

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

<b>Product Name:</b>	<b>BroadForce MA Selective Herbicide</b>
<b>Other means of identification:</b>	
<b>Recommended use of the chemical and restrictions on use:</b>	<b>Agricultural herbicide for use as described on the product label</b>
<b>Supplier:</b>	<b>Indigo Specialty Products Pty Ltd</b>
<b>ABN:</b>	<b>15 631 459 660</b>
<b>Street Address:</b>	<b>3/49 Donaldson Road, Rocklea Qld 4106</b>
<b>Telephone No:</b>	<b>+61 402 735 887</b>
<b>Fax:</b>	<b>NA</b>
<b>Email:</b>	<b><a href="https://indigospecialty.com.au/">https://indigospecialty.com.au/</a></b>
<b>Distributed by:</b>	<b>Indigo Specialty Products Pty Ltd</b> <b>3/49 Donaldson Road, Rocklea Qld 4106</b>
<b>Emergency Telephone:</b>	<b>+61 402 735 887</b>

### 2. HAZARDS IDENTIFICATION

Classification of the substance mixture: This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.

**Classification of the substance or mixture:**

Toxic to reproduction – Category 2  
Specific Target Organ Toxicity – Repeated Exposure – Category 1  
Acute Dermal Toxicity – Category 4  
Acute Oral Toxicity – Category 4  
Skin Sensitisation – Category 1  
Aspiration Hazard – Category 1

The following health hazard categories fall outside the scope of the Workplace Health and Safety Regulations:

Acute Aquatic Toxicity – Category 1  
Chronic Aquatic Toxicity – Category 1

**SIGNAL WORD: DANGER**



**Hazard Statement(s):**

H361 Suspected of damaging fertility or the unborn child  
H372 Causes damage to organs through prolonged or repeated exposure  
H312 Harmful in contact with skin  
H317 May cause an allergic skin reaction  
H304 May be fatal if swallowed and enters airways

**Precautionary Statement(s):**

**Prevention:**

P201 Obtain special instructions before use. Refer to label.  
P202 Do not handle until all safety precautions have been read and understood.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P260 Do not breathe the mist/vapours/spray.

- P264 Wash hands thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P272 Contaminated work clothing should not be allowed out of the workplace.

**Response:**

- P308 + P313 IF exposed or concerned: Get medical advice/attention.  
 P314 Get medical advice/attention if you feel unwell.  
 P302 + P352 IF ON SKIN: Wash with plenty of water.  
 P362 + P364 Take off contaminated clothing and wash it before reuse.  
 P330 Rinse mouth.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
 P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
 P331 Do NOT induce vomiting.

**Storage:**

- P405 Store locked up.

**Disposal:**

- P501 Dispose of contents/container in accordance with local/regional/national/international Regulations

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion (w/w)
Bromoxynil octanoate	1689-99-2	28.4%
MCPA 2-Ethyl Hexyl Ester	26544-20-7	30.8%
Aromatic hydrocarbon (contains 3-8% naphthalene)	64742-94-5 (91-20-3)	32.0%
Other components are not considered hazardous in this formulation and therefore are not required to be disclosed according to the WHS Regulations.		

### 4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist.

**Skin Contact:** Remove contaminated clothing and wash affected areas with soap and water. Seek medical attention if symptoms persist. Wash clothing before reuse.

**Eye Contact:** In case of eye contact, check for and remove any contact lenses. Immediately irrigate eyes with plenty of running water for at least 15 minutes, keeping eyelids open. Seek medical attention if symptoms persist.

**Ingestion:** If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs. Can cause chemical pneumonitis and pulmonary oedema. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure. Seek immediate medical attention.

**First Aid Facilities:** Eyewash and normal washroom facilities.

**Indication of immediate medical** Initial treatment: symptomatic.

**attention and special treatment needed:** Monitor: respiratory and cardiac functions.

Forced alkaline diuresis and haemodialysis may be considered. Carefully monitor the liver and kidney functions. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated

charcoal and sodium sulphate is always advisable. In case of hyperthermia physical cooling is advisable; in case of muscle rigidity muscle relaxants and mechanical ventilation may support in counteracting hyperthermia. Watch for pulmonary oedema, which may develop in serious cases of poisoning even after 24-48 hours. At first sign of pulmonary oedema, the patient should be placed in an oxygen tent and treated symptomatically. There is no specific antidote.

### 5. FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media:</b>	Use water spray*, alcohol-resistant foam, dry chemical or carbon dioxide. * Do not use extinguisher type which may spread fire (e.g. solid water stream or high volume water jet).
<b>Specific hazards arising from the substance or mixture:</b>	Dangerous gases are evolved in the event of a fire.
<b>Special protective equipment and precautions for fire-fighters:</b>	In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus. Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Emergency procedures/ Environmental precautions:</b>	In the event of a spill, prevent spillage from entering drains or water courses with absorbent material and call emergency services.
<b>Personal precautions/ Protective equipment:</b>	Keep people away from and upwind of spill/leak. Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke.
<b>Methods and materials for containment and cleaning up:</b>	Contain product spill as appropriate. Contain spill of diluted mix by absorbing with clay, sand, soil or proprietary absorbent (such as vermiculite). Cover drains if possible. Collect spilled material and waste in sealable open-top type containers for disposal.

### 7. HANDLING AND STORAGE

Classified as a C1 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.	
<b>Precautions for safe handling:</b>	Read container label before use. Use only in accordance with the instructions provided on the container label, including the Precaution and Protection sections and the Safety Directions.
<b>Conditions for safe storage, including any incompatibilities:</b>	Store in the closed, original container in a dry, well ventilated area, as cool as possible.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Control Parameters:</b>	Napththalene:	
	Time Weighted Average (parts per million)	10 ppm
	Time Weighted Average (mg/m <sup>3</sup> )	52 mg/m <sup>3</sup>
	Short Term Exposure Limit (parts per million)	15 ppm
	Short Term Exposure Limit (mg/m <sup>3</sup> )	79 mg/m <sup>3</sup>
	No other ingredients require controls	
<b>Appropriate engineering controls:</b>	Use only in a well-ventilated area.	
<b>Individual protection measures, such as Personal Protective Equipment (PPE):</b>		

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

Observe good standards of hygiene and cleanliness. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

**Respiratory Protection:** A respirator is not needed under normal and intended conditions of product use however if ventilation is not adequate then a respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

**Eye and Face protection:** Safety glasses/goggles with side shield protection should be worn as a general precaution. Consult AS/NZS 1336 and AS/NZS 1337 for further information.

**Skin Protection:** PVC or nitrile rubber gloves should be worn as a general precaution. Always check with the glove manufacturer or your personal protective equipment supplier regarding the correct type of glove to use. Consult AS/NZS 2161 for further information.  
Trousers, long sleeved shirt or overalls and closed in shoes or safety footwear should be worn as a general precaution. Consult AS/NZS 2210 and AS/NZS 2919 for further information.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Liquid
<b>Colour:</b>	Clear brown to dark brown
<b>Odour:</b>	Aromatic
<b>pH:</b>	3-5 (1% w/v dilution)
<b>Specific Gravity:</b>	1.07 kg/L
<b>Melting Point/Freezing Point:</b>	No data available for formulation.
<b>Boiling Point/range:</b>	No data available for formulation.
<b>Flash Point:</b>	75°C
<b>Evaporation Point:</b>	No data available for formulation.
<b>Vapour Pressure:</b>	No data available for formulation.
<b>Vapour Density:</b>	No data available for formulation.
<b>Solubility:</b>	BroadForce MA Selective Herbicide is an emulsifiable concentrate and so not soluble in water.
<b>Partition coefficient: n- octanol/water</b>	P= 7.94 X 10 <sup>05</sup> @ pH 7 & 20°C (bromoxynil octanoate) P= 1.55 X 10 <sup>-01</sup> @ pH 7 & 20°C (MCPA)
<b>Auto-ignition Temperature:</b>	No data available for formulation.
<b>Decomposition Temperature:</b>	No data available for formulation.
<b>Viscosity:</b>	No data available for formulation. Hydrocarbon liquid - 1.19 centipoise (cP) @ 25 °C

### 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	Stable under normal storage conditions and use.
<b>Chemical stability:</b>	Stable under normal storage conditions and use.
<b>Possibility of hazardous reactions:</b>	None when stored and used as directed. Hazardous polymerisation is not possible.
<b>Conditions to avoid:</b>	Exposure to excessive heat, open flames and sparks.
<b>Incompatible materials:</b>	No particular incompatibilities. Store and use as directed. Avoid contact with strong oxidizing agents.
<b>Hazardous decomposition products:</b>	Carbon dioxide and carbon monoxide may form when heated to decomposition.

### 11. TOXICOLOGICAL INFORMATION

<b>Acute toxicity:</b>	Oral (LD <sub>50</sub> ): 612 mg/kg (rat, calculated from ingredients) Category 4 Dermal (LD <sub>50</sub> ): 2740 mg/kg (rat, calculated from ingredients) Category 4 Inhalation (LC <sub>50</sub> ): No data for the product. Bromoxynil octanoate 4-hour LC50 is 0.72 mg/L in rats. MCPA 4-hour LC50 is >6.36 mg/L in rats. Hydrocarbon liquid - rat, LC50 104 ppm /4 Hours.
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<b>Ingestion:</b>	Product is harmful if ingested.
<b>Inhalation:</b>	Product is poisonous if inhaled. DO NOT inhale spray mist.
<b>Skin:</b>	Product is harmful in contact with skin
<b>Eye:</b>	Will irritate the eyes.
<b>Respiratory or skin sensitisation:</b>	Product is a skin sensitiser and may cause an allergic skin reaction
<b>Germ cell mutagenicity:</b>	No data for the product. Bromoxynil octanoate and MCPA are not considered to be genotoxic via in-vitro and in-vivo studies.
<b>Carcinogenicity:</b>	No data for the product. Bromoxynil octanoate and MCPA are not considered to be carcinogenic (24 month rat study).
<b>Reproductive toxicity:</b>	Bromoxynil octanoate has been assigned Toxic to Reproduction – Category 2 on the basis of studies, in rats, rabbits and mice which show reduced ossification and increased incidence of supernumerary ribs at doses (range 5 – 15 mg/kg/day) which are not toxic maternally. Supernumerary ribs are seen in control animals and are often seen in reproductive toxicity studies. The ribs disappear during subsequent development with rats, but not with mice. The significance of supernumerary species remain as an indicator of developmental toxicity and extrapolations to other species remain problematical.
<b>STOT-single exposure:</b>	No data for the product. For Bromoxynil octanoate and MCPA, no primary target organ for toxicity was identified from acute dose studies in mice, rats, rabbits and guinea pigs.
<b>STOT-repeated exposure:</b>	Causes damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard:</b>	Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result.

### 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	<b>Information on Bromoxynil octanoate, the primary environmental toxicant in BroadForce MA Selective Herbicide.</b>
	Fish LC50 (96 h) 0.041mg/L, <i>Oncorhynchus mykiss</i> NOEC (21 d) 0.0034 mg/l, <i>Oncorhynchus mykiss</i>
	Aquatic invertebrates: EC50 (48 h) 0.046 mg/l, <i>Daphnia magna</i> NOEC (21 d) 0.0025 mg/l, <i>Daphnia magna</i> EC50 (96 h) 0.065 mg/L Mysid shrimp ( <i>Americamysis bahia</i> ) NOEC (28 d) 0.1 mg/kg sediment <i>Chironomus riparius</i>
	Aquatic plants: EC50 (7 day) 0.073 mg/l (biomass), <i>Lemna gibba</i> EC50 (72 h) 0.043 mg/l (growth), <i>Navicula pelliculosa</i>
	Birds: Acute oral LD50 170 mg/kg <i>Colinus virginianus</i> (bobwhite quail) Short-term dietary LC50 1315 mg/kg feed <i>Colinus virginianus</i> (bobwhite quail)
	Honeybees: Acute 48 hour LD50 - >100 µg bee <sup>-1</sup>
<b>Persistence/degradability:</b>	Half-life of Bromoxynil octanoate is 1 day in aerobic soils (non- persistent). Half-life of MCPA is 24 days in aerobic soils (non- persistent). No evidence of volatility Bromoxynil octanoate has hydrolysis half life at pH 7 of 11 days (non-persistent). MCPA is stable to hydrolysis at pH 7 and is not pH sensitive.
<b>Bioaccumulative potential:</b>	MCPA bioaccumulation potential is considered to be low. Bromoxynil octanoate: <i>Lepomis macrochirus</i> (Bluegill sunfish): Bioconcentration factor (BCF): 230. The value mentioned relates to the combination of bromoxynil phenol and the active ingredient bromoxynil octanoate.
<b>Mobility in Soil:</b>	Bromoxynil octanoate is slightly to moderately mobile. MCPA is mobile.

Bromoxynil octanoate: Kf = 7.0 (Freundlich) Kfoc = 639  
MCPA: Kf = 0.94 (Freundlich) Kfoc = 74

### 13. DISPOSAL CONSIDERATIONS

**Disposal methods:** 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.

Container Disposal: Do not use this container for any other purpose. Triple or preferably pressure rinse empty containers before disposal or recycling. Add rinsings to spray tank. Contact licensed industrial waste collector for proper disposal.

### 14. TRANSPORT INFORMATION

**Road and Rail Transport:** According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500kg or 500 L are not subject to the ADG Code.

If transported above these limits, then it is classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; DANGEROUS GOODS

UN Number: 3082  
Proper Shipping Name or Technical Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains BROMOXYNIL OCTANOATE)

Transport Hazard Class: 9  
Packaging Group: III  
Hazchem Code: □3Z

**Marine Transport:** Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN Number: 3082  
Proper Shipping Name or Technical Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains BROMOXYNIL OCTANOATE)

Transport Hazard Class: 9  
Packaging Group: Not assigned.  
IMDG EMS Fire: F - A  
IMDG EMS Spill: S - F

**Air Transport:** Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN Number: 3082  
Proper Shipping Name or Technical Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains BROMOXYNIL OCTANOATE)

Transport Hazard Class: 9  
Packaging Group: Not assigned.

### 15. REGULATORY INFORMATION

**Poison Schedule (SUSMP):** 6 – POISON  
**APVMA:** 90749  
**AICS:** All the constituents of this material are either listed on the Australian Inventory of Chemical Substances (AICS), not required due to the nature of the chemical, or have been assessed under the National Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

### 16. OTHER INFORMATION

**General Information:** None

<b>Issue Number:</b>	001
<b>Issue Date:</b>	20 April 2021
In any event, the review and, if necessary, the re-issue of an SDS shall be no longer than 5 years after the last date of issue.	
<b>Reason(s) for Issue:</b>	Not applicable.
<b>Literary Reference:</b>	None
<b>Key abbreviations or acronyms used:</b>	ADG Code - Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition) AICS - Australian Inventory of Chemical Substances AgVet Code Act 1994 – Agricultural and Veterinary Chemicals Code Act 1994 APVMA – Agricultural Pesticides and Veterinary Medicines Australia GHS - Globally Harmonised System of Classification and Labelling of Chemicals (3 <sup>rd</sup> revised edition) 2009 IARC - International Agency for Research on Cancer LD <sub>50</sub> or LC <sub>50</sub> – Estimated lethal dose / concentration to kill 50% of the population/sample. Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (December 2016) STEL - Short term exposure limit means the average airborne concentration of a substance calculated over a 15 minute period. The STEL should not be exceeded at any time during a normal eight hour working day. STOT – Specific Target Organ Toxicity SUSMP - Standard for the Uniform Scheduling of Medicines & Poisons SWA - Safe Work Australia, formerly ASCC and NOHSC TGA – Therapeutic Goods Australia WHS – Workplace Health and Safety

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the manufacturer be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the manufacturer has been advised of the possibility of such damages.*

**END OF SDS**