	Cloquintocet-mexyl technical is practically non-toxic to birds, fish, crustaceans, earthworms, soil microorganisms and bees

13. Disposal considerations

Disposal of product	On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).
Disposal of Container	Do not use this container for any other purpose. Triple rinse containers, add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. drumMUSTER is the national program for the collection and recycling of empty, cleaned, non-returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMUSTER symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, puncture or shred and bury containers in local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

14. Transport information

General Transport Information	It is considered good practice not to transport agricultural chemical products with food, food related materials and animal feed products.
Land	Considered non-dangerous for road and rail transport by the Australian Code for the Transport of Dangerous Goods Road and Rail (August 2014 edition)
Sea and Air	Considered DANGEROUS for transport by sea and air in accordance with the IMDG Code 37-14

UN Number: IMDG, IATA UN3082

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Clodinafop-propargyl (ISO))

Dangerous Goods Class: 9 Miscellaneous dangerous substances and articles.

Packing Group: III

Marine pollutant: Yes

Symbol (fish and tree)

EMS Number: F-A,S-F

Hazchem Code: .3Z

Special Provisions: 179, 274, 331, 335, AU01

Limited Quantities: 5L

Packaging & IBCs - Packing Instruction: P001, IBC03, LP01

Packaging & IBCs - Special Packing Provisions: PP1 Portable Tanks & Bulk Containers - Instructions: T7 Portable Tanks & Bulk Containers – Special Provisions: TP1, TP29

15. Regulatory information (continued on page 5)

Poisons Schedule number	6
Safety, health and environmental regulations specific for the product in	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING

question

IMPORTANT: READ THIS LEAFLET BEFORE USING THIS PRODUCT

This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA)

Approval No: 65604/51408

16. Other information

Date of Review

This Safety Data Sheet (SDS) was reviewed 21 January 2017 and replaces the Material Data Safety Sheet dated 9 November 2011.

End of SDS.

Acronyms:

AVPMA: Australian Pesticides and Veterinary Medicines Authority.

GHS: Globally Harmonised system of Classification and Labelling of chemicals

HSIS: Hazardous Substances Information System

NOHSC: National Occupational Health and Safety Commission

CAS No.: unique numerical identifier assigned by Chemical Abstracts Service (division of the American Chemical Society)

STEL Exposure standard - short term exposure limit.

AS/NZS: Australian Standards and New Zealand Standards for Personal protective equipment

ADI: Acceptable Daily Intakes For Agricultural And Veterinary Chemicals

ADG: Australian Dangerous Goods

IMDG: International Maritime Code of Dangerous Goods

IATA: International Air Transport Association

End of SDS**DISCLAIMER:**

This SAFETY DATA SHEET has been developed according to the Work Health and Safety Regulations (WHS Regulations) Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals December 2011. The data, information and recommendations herein ("information") are represented in good faith and believed to be correct as of the date hereof. The purpose of this SAFETY DATA SHEET is to describe product in terms of their safety requirements. Grow Choice Pty Ltd makes no representation of merchantability, fitness for a particular purpose of application, or of any other nature with respect to the information or the product to which the information refers ("the product"). The information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purpose prior to the use of the product. The physical data shown herein are typical values based on the material tested. These values should not be construed as a guaranteed analysis of any specific lot or as guaranteed specification for the product or specific lots thereof.

Due care should be taken to make sure that the use or disposal of this product and/or its packaging is in compliance with Relevant Federal, State and Local Government regulations.