


**Section 1: Identification: Product identifier and chemical identity**

<b>Product Identifier:</b>	<b>CHOICE 2,4-D ESTER 680 HERBICIDE</b>
<b>Other Means of Identification:</b>	Agricultural herbicide. Grow Choice product code number: 400 AVPMA registered number: 66472
<b>Recommended use and restrictions on use:</b>	A specially formulated low volatile herbicide for selective control of various weeds in crops, pastures and non-agricultural areas according to the Directions for Use.  This is a PHENOXY HERBICIDE that can cause severe damage to native vegetation and susceptible crops such as cotton, grapes, tomatoes, oilseed crops and ornamentals.
<b>Details of manufacturer or importer:</b>	<b>Grow Choice Pty Ltd</b> ABN 36 161 264 884
<b>Address:</b>	<b>113 Fitzroy Street</b> <b>TAMWORTH NSW 2340</b> <b>AUSTRALIA</b>
<b>Website:</b>	<b>www.growchoice.com.au</b>
<b>Phone Number:</b>	<b>(02) 6766 3979</b>
<b>Emergency Phone Number:</b>	<b>24 hours - 1800 033 111</b>

**Section 2: Hazards identification**

<b>Classification of the substance or mixture in accordance with Australian GHS Regulation:</b>	OT4 Acute Toxicity - Oral: Category 4 SS-1 Sensitization - Skin: Category 1 ED2A Eye Damage/Irritation: Category 2A SC-2 Skin Corrosion/Irritation: Category 2 AC1 Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1  
<b>Signal word:</b>	Warning
<b>Hazard statements:</b>	H302 Harmful if swallowed. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H315 Causes skin irritation. H410 Very toxic to aquatic life with long lasting effects.
<b>General precautionary statements:</b>	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use.
<b>Precautionary statement – Prevention</b>	P264 Wash hands and exposed skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves, clothing, eye and face protection.

<b>Precautionary statement – Response</b>	<p>P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P330 Rinse mouth.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P362 Take off contaminated clothing and wash before reuse.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337+P313 If eye irritation persists: Get medical advice/attention.</p>
<b>Other information:</b>	Poisons Schedule S6.

### Section 3: Composition and information on ingredients

<b>Chemical Nature</b>	Liquid	
<b>Chemical Name</b>	<b>CAS No.</b>	<b>Concentration</b>
2,4-D present as the 2-ethyl hexyl ester	1928-43-4	680 g/L
Other ingredients (non-hazardous)		0-10%

### Section 4: First aid measures

<b>Description of necessary First Aid measures:</b>	<p>In case of poisoning by any exposure route contact a doctor or Poisons Information Centre on 131 126. Have the product label or SDS with you when calling or going for treatment.</p> <p><b>Inhalation:</b> Remove affected person to fresh air until recovered. If symptoms develop or persist, seek medical advice.</p> <p><b>Skin contact:</b> Remove contaminated clothing and launder before re-use. Wash affected areas thoroughly with soap and water.</p> <p><b>Eye contact:</b> If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes. Seek medical advice.</p> <p><b>Ingestion:</b> If swallowed do NOT induce vomiting; seek medical advice immediately and show this container or label or contact the Poisons Information Centre on 13 11 26 (Aust). Make every effort to prevent vomit from entering the lungs by careful placement of the patient.</p>
<b>Advice to Doctor:</b>	Treat symptomatically. If vomiting occurs, surfactants present may cause pulmonary pneumonitis.

### Section 5: Fire fighting measures

<b>Suitable extinguishing equipment:</b>	Water fog, foam, carbon dioxide or dry chemical.
<b>Specific hazards arising from the combustion products:</b>	Although material is not flammable, the concentrate is combustible. May emit toxic fumes of hydrogen chloride or phosgene if involved in fires or exposed to extreme heat.
<b>Special protective equipment and precautions for Fire Fighters:</b>	Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.
<b>Further information:</b>	STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

## Section 6: Accidental release measures

<b>Spills and Disposal</b>	Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite). Collect spilled material and waste in sealable open-top type containers for disposal. On-site disposal of concentrate is not acceptable.
<b>Personal precautions, protective equipment and emergency procedure:</b>	For appropriate personal protective equipment (PPE), refer Section 8.
<b>Environmental precautions:</b>	This product is a herbicide and spills can damage crops, pastures and desirable vegetation. Prevent from entering drains, waterways or sewers.
<b>Methods for cleaning up or taking up – large spillages:</b>	Place damaged containers in recovery bins (if available) and return to manufacturer. If large liquid spills occur, attempt to recover as much spilled material from sumps and bunded areas, as possible, before absorbing remaining material into vermiculite or other absorbent.

## Section 7: Handling and storage

<b>Precautions for safe handling:</b>	Do NOT contaminate dams, rivers or streams, or any other water bodies with pesticide or used containers.
<b>Requirements for safe storage:</b>	Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight.
<b>Other information:</b>	Do not use on or in situations where damage to susceptible crops or plants such as cotton, tobacco, tomatoes, flowers, vines, fruit trees or other susceptible crop plants may result from direct application or drift. Always read the label and any attached leaflet before use.

## Section 8: Exposure controls and personal protection

<b>Occupational exposure limit values:</b>	No exposure standard for this product has been set, however, an exposure standard has been set for 2,4-D acid at 10 mg/m <sup>3</sup> .
<b>Engineering controls:</b>	Handle in well ventilated areas, generally natural ventilation is adequate. Local exhaust ventilation may be required in confined spaces.
<b>Respiratory protection:</b>	Do not inhale spray mist.
<b>Personal protective equipment:</b>	When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles.
<b>Hygiene measures:</b>	After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.
<b>Special training requirements:</b>	Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

## Section 9: Physical and chemical properties

<b>Appearance:</b>	Clear brown liquid	<b>pH:</b>	3.0 – 4.0
<b>Solubility in water:</b>	Disburses in water	<b>Melting point:</b>	-5°C
<b>Flash Point:</b>	130°C, firepoint 220°C	<b>Boiling point:</b>	>200°C (2,4-D 2EHE)
<b>Flammability:</b>	Combustible liquid C1 (AS1940).	<b>Specific gravity:</b>	1.14
<b>Partitioning coefficient: n-octanol/water:</b>	Kow Log P is 5.78 for 2,4-D 2EHE.	<b>Vapour pressure:</b>	0.48 mPa @ 25°C for 2,4-D 2EHE

## Section 10: Stability and reactivity

<b>Chemical stability:</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Keep away from strong oxidising agents, may react violently.
<b>Hazardous polymerisation:</b>	Hazardous polymerisation is not possible

## Section 11: Toxicological information

<b>Inhalation:</b>	When applying the product as a spray avoid breathing in spray mist.
<b>Skin:</b>	Prolonged contact with the concentrate may result in absorption of 2,4-D in harmful amounts. Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis Prolonged or repeated exposure may cause skin sensitisation.
<b>Eye:</b>	May irritate the eyes. Prolonged contact with the concentrate may cause damage to the eye.
<b>Ingestion:</b>	Ingestion of the concentrate in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination.
<b>Serious eye damage / irritation</b>	Not an eye irritant.
<b>Skin Corrosion / irritation:</b>	Mild skin irritant.
<b>Skin Sensitisation:</b>	Prolonged and repeated skin contact may result in skin sensitisation.
<b>Carcinogenicity:</b>	The weight of the evidence is that 2,4-D is not carcinogenic.
<b>Mutagenicity:</b>	The weight of evidence indicates that 2,4-D does not present a mutagenic risk.
<b>Reproductive toxicity:</b>	Data indicates no reproductive effects. Data indicates no teratogenic effects.
<b>Acute toxicity – oral:</b>	LD50 (rat) 720 - 982 mg/kg for 2,4-D 2 ethyl hexyl ester (2EHE).
<b>Acute toxicity - dermal:</b>	LD50 (rat) >2000 mg/kg for 2,4-D 2EHE.
<b>Acute toxicity - inhalation:</b>	LC50 (rat) (4hr) >5.4 mg/l for 2,4-D 2EHE.
<b>Chronic health effects:</b>	Chronic Overexposure: Repeated absorption of relatively large amounts of 2,4-D presents a risk to the liver and kidneys.
<b>Additional toxicological information:</b>	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, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Aust Govt Dept. of Health, Office of Chemical Safety, 'ADI List', December 2015).

## Section 12: Ecological information

<b>Known harmful effects on the environment:</b>	The product is a marine pollutant for sea transport.
<b>Environmental protection:</b>	Spray drift can cause damage, read the label for more information.
<b>Acute toxicity – fish:</b>	LC50 (96hr) for inland silverside is >0.24 mg/l for 2,4-D 2EHE technical LC50 (96hr) for bluegill sunfish is 20 mg/l
<b>Acute toxicity – daphnia:</b>	EC50 (48hr) for daphnia magna is 5.2 mg/l for 2,4-D 2EHE technical.
<b>Acute toxicity – algae:</b>	EC50 (120hr) for Selenastrum capricornutum >30 mg/l for 2,4-D 2EHE technical.
<b>Acute toxicity to other organisms:</b>	Birds: Not toxic to birds. LD50 for mallard ducks is 663 mg/kg Bees: Not toxic to bees. LD50 >100 µg/bee.

## Section 13: Disposal considerations

<b>Product Disposal:</b>	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®).
<b>Container Disposal:</b>	<p>Do not use this container for any other purpose. Triple or preferably pressure rinse inner bladder or containers before disposal. Add rinsings to the spray tank. 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. 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.</p> <p>Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage.</p>

## Section 14: Transport information

<b>Transport information:</b>	<p>It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.</p> <p>Considered non-dangerous for road and rail transport (in packaging, including IBCs not greater than 3000L each) by the Australian Code for the Transport of Dangerous Goods by Road and Rail. Ref: ADG7; SP No. AU01.</p>
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For bulk shipments as Class 9, use UN 3082, HazChem code 2Z.

SEA TRANSPORT: IMDG			
<b>Hazard class:</b>	9	<b>Packing group:</b>	III
<b>ID number:</b>	UN 3082	<b>Proper shipping name:</b>	Environmentally Hazardous Substance, Liquid, N.O.S. (contains 2,4-D 2 Ethyl Hexyl Ester)
<b>Marine pollutant:</b>	YES		

## Section 15: Regulatory information

<b>Regulatory Information:</b>	WHS regulations (2011) - Schedule 11: classification not listed.
<b>Poisons Schedule (SUSMP):</b>	S6
<b>Packaging and labelling:</b>	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTION BEFORE OPENING OR USING
<b>Other information:</b>	This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA). APVMA product number: 66472

## Section 16: Any other relevant information

**Date of preparation or last revision:** August 2018

**Source of Data:** The information provided in this SDS is sourced from Grow Choice internal studies which have been conducted according to Regulatory requirements including OECD and CIPAC Guidelines and EC Directives. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

**Note: This product is a registered agricultural chemical and must, therefore, be used in accordance with the container label directions**

**CONTACT POINT:** Grow Choice Pty Ltd  
(02) 6766 3979

**24 HOUR EMERGENCY CONTACT: 1800 033 111**

This Material Safety Data Sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

### **DISCLAIMER**

This product complies with the specifications in its statutory registration. Implied terms and warranties are excluded. Grow Choice's liability for breach of the express or any non-excludable implied warranty is limited to product replacement or purchase price refund. The purchaser must determine suitability for intended purpose and take all proper precautions in the handling, storage and use of the product including those on the label and/or safety data sheet failing which Grow Choice shall have no liability.

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