

Amgrow Chemspray Multiweed All Purpose Lawn Weeder

Section 1 - Identification of Chemical Product and Company

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Substance: Dicamba, Bentazone and MCPA in hydrocarbon solvent
Trade Name: Multiweed All Purpose Lawn Weeder
Product Use: Selective herbicide to control Mullumbimby couch and other broadleaf weeds in lawns
Revision Date: March 2008

Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is classified Hazardous according to the criteria of ASCC. Xn Harmful, Xi Irritant
Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code.

Risk Phrases: R22, Harmful if swallowed. R36 Irritating to eyes. R38 Irritating to skin R41 Risk of serious eye damage

Safety Phrases: S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice S36/37/39 Wear suitable protective clothing and eye/ face protection

SUSDP Classification: S5

ADG Classification: None allocated. Not a Dangerous Good under the ADG Code.

UN Number: None allocated

Emergency Overview

Physical Description & colour: Brown coloured liquid.

Odour: Phenoxy odour

Major Health Hazards: Possible long term damage to eyes, harmful if swallowed

Potential Health Effects

Inhalation:

Short term exposure: Data suggests that this product is harmful if inhaled. Minor or short term exposure may lead to short term health problems

Long Term exposure: May lead to permanent health problems

Skin Contact:

Short term exposure: Data suggests that this product may be absorbed through the skin and be harmful by skin absorption.

Long Term exposure: Major skin exposure may lead to health problems.

Eye Contact:

Short term exposure: This product is irritating to the eyes. It will cause discomfort such as stinging pain, watering and redness of the eyes.

Long Term exposure: Effects may last after exposure has ceased, and in severe exposure, long lasting or even permanent effects such as corneal damage can occur.

Ingestion:

Short term exposure: Data suggests that this product is harmful if swallowed

Long Term exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:

ASCC: No significant ingredient is classified as carcinogenic by ASCC.

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

IARC: No significant ingredient is classified as carcinogenic by IARC

MATERIAL SAFETY DATA SHEET

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc, %	TWA (mg/m3)	STEL (mg/m3)
Bentazone	25057-89-0	19	not set	not set
MCPA (as dimethylamine salt)	2039-46-5	11	not set	not set
Dicamba (as dimethylamine salt)	1918-00-9	19	not set	not set
Other non hazardous ingredients	secret	<1	not set	not set
Water	7732-18-5	to 100	not set	not set

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

The ASCC 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. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated 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.

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 MSDS with you when you call.

Inhalation: If vapours or mists have been inhaled, and irritation or unusual symptoms have developed, remove to fresh air and observe until recovered. If irritation or symptoms persists more than about 30 minutes, seek medical advice.

Skin Contact: If product gets on skin, immediately remove contaminated clothing and wash skin thoroughly with soap and water to remove material. If you begin to feel unwell, seek medical attention.

Eye Contact: If this product comes into contact with eyes, hold open and wash with running water for at least 15 minutes. Ensure irrigation under eyelids by occasionally lifting them. Do not try to remove contact lenses unless trained. Seek medical attention.

Ingestion: If swallowed, do NOT induce vomiting unless requested to do so by medical advice. Wash mouth with water and contact a Poisons Information Centre, or call a doctor immediately.

Advice to Doctor: Treat symptomatically. Note the nature of this product.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

Extinguishing Media: This product does not burn. Use extinguishing media suited to the materials that are burning. Preferred extinguishing media are carbon dioxide, dry chemical, foam, water fog.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade. Immediately evacuate the area of unnecessary personnel. When fighting fires involving significant quantities of this product, wear safety boots, non-flammable overalls, gloves, hat, goggles and respirator. All skin areas should be covered

Unusual Fire & Explosion Hazards: Fire decomposition products from this product may form toxic and corrosive mixtures in confined spaces. Likely to decompose only after heating to dryness followed by further strong heating.

Decomposition Products: Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen, and under some circumstances, oxides of nitrogen. Hydrogen chloride gas, chlorides, and in some circumstances, phosgene. Water.

Flash point: Does not burn

Section 6 - Accidental Release Measures

Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. Evacuate the spill area and deny entry to unnecessary and unprotected personnel. Immediately call the Fire Brigade. Wear full protective chemically resistant clothing including Face mask, face shield, gauntlets and self contained breathing apparatus. All skin areas should be covered. See below under Personal Protection regarding Australian Standards relating to personal protective equipment.

MATERIAL SAFETY DATA SHEET

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 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 MSDS 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 MSDS 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 S5 poison. Observe all relevant regulations regarding sale, transport and storage of this class of product. Containers should be kept closed in order to minimise contamination. Keep away from extreme heat and open flames and ensure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10.

Section 8 - Exposure Controls and Personal Protection

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

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

ASCC Exposure limits	TWA (mg/m ³)	STEL (mg/m ³)	ADI (mg/Kg/day)	NOEL(mg/Kg/day)
Bentazone	not set	not set	0.01	10
MCPA	not set	not set	0.01	1.1
Dicamba	not set	not set	0.03	3

The ASCC 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. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated 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, Dec 2006.)

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: If there is a significant chance vapours or mists accumulating in the area where this product is being used, a local exhaust system should be used.

Eye Protection: Eye protection such as protective glasses or goggles is essential when this product is being used.

Skin Protection: You should prevent skin contact by wearing impervious gloves, protective clothing and, preferably, an apron. Make sure that all skin areas are covered

Protective Material Types: Suggest that protective clothing be made from the following materials: PVC, nitrile.

Respirator: If there is a significant chance vapours or mists accumulating in the area where this product is being used, a mask or respirator should be used.

Always wash hands before eating, drinking or smoking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

MATERIAL SAFETY DATA SHEET

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	Brown liquid.
Odour:	Phenoxy odour
Boiling Point:	No specific data. Expected to decompose before boiling.
Melting/softening point:	No specific data. Liquid at normal temperatures.
Volatiles:	No data. Expected to be low at 100°C
Vapour Pressure:	No data.
Vapour Density:	>1
Specific Gravity:	no data
Water Solubility:	Soluble
pH:	No data.
Odour Threshold:	No data.
Evaporation Rate:	No data.
Coeff Oil/water distribution:	No data
Flashpoint:	Does not burn.
Auto ignition temp:	n/a

Section 10 – Stability and Reactivity

Reactivity: This product is unlikely to react or decompose under normal storage conditions.

Conditions to Avoid: Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

Incompatibilities: strong acids, strong oxidising agents.

Fire Decomposition: Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen, and under some circumstances, oxides of nitrogen. Hydrogen chloride gas, chlorides, and in some circumstances, phosgene. Water.

Polymerisation: This product will not undergo polymerisation reactions.

Section 11 - Toxicological Information

Dicamba at high levels over a long period of time has been shown to cause changes in the liver and a decrease in body weight in rats. In mice, some enlargement of liver cells has occurred. Dicamba LD₅₀ Oral (Rat) = 1707mg/kg LD₅₀ Dermal (Rabbit) >2000mg/kg

MCPA is slightly toxic via ingestion, with reported oral LD50 values for the technical product in rats ranging from 700 mg/kg to 1160 mg/kg and ranging in mice from 550 to 800 mg/kg. It is slightly toxic via the dermal route as well, with reported dermal LD50 values ranging from greater than 1000 mg/kg in rats to greater than 4000 mg/kg in rabbits.

Bentazone Oral LD50 (rat): >1000 mg/kg Dermal LD50 (rat): >2500 mg/kg

Reproductive effects:

Dicamba In a three-generation study, dicamba did not affect the reproductive capacity of rats. The data suggest that dicamba is unlikely to cause reproductive effects in humans at expected

MCPA A two-generation rat study at doses of up to 15 mg/kg/day affected reproductive function. Even smaller amounts of the compound were toxic to the foetuses. It is unlikely that humans will experience these effects under normal exposure conditions.

Teratogenic effects:

Dicamba No teratogenic effects have been shown in lab animals such as rabbits and rats

MCPA Mice fed 5 to 100 mg/kg/day of MCPA on days 6 to 15 showed significantly reduced foetal weight and delayed bone development at the highest dose. Teratogenic effects in humans are unlikely at expected exposure levels.

Mutagenic effects:

Dicamba has not been shown to be a mutagen.

MCPA - It appears that the compound poses little or no mutagenic risk.

MATERIAL SAFETY DATA SHEET

Carcinogenic effects:

MCPA All of the available evidence on indicates that the compound does not cause cancer

Dicamba Rats fed up to 25 mg a/kg/day for 2 years showed no increased incidence of tumours. This evidence suggests that dicamba is not carcinogenic.

Organ toxicity:

MCPA - Target organs identified in animal studies include the liver, kidneys, spleen and thymus. Farm worker exposure has resulted in reversible anemia, muscular weakness, digestive problems, and slight liver damage

Dicamba Chronic exposure can lead to the development of the same symptoms as described for acute exposure.

Fate in humans and animals:

MCPA is rapidly absorbed and eliminated from mammalian systems. In a rat study, three quarters of the dose was eliminated within 2 days. All was gone by the 8 days. Humans excreted about half of a 5 mg dose in the urine within a few days. No residues were found after day 5. Cattle and sheep fed low to moderate doses of MCPA in the diet for 2 weeks showed no residues from levels less than about 18 mg/kg.

Dicamba was excreted rapidly by rats, mainly in the urine, when administered orally or subcutaneously. Eventually, between 90 and 99% of the dose was excreted un-metabolized in the urine.

This indicates that dicamba is rapidly absorbed into the bloodstream from the gastrointestinal tract. When daily intake stopped, storage in the organs declined rapidly. It is therefore concluded that dicamba does not bio-accumulate in mammalian tissues.

Section 12 - Ecological Information

Ecological Effects

Effects on birds: MCPA is moderately toxic to wildfowl; the LD50 of MCPA in bobwhite quail is 377 mg/kg. Dicamba is practically nontoxic to birds. The LD50 for technical dicamba in mallard ducks is 2009 mg/kg. The 8-day dietary LC50 in mallards and in bobwhite quail is greater than 10,000 ppm.

Effects on aquatic organisms: MCPA is only slightly toxic to freshwater fish, with reported LC50 values ranging from 117 to 232 mg/L in rainbow trout. MCPA is practically nontoxic to freshwater invertebrates, and estuarine and marine organisms. Bentazone -Low toxicity to aquatic organisms. 48hr LC50 (Daphnia magna): 125 mg/L 96hr LC50 (rainbow trout) : >100 mg/L

Dicamba is of low toxicity to fish. The LC50 (48-hour) for dicamba is 35 mg/L in rainbow trout and 110 mg/L in Daphnia magna,

Effects on other organisms: MCPA is not toxic to bees. Dicamba poses little threat to wildlife and is not toxic to bees

Environmental Fate:

Breakdown in soil and groundwater: MCPA and its formulations are rapidly degraded by soil microorganisms and it has low persistence, with a reported field half-life of 14 days to 1 month, depending on soil moisture and soil organic matter. MCPA readily leaches in most soils, but its mobility decreases with increasing organic matter. MCPA and its formulations show little affinity for soil. Dicamba is moderately persistent in soil. The half-life of dicamba in soil is typically 1 to 4 weeks. It is stable to water and other chemicals in the soil. Dicamba does not bind to soil particles and is highly soluble in water. It is therefore highly mobile in the soil and may contaminate groundwater.

Breakdown in water: MCPA - It is relatively stable to light breakdown, but can be rapidly broken down by microorganisms. Dicamba - Under conditions suitable for rapid metabolism, the half-life is less than 2 weeks.

Breakdown in vegetation: MCPA is readily absorbed and translocated in most plants. It works by concentrating in the actively growing regions of a plant (meristematic tissue), where it interferes with protein synthesis, cell division, and ultimately the growth of non-resistant plants. It is actively broken down in plants. Dicamba is rapidly taken up by the leaves and roots of plants, and it is readily translocated to other plant parts.

MATERIAL SAFETY DATA SHEET

Section 13 - Disposal Considerations

Disposal: There are many pieces of legislation covering waste disposal and they differ in each state and territory, so each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. The Hierarchy of Controls seems to be common - the user should investigate: Reduce, Reuse, and Recycle and only if all else fails should disposal be considered. Note that properties of a product may

change in use, so that the following suggestions may not always be appropriate. The following may help you in properly addressing this matter for this product. 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/>

Section 14 - Transport Information

ADG Code: This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

Section 15 - Regulatory Information

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

Section 16 - Other Information

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

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail
AICS	Australian Inventory of Chemical Substances
ASCC	Office Of The Australian Safety & Compensation Council
CAS number	Chemical Abstracts Service Registry Number
Hazchem Number	Emergency action code of numbers and letters that provide information to emergency services especially fire-fighters
IARC	International Agency for Research on Cancer
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
R-Phrase	Risk Phrase
SUSDP	Standard for the Uniform Scheduling of Drugs & Poisons
UN Number	United Nations Number

THIS MSDS 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 MSDS 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 MSDS is prepared in accord with the ASCC document "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [NOHSC:2011(2003)]

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