



Safety Data Sheet


in accordance with Safe Work Australia

1. Product identifier & identity for the chemical

Product Identifier	BIO CHOICE 360 HERBICIDE
ACTIVE CONSTITUENT	360g/L GLYPHOSATE Present as the Isopropylamine salt
Other means of Identification	Agricultural herbicide. Grow Choice product code number: 360 AVPMA registered number: 53297/1000
Recommended use of the chemical and restrictions on due	Agricultural herbicide. A non-residual herbicide for the control of a broad range of Annual and Perennial Weeds.
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 Safe Work Australia, Globally Harmonized System of Classification and Labelling of Chemicals (the GHS).

Classification of the hazardous chemical	GHS (Glyphosate)
GHS symbol	Eye damage – category 1 Corrosion 
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	H318: Causes serious eye damage
Prevention Statements	P280: Wear eye protection/face protection.
Response Statements	P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER or doctor/physician..
Storage Statements	No specific GHS statement - refer to Section 7.
Disposal Statements	No specific GHS statement - refer to Section 7

3. Composition/information on ingredients

Chemical ingredients:	Component	CAS No	Proportion (g/L)
CAS number and other unique identifiers:	Glyphosate present as the Isopropylamine salt	1071-83-6	360
Concentration of ingredients:	Other ingredient – Water (not hazardous)	7732-18-5	

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

Suitable extinguishing media	Product will not burn. Choose extinguishing media to suit the burning material: water spray, carbon dioxide, dry chemical or alcohol resistance foam. Keep upwind from the smoke and flames.
Specific hazards arising from the chemical	Reaction with galvanized steel or unlined steel, excluding stainless steel, tanks and containers, may produce hydrogen gas which may form a highly flammable or explosive gas mixture. Product involved in a major fire may evolve oxides of nitrogen or phosphorus.
Special protective equipment and precautions	Fire fighters should wear Safe Work Australia approved self-contained breathing apparatus (AS/NZS 1715/1716) and full protective equipment. Keep unnecessary people away.

for fire fighters	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.
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6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	For personal protective equipment (PPE) and hygiene advice, refer Section 8.
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Environmental precautions	Avoid contamination of waterways, drains and sewers.
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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.
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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 established for this product.
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Appropriate engineering controls	Special ventilation is not required for this product.
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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 border="0"> <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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Requirements Concerning 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.
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9. Physical and chemical properties (continued on page 3)

Appearance, form, colour and odour	Clear green liquid with a faint amine odour.
pH (1% deion. Water);	4.5 – 5.0 (7% in water)
Melting point	-10°C
Boiling point	>100°C (water only)
Flash point	Not-flammable
Specific Gravity	1.179
Evaporation pressure	<1 x 10 ⁻⁵ Pa at 25°C
Flammability	Product not flammable
Vapour pressure	No information or data available
Behaviour in water	Disperses in water
Relative density	1.704 (20°C)

Solubility in water	Soluble in water
Vapour Pressure	Active ingredient is considered non volatile
Auto-ignition temperature	Not self-igniting
Decomposition temperature	No information or data available
Viscosity	No information or data available

10. Stability and Reactivity

Reactivity	Product is corrosive to mild steel, zinc and galvanized steel excluding stainless steel, polyethylene and plastics.
Chemical stability	Glyphosate formulations are stable for extended periods below 60°C.
Conditions to avoid	Do not mix, store or use spray products/apparatus made of galvanized steel or unlined steel containers or spray tanks.
Incompatible materials and possible hazardous reactions	Contact of the concentrate to be avoided with strong alkalis and alkaline material such as lime. Such contact may release isopropylamine and ammonia vapour with a fish like odour, which may be an irritant to eyes.
Hazardous decomposition products	Thermal decomposition may lead release of: Carbon oxides; sulphur oxides; Nitrogen oxides (NOx) and Hydrogen fluoride. Hazardous polymerization is not possible.

11. Toxicological information

Information on routes of exposure and symptoms related to exposure	<p>If the information and precautions are followed on this SDS, no harmful effects are expected.</p> <p>Will irritate the eyes.</p> <p>May irritate the skin.</p> <p>Avoid contact with eyes and skin. If product gets in eyes, wash it out immediately with water</p> <p>Avoid inhaling when spraying. May cause irritation.</p> <p>The concentrate is of low toxicity if swallowed. Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury.</p> <p>Wash hands after use.</p> <p>After each day's use, wash gloves, face shield or goggles and contaminated clothing.</p>
Immediate, delayed and chronic health effects from exposure	<p>LD50 (rat) >5,000 mg/kg for a similar product.</p> <p>LD50 (rat) >sopropylam5,000 mg/kg for a similar product –</p> <p>LD50 (rabbit) >5000 mg/kg for a similar product</p> <p>LC50 (rat) (4hr) >1.3 mg/l</p> <p>LC50 concentration not reached.</p>
Acute Toxicity – Oral	
Acute Toxicity Dermal	
Acute Toxicity - Inhalation	
Ingestion	The concentrate is of low toxicity if swallowed. Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury. Possible symptoms of exposure include: nausea, vomiting and gastrointestinal discomfort and diarrhea. Ingestion of a large quantity of the undiluted product may result in hypotension and pulmonary oedema.
Inhalation	<p>When applying the product as a spray avoid breathing in spray mist.</p> <p>May cause irritation to mucous membranes and respiratory tract. The concentrated product may cause slight irritation on contact.</p>
Eye	The concentrate may cause irritation of the eyes. Prolonged contact with the concentrate may cause damage to the eye.
Skin Sensitisation	Product is not a skin sensitiser.
Serious eye damage/irritation	Slight irritant
Skin corrosion/irritation	Slight irritant.
Exposure Levels/Chronic effects	No information available, no chronic effects expected.
Data limitations	<p>The Australian Acceptable Daily Intake (ADI) for glyphosate for a human is 0.3 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 30 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: Comm. Dept. of Health and Ageing, Office of Chemical Safety, 'ADI List', June 2014).</p>

12. Ecological information (continued on page 4)

Eco toxicity	The formulated product is practically non-toxic to fish, birds and bees. Glyphosate products do not appear to pose any threat to birds.
Persistence and degradability	
Bio -accumulative potential	This product is permitted for the control of certain weed species in waterways. Carefully read the precautions under 'Aquatic Weed Control' in the 'Directions For Use' table on the label.
Acute Toxicity - Fish	<p>LC50 (96hr) for rainbow trout is >989 mg/l.</p> <p>LC50 (96hr) for carp is >895 mg/l</p> <p>Not toxic to fish.</p> <p>The above data is for the formulated product.</p>
Acute Toxicity - Daphnia	EC50 (48hr) for daphnia is 675 µg/l for the formulated product
Acute Toxicity - Algae	<p>EC50 (72hr) for algae 150 mg/l.</p> <p>Birds: Not toxic to birds. LD50 for mallard ducks and bobwhite quail (diet) is >5620 mg/kg</p> <p>Bees: Not toxic to bees. LD50 >100 µg/bee.</p> <p>LC50 (96hr) for leopard frog tadpole is >1040 mg/l</p>
Mobility in soil	Glyphosate is moderately persistent in soil, with an estimated average half-life of 47 days. Absorption studies indicate that glyphosate has very low mobility.

Do not spray in high winds.
Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.
Glyphosate is a non-selective contact herbicide.
Spray drift can cause damage, read the label for more information.

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

This product is not classified as a dangerous good according to the Australian Code for the Transport of Dangerous Goods by road or rail (ADG7).

15. Regulatory information

Poisons Schedule number

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) – Poison Schedule: 5

Glyphosate 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.

Acronyms:

AVPMA: Australian Pesticides and Veterinary Medicines Authority.

GHS: Globally Harmonised system of Classification and Labelling of chemicals

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

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.