

Section 1: Identification: Product identifier and chemical identity

Product Identifier:	BIOCHLOR 500 GRAIN PROTECTANT
Active Constituent:	Chlorpyrifos-Methyl 500.0 g/L Hydrocarbon Liquid 513.0 g/L
Other Means of Identification:	Agricultural Insecticide. Grow Choice product code number: 2004 20 AVPMA registered number: 60650
Recommended Use:	For the control of insect pests in stored grain (except rice and malting barley) and lupins; and on surfaces of buildings and equipment as specified in the Directions For Use Table.
Details of manufacturer or importer:	Grow Choice Pty Ltd ABN 36 161 264 884
Address:	113 Fitzroy Street TAMWORTH NSW 2340 AUSTRALIA
Website:	www.growchoice.com.au
Phone Number & Email:	(02) 6766 3979 - 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

Section 2: Hazards identification (cont. 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 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 UN number: UN 3082 Poisons Schedule number: S6
Classification of the hazardous chemical:	Category 4: Flammable liquids Category 2: Skin corrosion/irritation Category 1: Serious eye damage/eye irritation Sub-category 1B: Skin sensitisation Category 3: Specific target organ toxicity - single exposure Category 1: Aspiration hazard Category 1: Acute aquatic toxicity Category 1: Chronic aquatic toxicity
GHS Symbol:	Chronic Health Hazard Corrosive Health Hazard Environmental Hazard
	
Signal code and word:	DANGER
Precautionary Statements (General):	If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use.

Prevention Statements:	<p>Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid release to the environment. Wear protective gloves/eye protection/face protection.</p>
Response Statements:	<p>IF SWALLOWED: Immediately call a POISON CENTRE or doctor/ physician. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor/ physician if you feel unwell. 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 CENTRE or doctor/ physician. Do NOT induce vomiting. If skin irritation or rash occurs: Get medical advice/ attention. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.</p>
Storage Statements:	<p>Store locked up. Store in a dry place. Store in a closed container. Store in a well-ventilated place. Keep cool. Refer Section 7</p>
Disposal Statements:	<p>P501: Dispose of contents and container in accordance with local, regional and national regulations.</p>

Section 3: Composition and information on ingredients

Chemical ingredients: CAS number and other unique identifiers: Concentration of ingredients		
Component	CAS No	Proportion
Chlorpyrifos-Methyl	5598-13-0	500 g/L
Hydrocarbon Liquid	64742-94-5	513 g/L

Section 4: First aid measures

In Case Of Emergency Dial 000 and/or Poisons Information Centre: Phone: 13 11 26 and speak to a Poisons Information Specialist. Take this SDS and or DFU/Label with you or when calling the Poisons Information Centre.	
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.

Section 5: Fire fighting measures (cont. page 3)

Suitable Extinguishing Media:	Water fog, carbon dioxide, dry chemical or foam.
Specific hazards from arising from the chemical:	Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition, which may be toxic and/or irritating. Combustion products may include and are not limited to: Sulphur oxides. Phosphorous compounds. Nitrogen oxides. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

Special Protective Equipment and Precautions for Fire Fighters:

Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves).

Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

The product may emit toxic fumes of hydrogen chloride or phosgene if involved in fires or exposed to extreme heat. Fire fighters should wear Safe Work Australia approved self-contained breathing apparatus (AS/NZS 1715/1716) and full protective gear. 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.

Section 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;
Avoid contamination of waterways;
Ensure adequate ventilation;
Refer to Section 8 for Personal Protection Equipment (PPE).

Environmental precautions:

Avoid contamination of waterways.

Methods 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.

Section 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 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.

Section 8: Exposure controls and personal protection

Control parameters – exposure standards, biological monitoring:	<p>SWA Exposure Limits TWA (mg/m³) STEL (mg/m³)</p> <p>No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems. Ventilation: This product should only be used where there is ventilation that is adequate to keep exposure below the TWA levels. If necessary, use a fan.</p>
Appropriate engineering controls:	<p>Eye Protection: Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.</p> <p>Skin Protection: Prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.</p> <p>Protective Material Types: We suggest that protective clothing be made from the following materials: rubber, PVC.</p> <p>Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Otherwise, not normally necessary.</p> <p>Eyebaths or eyewash stations and safety deluge showers should be provided near to where this product is being used.</p> <p>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.</p>
Personal protective equipment (PPE):	<p>When opening the container and 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, if protected from spray drift.</p> <p>When using the prepared spray, wear 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.</p> <p>Face and Eye Protection: Face shield or goggles.</p> <p>Clothing: Cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat.</p> <p>Gloves: Elbow-length chemical resistant PVC gloves.</p> <p>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.</p> <p>Recommended to use Australian and New Zealand Standard PPE:</p> <p>Overalls: AS 3765, Clothing for protection against Hazardous chemicals</p> <p>Gloves: AS/NZS 2161, Industrial safety gloves and mittens (not electrical and medical gloves)</p> <p>Goggles and face shield: AS/NZS 1337, Eye protectors for industrial applications.</p> <p>Footwear: AS/NZS 2210, Occupational protective footwear</p> <p>Respirators: AS/NZS 1715 Selection, Use and Maintenance of Respiratory Protective Devices AS/NZS 1716, Respiratory Protective Devices</p>
Requirements concerning special training:	<p>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.</p>

Section 9: Physical and chemical properties

Appearance:	Clear, straw coloured liquid	Boiling Point:	No data
Odour:	Unpleasant mercaptan odour	pH:	No data
Flash Point:	Closed cup >60.5 °C	Evaporation Rate:	No data
Liquid Density:	1.13 g/cm ³ at 20 °C Pycnometer	Solubility in water:	Emulsifiable
Vapour Pressure:	No data	Melting Point:	No data
Auto ignition temp:	446 °C at 102.7 kPa 92/69/EEC A15 Ramped Temperature	Decomposition temperature:	No data
Flammability:	No data	Viscosity:	No data

Section 10: Stability and reactivity

Chemical Stability:	Product is unstable at elevated temperatures.
Conditions to avoid:	Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Avoid static discharge. Avoid direct sunlight.
Incompatible materials and possible hazardous reactions:	Avoid contact with Bases and Oxidizers.
Hazardous decomposition products:	If Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen chloride. Organic sulphides. Sulphur dioxide. Toxic gases are released during decomposition. Hazardous polymerization is not possible.

Section 11: Toxicological information

Local Effects:	There is no data to hand indicating any particular target organs.
Target Organs:	
Classification of Hazardous Ingredients	
Ingredient	Risk Phrases
Aromatic Hydrocarbons	Conc>=10%: Xn; R65
Chlorpyrifos-methyl	Conc>=1
Inhalation:	Acute inhalation toxicity Prolonged excessive exposure may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract (nose and throat). May cause central nervous system effects. As product: LC50, Rat, male and female, 4 Hour, dust/mist, > 6.654 mg/l
Ingestion:	Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. As product: LD50, Rat, male, > 2,000 mg/kg As product: LD50, Rat, female, 3,162 mg/kg
Skin:	Prolonged skin contact is unlikely to result in absorption of harmful amounts. As product: LD50, Rabbit, male and female, > 5,000 mg/kg Skin corrosion/irritation Brief contact may cause slight skin irritation with local redness. May cause drying and flaking of the skin. Effects may be slow to heal.

Eye:	<p>May cause moderate eye irritation, which may be slow to heal.</p> <p>May cause slight corneal injury.</p> <p>May cause permanent impairment of vision, even blindness.</p> <p>Sensitization</p> <p>Has caused allergic skin reactions when tested in guinea pigs.</p>
Aspiration Hazard:	<p>May be fatal if swallowed and enters airways.</p>
Reproductive:	<p>For similar active ingredient(s). Chlorpyrifos did not interfere with fertility in reproduction studies in laboratory animals. Some evidence of toxicity to the offspring occurred, but only at a dose high enough to produce significant toxicity to the parent animals. For the solvent(s): In animal studies, did not interfere with reproduction.</p>
Toxicity:	<p>Specific Target Organ Systemic Toxicity (Repeated Exposure)</p> <p>For the active ingredient(s): Excessive exposure may produce organophosphate type cholinesterase inhibition.</p> <p>Signs and symptoms of excessive exposure to active ingredient may be headache, dizziness, incoordination, muscle twitching, tremors, nausea, abdominal cramps, diarrhea, sweating, pinpoint pupils, blurred vision, salivation, tearing, tightness in chest, excessive urination, convulsions.</p> <p>In animals, effects have been reported on the following organs: Adrenal gland; Liver.</p> <p>For the solvent(s): Excessive exposure to solvent(s) may cause respiratory irritation and central nervous system depression.</p> <p>For the minor component(s): In animals, effects have been reported on the following organs: Respiratory tract.</p> <p>Carcinogenicity: Active ingredient did not cause cancer in laboratory animals. Contains naphthalene, which has caused cancer in some laboratory animals. In humans, there is limited evidence of cancer in workers involved in naphthalene production. Limited oral studies in rats were negative.</p> <p>Teratogenicity: For the active ingredient(s): High doses fed to pregnant mice resulted in an increase in cleft palate, a common developmental abnormality in mice. No abnormalities have been observed in other species under similar test conditions. For the solvent(s): Did not cause birth defects or any other foetal effects in laboratory animals.</p>
Mutagenicity:	<p>For the active ingredient(s): In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative. For the solvent(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.</p>
Data limitations:	<p>Exposure limits have not been established by SWA for any of the significant ingredients in this product. The ADI for Chlorpyrifos-methyl is set at 0.01mg/kg/day. The corresponding NOEL is set at 0.1mg/kg/day.</p> <p>ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, June 2014.</p>

Section 12: Ecological information

Eco toxicity:	<p>This product is very toxic to aquatic organisms.</p> <p>This product is toxic to bees.</p> <p>This product is biodegradable.</p> <p>It will not accumulate in the soil or water or cause long term problems.</p> <p>Birds: LD50 chicken: >7950mg/kg LD50 mallard: 2500-5000mg/kg</p> <p>Fish: LC50 rainbow trout (Oncorhynchus mykiss): 0.3mg/L</p> <p>Bees: LD50 0.38µg/bee</p> <p>Daphnia: EC50 0.016-0.025mg/L</p>
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Section 13: Disposal considerations

Product Disposal:	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®).
Container Disposal:	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.

Section 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 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.
ADG:	
UN Number:	3082
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chlorpyrifos-Methyl)
DG Class:	9
Packing Group:	III
Marine Pollutant:	Chlorpyrifos-Methyl
Classification for SEA transport (IMO-IMDG):	
UN Number:	3082
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chlorpyrifos-Methyl)
DG Class:	9
Packing Group:	III
Marine Pollutant:	Chlorpyrifos-Methyl
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk
Classification for AIR transport (IATA/ICAO):	
UN Number:	3082
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chlorpyrifos-Methyl)
DG Class:	9
Packing Group:	III

Section 15: Regulatory information

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP): Schedule 6

Registration status: Registered

APVMA approval: 60650

Section 16: Any other relevant information

Date of preparation or last revision: This Safety Data Sheet (SDS) was completed 18 January 2022 and replaces SDS dated 18 January 2017.

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)

TWA: Exposure Standard - time weighted average

STEL: Exposure standard - short term exposure limit.

mg/m³: Milligrams of substance per cubic metre of air at 25°C and one atmosphere pressure. The value is exact.

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

Source of Data: The information provided in this SDS is sourced from Grow Choice 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 HOURS 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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