

Amgrow Chemspray Bin-Die Selective LawnWeeder**Section 1 - Identification of Chemical Product and Company****Amgrow Pty Ltd**
PO Box 6390
Silverwater NSW 1811**Phone: (02) 9395 1200** (Business hours)
Fax: (02) 9395 1241**Trade Name:** Bin-Die Selective Lawn Weeder
Product Use: Selective herbicide to control bindii, clover and other broadleaf weeds in buffalo & other lawns
Issue Date: February 2013**Section 2 - Hazards Identification****Statement of Hazardous Nature****CLASSIFIED AS HAZARDOUS ACCORDING TO THE CRITERIA OF SWA (T Toxic)****NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE****Risk Phrases:** R20/21/22, Harmful by inhalation, in contact with skin and if swallowed. R63, Possible risk of harm to the unborn child R43, May cause sensitisation by skin contact**Safety Phrases:** S2, S13, S44, S36/37/38. Keep out of reach of children. Keep away from food, drink and animal feeding stuffs. Wear suitable protection and gloves. If you feel unwell, contact a doctor or Poisons Information Centre immediately and show this container or label**SUSMP Classification:** S6**ADG Classification:** None allocated. Not a Dangerous Good under the ADG Code.**UN Number:** None allocated**Emergency Overview****Physical Description & colour:** Dark brown liquid**Odour:** Characteristic solvent odour.**Major Health Hazards:** Chronic exposure to bromoxynil may lead to weight loss and damage to kidneys and liver.**Potential Health Effects****Inhalation:** Available data indicates that this product is harmful if inhaled, may lead to short term health problems. Long term exposure May lead to permanent health problems**Skin Contact:** Data suggests that this product may be absorbed through skin and be harmful by skin absorption. Major skin exposure may lead to health problems**Eye Contact:** This product is mildly irritating to eyes, but is unlikely to cause anything more than mild transient discomfort such as watering and redness. However this should quickly disappear once exposure is over**Ingestion:** Data suggests that this product is harmful if swallowed**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**Section 3 - Composition/Information on Ingredients**

Ingredients	CAS No	Conc,%
Bromoxynil Octanoate	1689-99-2	20
MCPA (2-ethylhexyl ester)	29450-45-1	20
Other non hazardous ingredients	secret	to 100

*This is a commercial product whose exact ratio of components may vary slightly.***MATERIAL SAFETY DATA SHEET**

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 vapour or mists have been inhaled and irritation or unusual symptoms have developed, remove to fresh air and observe til recovered. Seek medical advice if symptoms persist.

Skin Contact: Remove contaminated clothing and wash gently and thoroughly with water (use non-abrasive soap if necessary) for 5 minutes or until chemical is removed.

Eye Contact: Flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

Ingestion: If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: There is a moderate risk of an explosion from this product if it is involved in a fire. Fire-fighters should take care and appropriate precautions

Extinguishing Media: 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 may form toxic and corrosive mixtures in confined spaces. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.

Flash point: 75°C

Upper Flammability Limit: 7.0%

Lower Flammability Limit: 0.6%

Auto ignition temperature: No data.

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.

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.

MATERIAL SAFETY DATA SHEET

Storage: This product is a S6 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

Exposure limits	TWA (mg/m³)	STEL (mg/m³)	ADI (mg/Kg/day)	NOEL (mg/Kg/day)
Bromoxynil	not set	not set	0.003	0.3
MCPA	not set	not set	0.01	1.1

Exposure limits have been set for ingredients in product. 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 exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. A TWA has not been established by Worksafe Australia for any of the major ingredients in this product. There is a blanket limit of 10mg/m³ for dusts or mists when limits have not otherwise been established. The nature of this product makes it unlikely that this level will be approached in normal use. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, 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**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

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 recommended 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: We 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.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	Dark Brown liquid.
Odour:	Characteristic solvent odour.
Boiling Point:	Solvent boils in range 190-270°C
Freezing/Melting 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:	1.07-1.09
Water Solubility:	Emulsifiable.
pH:	No data.
Volatility by volume:	30-40%
Evaporation Rate:	No data.

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 oxidising agents.

MATERIAL SAFETY DATA SHEET

Fire Decomposition: Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen, and under some circumstances, oxides of nitrogen. Water, bromides, hydrogen bromide.

Polymerisation: This product will not undergo polymerisation reactions.

Section 11 - Toxicological Information

Please note that data in this section applies to concentrated active constituents only, not this product.

Acute toxicity: Bromoxynil: LD₅₀ Oral (Rat) = 190mg/kg; LD₅₀ Oral (Rabbit) = 260mg/kg; LD₅₀ Oral (Guinea pig) = 63mg/kg. LD₅₀ Dermal (Rabbit) >2000mg/kg. MCPA: LD₅₀ Oral (Rat) = 700-1160mg/kg; LD₅₀ Oral (mouse) = 550-800mg/kg; LD₅₀ Dermal (Rabbit) >4000mg/kg

Chronic toxicity: Bromoxynil: Studies have shown that has no effect on rats given dietary doses of 15 and 50 mg/kg/day for 90 days. Doses up to 5 mg/kg/day for 2 years had no impact on blood chemistry or urine. MCPA - Dietary levels of approximately 50 mg/kg/day and 125 mg/kg/day over 7 months caused reduced feeding rates and retarded growth rates in rats.

Reproductive effects: Bromoxynil No changes in reproduction were noted in female rats fed 15 mg/kg/day of over three generations. This suggests that bromoxynil does not cause reproductive effects. MCPA - A two-generation rat study at doses of up to 15 mg/kg/day affected reproductive function. It is unlikely that humans will experience these effects under normal exposure conditions.

Teratogenic effects: Bromoxynil is a suspected teratogen. The compound produced birth defects in rats at oral doses above 35 mg/kg. Newborn rabbits had birth defects when Bromoxynil was administered to pregnant mothers at doses above 30 mg/kg. Teratogenic effects in humans are unlikely at expected exposure levels. MCPA was fed to pregnant rats (2 to 100 mg/kg/day on days 8 to 15 of gestation) - cleft palate, heart defect, and kidney anomalies were observed in the offspring. Teratogenic effects in humans are unlikely at expected exposure levels.

Mutagenic effects: Bromoxynil - No data currently available. MCPA - It appears that the compound poses little or no mutagenic risk.

Organ toxicity: No data were available regarding the target organs affected by bromoxynil. 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

Fate in humans and animals: No bromoxynil was present in the milk or feces of cows 9 days after exposure to low doses of the herbicide. Less than 20% of the compound was excreted in urine as the parent compound. 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.

Section 12 - Ecological Information

Ecological Effects

Effects on birds: Bromoxynil is highly toxic to pheasants, moderately toxic to hens, quail and ducks: LD₅₀ Oral (Pheasant) = 50mg/kg; LD₅₀ Oral (hen) = 240mg/kg; LD₅₀ Oral (quail) = 100mg/kg; LD₅₀ Oral (mallard duck) = 200mg/kg. MCPA is moderately toxic to wildfowl; LD₅₀ Oral (bobtail quail) = 377mg/kg

Effects on aquatic organisms: Bromoxynil is very highly toxic to moderately toxic to freshwater fish; LC₅₀ (rainbow trout) = 0.05 mg/L. MCPA is only slightly toxic to freshwater fish, LC₅₀ (rainbow trout) = 117-232 mg/L, MCPA is practically nontoxic to freshwater invertebrates, and estuarine and marine organisms.

Effects on other organisms: Bromoxynil and MCPA are not toxic to bees.

Environmental Fate:

Breakdown in soil and groundwater: Bromoxynil has a low persistence in soil. In sandy soil, the half-life is about 10 days. Degradation in clay was slower. 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.

Breakdown in water: Bromoxynil - No data currently available. MCPA - It is relatively stable to light breakdown, but can be rapidly broken down by microorganisms.

MATERIAL SAFETY DATA SHEET

Breakdown in vegetation: The herbicide works by disrupting the plants ability to produce energy for cell-related activities. It is not readily translocated throughout the plant once it has been absorbed. 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.

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 for transport by road or rail

IMDG/IATA: This product is not classified as a dangerous good for transport by sea or air

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	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
IATA	International Air Transport Authority
IMDG	International Maritime Dangerous Good
NOHSC	National Occupational Health and Safety Commission
NTP	National Toxicology Program (USA)
R-Phrase	Risk Phrase
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
SWA	Safe Work Australia (formerly ASCC and NOHSC)
UN Number	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 "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [NOHSC:2011(2003)]

Copyright © Amgrow Pty Ltd February 2013

MATERIAL SAFETY DATA SHEET