

## Section 1 - Identification of the Material and Supplier

**Chemical nature:** Metribuzin  
**Trade Name:** **Metric Herbicide**  
**APVMA Code:** 68564  
**Supplier:** **Amgrow Australia Pty Ltd**  
**Unit B2a, 3-29 Birnie Avenue, Lidcombe, NSW 2141**  
**Phone: 02 9395 1200 (office hours), Fax: 02 9395 1241**  
**www.amgrow.com.au**

**Product Use:** Agricultural herbicide for use as described on the product label.  
**Creation Date:** **November 2016**  
**This version issued:** **November 2016** and is valid for 5 years from this date.  
**Poisons Information Centre: Phone 13 1126 from anywhere in Australia**

## Section 2 - Hazards Identification

### Statement of Hazardous Nature

**THIS PRODUCT IS CLASSIFIED AS HAZARDOUS ACCORDING TO THE CRITERIA OF SWA (XN, Harmful, N Dangerous to the Environment)**

**NOT A DANGEROUS GOOD ACCORDING TO AUSTRALIAN DANGEROUS GOODS (ADG) CODE, See section 14 for IATA and IMDG/IMSBC criteria.**

**SUSMP Classification:** S6

**ADG Classification:** None allocated. Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code. According to AU01, Environmentally Hazardous Substances in packaging, IBC or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code.

**UN Number:** 3082



### GHS Signal word: **WARNING**

Acute toxicity Oral Category 4  
Eye damage/irritation Category 2A  
Acute aquatic toxicity: Category 1  
Chronic aquatic toxicity: Category 1

### HAZARD STATEMENT:

H302: Harmful if swallowed.  
H319: Causes serious eye irritation.

### PREVENTION

P264: Wash contacted areas thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P271: Use only outdoors or in a well ventilated area.  
P280: Wear protective gloves, protective clothing and eye or face protection.

### RESPONSE

P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.  
P362: Take off contaminated clothing and wash before reuse.  
P330: Rinse mouth.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313: If eye irritation persists: Get medical advice.  
P391: Collect spillage.  
P370+P378: In case of fire, use carbon dioxide, dry chemical, foam, water fog.

### STORAGE

P405: Store locked up.  
P403+P233: Store in a well-ventilated place. Keep container tightly closed.

### DISPOSAL

P501: Dispose of contents and containers as specified on the registered label.

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## Emergency Overview

**Physical Description & Colour:** White suspension

**Odour:** Mild characteristic odour.

**Major Health Hazards:** Causes serious irritation to eyes, harmful if swallowed

## Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc. %
Metribuzin	21087-64-9	40
Glycerine	56-81-520	10-20
Other non hazardous ingredients	secret	to 100

*This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.*

## Section 4 - First Aid Measures

### General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

**Inhalation:** Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice.

**Skin Contact:** Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) until product is removed. Seek medical attention if irritation develops

**Eye Contact:** Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

**Ingestion:** Call doctor or Poison Information Centre immediately. Rinse mouth, do NOT induce vomiting. Keep patient warm and at rest.

## Section 5 - Fire Fighting Measures

**Fire and Explosion Hazards:** The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is no risk of an explosion from this product under normal circumstances if involved in a fire.

**Fire decomposition** In the event of fire the following may be released: Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Sulphur oxides, Nitrogen oxides (NO<sub>x</sub>)

**Extinguishing Media:** In case of fire, use carbon dioxide, dry chemical, foam or water fog.

**Fire Fighting:** When fighting fires involving significant quantities of this product, wear a splash suit complete with self contained breathing apparatus.

**Flash point:** Not flammable.

**Upper Flammability Limit:** No data.

**Lower Flammability Limit:** No data.

**Autoignition temperature:** No data.

**Flammability Class:** No data.

**Hazchem Code:** 3Z

## Section 6 - Accidental Release Measures

**Accidental release:** In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective chemically resistant clothing including eye/face protection, gauntlets and self contained breathing apparatus. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. No special recommendations for clothing materials. Eye/face protective equipment should comprise, as a minimum, protective glasses and, preferably, goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8).

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material

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enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this SDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

## Section 7 - Handling and Storage

**Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

**Storage:** This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

## Section 8 - Exposure Controls and Personal Protection

### Exposure Limits

	TWA(mg/m <sup>3</sup> )	STEL(mg/m <sup>3</sup> )	ADI(mg/Kg/day)	NOEL(mg/Kg/day)
Metribuzin	5	not set	0.02	2

*Exposure limits have not been set by SWA for any other ingredients in product. The TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. There is a blanket limit of 10mg/m<sup>3</sup> for dusts or mists when limits have not otherwise been established. 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. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, 31<sup>st</sup> March 2012*

### Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

Exposure limits have not been established by SWA for any of the significant ingredients in this product.

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:** No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that vapours and mists are minimised.

**Eye Protection:** Protective glasses or goggles must be worn when this product is being used. Failure to protect your eyes may lead to severe harm to them or to general health. Emergency eye wash facilities must also be available in an area close to where this product is being used.

**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.

**Protective Material Types:** We suggest that protective clothing be made from the following materials: PVC.

**Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

Eyebaths or eyewash stations and safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

## Section 9 - Physical and Chemical Properties:

<b>Physical Description &amp; colour:</b>	Viscous white suspension
<b>Odour:</b>	Mild characteristic odour.
<b>Boiling Point:</b>	Approx 100°C at 100kPa
<b>Freezing Point:</b>	No specific data. Liquid at normal temperatures.
<b>Specific Gravity:</b>	1.16
<b>Volatiles:</b>	Solvent content.
<b>Vapour Pressure:</b>	No data.
<b>Vapour Density:</b>	No data.
<b>Viscosity:</b>	600 - 1,600 mPaxs at 20 °C Velocity gradient 7.5 /s
<b>Water Solubility:</b>	Miscible
<b>pH:</b>	5.0 -8.0 at 100% (23°C)
<b>Partition coefficient:</b>	Metribuzin: log Pow: 1.6 (n-octanol/water)

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**Volatility:** No data.  
**Coeff Oil/water Distribution:** No data  
**Flash Point:** Not relevant

## Section 10 - Stability and Reactivity

**Reactivity:** This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

**Conditions to Avoid:** Exposure to moisture, elevated temperatures

**Incompatibilities:** Strong bases, Ketones, Aldehydes, Oxidizing agents

**Fire Decomposition:** Thermal decomposition can lead to release of: Hydrogen cyanide (hydrocyanic acid), Nitrogen oxides (NO<sub>x</sub>), Carbon oxides, Sulphur oxides

**Polymerisation:** This product will not undergo polymerisation reactions.

## Section 11 - Toxicological Information

**Local Effects:**

**Target Organs:** There is no data to hand indicating any particular target organs.

### Potential Health Effects

**Inhalation:** Not harmful but may be irritating to sensitive individuals

**Skin Contact:** Not harmful by skin contact but may cause slight irritation

**Eye Contact:** This product is a severe eye irritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms such as swelling of eyelids and blurred vision may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment is likely to cause permanent damage.

**Ingestion:** Harmful by ingestion

**Carcinogen Status:**

**SWA:** No significant ingredient is classified as carcinogenic by SWA.

**NTP:** No significant ingredient is classified as carcinogenic by NTP.

**IARC:** No significant ingredient is classified as carcinogenic by IARC

Tests below conducted with a similar formulation.

**Acute oral toxicity** LD50 (Rat) 1,078 mg/kg

**Acute inhalation toxicity** LC50 (Rat) 3.055 mg/L Exposure time: 4 h(analytical) Determined in the form of liquid aerosol.

**Acute dermal toxicity** LD50 (Rat) > 2,000 mg/kg

**Skin irritation** Slight irritant effect - does not require labelling (Rabbit)

**Eye irritation** Irritating to eyes (Rabbit)

**Sensitisation** Non-sensitizing (Guinea pig) OECD Test Guideline 406, Buehler test

**Mutagenicity:** Metribuzin was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

**Assessment toxicity to reproduction:** Metribuzin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Metribuzin is related to parental toxicity.

**Assessment developmental toxicity:** Metribuzin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Metribuzin are related to maternal toxicity.

### Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Metribuzin	Conc>=25%: Xn; R22, N R50/53
Harmful if swallowed, Very Toxic to aquatic organisms, May cause long-term adverse effects in the aquatic environment.	

## Section 12 - Ecological Information

Values relate to the active ingredient (Metribuzin) only

**Toxicity to fish** LC50 (Oncorhynchus mykiss (rainbow trout)) 74.6 mg/L, 96 h, LC50 (Leuciscus idus (Golden orfe)) 141.6 mg/L 96 h

**Toxicity to aquatic invertebrates** LC50 (Daphnia magna (Water flea)) 49.6 mg/L 48 h

**Toxicity to aquatic plants** IC50 (Desmodesmus subspicatus (green algae)) 0.021 mg/L 72 h

**Toxicity to bacteria** EC50 (activated sludge) 761 mg/L

**Toxicity to other organisms** LD50 (Colinus virginianus (Bobwhite quail)) 164 mg/kg, LD50 (Anas platyrhynchos (Mallard duck)) 460 - 680 mg/kg

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**Persistence and degradability**

**Biodegradability** Metribuzin: Not rapidly biodegradable, Koc Metribuzin: Koc: 24 – 106

**Bioaccumulative potential** Metribuzin: Does not bioaccumulate.

**Mobility in soil** Metribuzin: Mobile in soils

### Section 13 - Disposal Considerations

**Disposal:** Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

### Section 14 - Transport Information

**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/IMSBC when carried by Air or Sea transport (see details below).**

**UN Number:** 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Metribuzin solution)

**Hazchem Code:** 3Z

**Special Provisions:** 179, 274, 331, 335, 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.

**Packing Group:** III

**Packing Instruction:** 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).

### Section 15 - Regulatory Information

**AICS:** All of the significant ingredients in this formulation are compliant with NICNAS regulations.

**SUSMP:** Metribuzin is mentioned in the schedule (S6)

### Section 16 - Other Information

**This SDS contains only safety-related information. For other data see product literature.**

**Acronyms:**

<b>ADG Code</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail	<b>IMDG</b>	International Maritime Dangerous Good
<b>AICS</b>	Australian Inventory of Chemical Substances	<b>IMSBC</b>	International Maritime Solid Bulk Code
<b>CAS number</b>	Chemical Abstracts Service Registry Number	<b>NTP</b>	National Toxicology Program (USA)
<b>Hazchem Number</b>	Emergency action code of numbers and letters that provide information to emergency services especially fire-fighters	<b>SUSMP</b>	Standard for the Uniform Scheduling of Medicines & Poisons
<b>IARC</b>	International Agency for Research on Cancer	<b>SWA</b>	Safe Work Australia (formerly ASCC and NOHSC)
<b>IATA</b>	International Air Transport Authority	<b>UN Number</b>	United Nations Number

THIS SDS 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 MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE. IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product. This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (December 2011)

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### SAFETY DATA SHEET