






1. Product identifier & identity for the chemical

Product Identifier	Choice Low Odour Amine 625 Herbicide
Active Constituent	2,4-D PRESENT AS THE DIMETHYLAMINE AND DIETHANOLAMINE SA
Other means of Identification	Agricultural herbicide. Grow Choice product code number: 625 AVPMA registered number: 58915/20L/0704, 58915/110L/0704, 58915/200L/0704, 58915/1000L/0704
Recommended use of the chemical and restrictions on due	For the control of broadleaf weeds in fallow before direct drilling or sowing of cereals and pastures; and in cereal crops, pastures, sugar cane peanuts and non-agricultural areas as per Directions for Use. This is a PHENOXY HERBICIDE that can cause severe damage to susceptible crops such as cotton, grapes, tomatoes, oilseed crops and ornamentals.
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: rfagan@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

Classified as **HAZARDOUS** in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (the GHS).

Not subject to the ADG Code when transported by Road or Rail in Australia, in packages 500kg(L) or less; or IBCs, but classed as **Dangerous by IATA and IMDG when carried by Air or Sea transport** ADG Code: 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Classification of the hazardous chemical	Acute toxicity - category 4 Eye damage - category 1 Hazardous to the aquatic environment (chronic) - category 2
GHS symbol	Corrosive Health Hazards Environmental   
Signal word	Danger
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.
Hazard Statements	Harmful if swallowed H318 Causes serious eye damage H411 Toxic to aquatic life with long lasting effects
Prevention Statements	Wash affected area including hands, arms and face thoroughly with soap and water after handling. Do not eat, drink or smoke when using this product. Wear eye protection/face protection. As/NZS 1337, Eye protectors for industrial applications..
Response statements	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
Storage Statements	Refer to Section 7.
Disposal Statements	Dispose of contents/container in accordance with State and local Regulations. Avoid release to the environment.
Other information	Poison Schedule: S6

3. Composition/information on ingredients

Chemical ingredients: CAS number and other unique identifiers: Concentration of ingredients:	Component	CAS No	Proportion (g/L)
	2,4-D PRESENT AS THE DIMETHYLAMINE AND DIETHANOLAMINE SA	2008-39-1	625 g/L
	Other non-hazardous components including water		375 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 symptoms persist.
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 & get urgent medical attention.
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.

5. Fire Fighting Measures (continued on page 2)

Suitable extinguishing media	Use media suited to burning material.
Specific hazards arising from the chemical	Unusual fire and Explosion hazards: Decomposition products are toxic and corrosive. There is little or no chance of an explosion from this product if involved in a fire. Polymerisation: Product will not polymerise.
Special protective equipment and precautions for fire fighters	Fire fighters should wear Safe Work Australia approved self-contained breathing apparatus (AS/NZS 1715/1716) and full protective equipment. Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of extinguishing agent and spillage safely later. Contamination of water bodies should be avoided.

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.
Environmental precautions	For appropriate personal protection equipment, refer to Section 8. Avoid contamination of waterways, drains and sewers.
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, clay or soil). Shovel the absorbed spill into drums. Final clean up with detergent or degreaser is recommended.

7. Handling and Storage

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, 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.
Conditions for safe storage, including any incompatibilities:	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.

8. Exposure controls/personal protection

Control parameters – exposure standards, biological monitoring	An exposure standard has not been met for this product, although an exposure standard has been set for 2,4-D acid at 10 mg/m ³ .										
Appropriate engineering controls	In industrial situations, concentration values below the TWA value should be maintained. Values may be reduced by process modification, use of local exhaust ventilation, capturing substances at the source or other methods. If you believe airborne concentrations of mist, dusts or vapours are high, you are advised to modify the process or environment to reduce the problem.										
Personal protective equipment (PPE)	When opening the container, preparing the spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC chemical resistant and face shield or goggles. 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. Training as required by State or Local regulations should be adhered to for people who use pesticides in their job or business. Recommended to use Australian and New Zealand Standard PPE: <table> <tr> <td>Overalls</td> <td>AS 3765, Clothing for protection against Hazardous chemicals</td> </tr> <tr> <td>Gloves:</td> <td>AS/NZS 2161, Industrial safety gloves and mittens (not electrical and medical gloves)</td> </tr> <tr> <td>Goggles and face shield</td> <td>As/NZS 1337, Eye protectors for industrial applications.</td> </tr> <tr> <td>Footwear</td> <td>AS/NZS 2210, Occupational protective footwear</td> </tr> <tr> <td>Respirators</td> <td>AS NZS 1715 Selection, Use and Maintenance of Respiratory Protective Devices AS/NZS 1716, Respiratory Protective Devices</td> </tr> </table>	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
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9. Physical and chemical properties (continued on page 3)

Appearance, form, colour and odour	Clear red-brown liquid with ammoniacal odour.
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pH (1% deion. Water);	8.5 – 9.5
Melting point	<0°C
Boiling point	>100°C (for water)
Flash point	Product does not burn.
Specific Gravity	1.254
Volatile component	30%
Flammability	Non combustible material.
Vapour Pressure	16mm Hg (for water), 2,4-D amine salt is non volatile.

10. Stability and Reactivity

Reactivity	Not known.
Chemical stability	Stable
Conditions to avoid	Keep away from strong oxidising agents.
Incompatible materials and possible hazardous reactions	Strong acids, strong alkalis, strong oxidising agents. Reaction of the concentrate or spray mix with acids will precipitate solid 2,4-D acid and largely de-activate the product and cause blockages in spray equipment.
Hazardous decomposition products	Carbon dioxide, carbon monoxide, nitrogen oxides, hydrogen chloride gas, chlorides, water. Hazardous polymerization is not possible.

11. Toxicological information

Information on routes of exposure and symptoms related to exposure	A TWA value of 10 and a STEL value of "not set" has been established for a significant ingredient of this product. Values expressed as mg/m ³ . Exposure values at the STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. Exposure values at the TWA (Time Weighted Average) means the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. See ingredients section on page 1 of this data sheet.
Immediate, delayed and chronic health effects from exposure	No harmful effects are expected if the precautions on the label and this SDS are followed.
Acute Toxicity – Oral	Acute Toxicity - Oral LD50 (rat) 699 mg/kg for 2,4-dichlorophenoxyacetic acid LD50 (rat) 700 mg/kg for dimethylamine LD50 (rat) 710 mg/kg for diethanolamine
Acute Toxicity Dermal	Acute Toxicity - Dermal LD50 (rabbit) >2000 mg/kg
Acute Toxicity - Inhalation	Acute Toxicity - Inhalation LC50 (rat) (4hr) >1.79 mg/l Skin Irritation Not a skin irritant. Skin Sensitisation.
Skin corrosion/irritation	Prolonged contact with the concentrate may cause irritation. Prolonged contact of the concentrate with skin will result in absorption of some 2,4-D which can be harmful.
Serious eye damage/irritation	The concentrate will cause irritation of the eyes. Prolonged contact with the concentrate may cause damage to the eye.
Ingestion	Not a likely route of exposure. Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury. However, swallowing of large amounts may cause injury. Ingestion of the product in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination.
Inhalation	The components of the product are of low volatility and no adverse effects are expected from handling the concentrate. The concentrate is considered harmful by inhalation by Worksafe Australia. A moderate hazard exists from inhalation of spray and care should be taken to avoid inhalation of spray mists
Skin Sensitisation	Product is not a skin sensitizer.
Exposure Levels/Chronic effects	Repeated absorption of relatively large amounts of 2,4-D presents a risk to the liver and kidneys. Carcinogenicity The weight of the evidence is that 2,4-D is not carcinogenic.
Data limitations	The Australian Acceptable Daily Intake (ADI) for 2,4-D for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1 mg/kg/day. (Ref: Comm. Dept. of Health and Ageing, Office of Chemical Safety, 'ADI List', June 2014).

12. Ecological information

Eco toxicity	Half life in soil is typically 7 days.
Persistence and degradability	Loss from soil is principally by microbial degradation.
Bio -accumulative potential	Mobility Rapid degradation in soil prevents significant downward movement under normal conditions.
Mobility in soil	2,4-D amine products do not appear to pose any threat to birds. 2,4-D amine products do not appear to pose any threat to fish or other aquatic organisms other than in very high concentrations. Spray drift can cause damage, read the label for more information. Acute Toxicity - Fish Not toxic to fish. LC50 (96 hr) for rainbow trout is ~100 mg/l. Acute Toxicity – Daphnia LC50 (48hr) for 2,4-D amines is 184 mg/l. Acute Toxicity - Other Organisms Birds: Not toxic to birds. LD50 for mallard ducks is >1000 mg/kg Bees: Not toxic to bees. LD50 104.5 µg/bee. Sewage Treatment Not inhibitory in sewage system, 2,4-D is rapidly biodegraded.

13. Disposal considerations (continued on page 4)

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

It is considered good practice not to transport agricultural chemical products with food, food related materials and animal feed products.

Not subject to the ADG Code when transported by Road or Rail in Australia, in packages 500kg(L) or less; or IBCs, but classed as Dangerous by IATA and IMDG when carried by Air or Sea transport (see details below). ADG Code: 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Hazchem Code: *3Z Special Provisions: 179, 274, AU01 Limited quantities: ADG 7 specifies a Limited Quantity value of 5 L for this class of product. Dangerous Goods Class: Class 9: Miscellaneous Dangerous Goods. Packaging Group: III Packaging Method: P001, IBC03, LP01 Class 9 Miscellaneous Dangerous Goods shall not be loaded in the same vehicle or packed in the same freight container with Dangerous Goods of Class 1 (Explosives).

Packaging and IBCs – Packing instructions: P002, IBC08, LP02

Packaging and IBCs – Special Packing Provisions: PP12, B3

Portable Tanks and Bulk containers – Instructions: T1, BK2

Portable Tanks and Bulk containers – special Provisions: TP33

15. Regulatory information

Poisons Schedule number Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) – Poison Schedule: S6

2,4-d is listed in the Australian Inventory of Chemical Substances (AICS).

16. Other information

Date of Review This Safety Data Sheet (SDS) was completed 17 April 2015 and replaces MSDS 20/04/09.

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)

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

ADI: Acceptable Daily Intakes For Agricultural And Veterinary Chemicals

EMS Number:

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.