

OzCrop Bromoxynil 200 Selective Herbicide OzCrop

Chemwatch: 5338-80 Version No: 5.1

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

Chemwatch Hazard Alert Code: 2

Issue Date: 10/12/2021 Print Date: 23/09/2022 S.GHS.AUS.EN.E

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name	OzCrop Bromoxynil 200 Selective Herbicide
Chemical Name	Not Applicable
Synonyms	APVMA Code: 68441
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bromoxynil octanoate)
Chemical formula	Not Applicable
Other means of identification	Not Available

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Agricultural herbicide.

Details of the manufacturer or supplier of the safety data sheet

Registered company name	OzCrop
Address	G13/25 Solent Circuit Norwest NSW 2153 Australia
Telephone	+61 2 8123 0170
Fax	+61 2 8123 0171
Website	http://www.ozcrop.com.au
Email	orders@ozcrop.com.au

Emergency telephone number

Association / Organisation	In Transport Emergency DIAL 000	
Emergency telephone numbers	1800 033 111 (24 hours - Australia wide)	
Other emergency telephone numbers	Not Available	

SECTION 2 Hazards identification

Classification of the substance or mixture

COMBUSTIBLE LIQUID, regulated for storage purposes only

Poisons Schedule	S6
Classification [1]	Flammable Liquids Category 4, Aspiration Hazard Category 1, Acute Toxicity (Dermal) Category 4, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2A, Acute Toxicity (Inhalation) Category 1, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, Reproductive Toxicity Category 2, Hazardous to the Aquatic Environment Long-Term Hazard Category 1
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

Label elements

Hazard pictogram(s)







Signal word Dange

Hazard statement(s)

H227	Combustible liquid.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

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H330	Fatal if inhaled.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P273	Avoid release to the environment.
P284	[In case of inadequate ventilation] wear respiratory protection.
P264	Wash all exposed external body areas thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider.		
P331	Do NOT induce vomiting.		
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.		
P308+P313	IF exposed or concerned: Get medical advice/ attention.		
P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.		
P302+P352	IF ON SKIN: Wash with plenty of water and soap.		
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.		
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.		
P337+P313	If eye irritation persists: Get medical advice/attention.		
P362+P364	Take off contaminated clothing and wash it before reuse.		
P391	Collect spillage.		

Precautionary statement(s) Storage

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

Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name	
1689-99-2	10-30	bromoxynil octanoate	
Not Available		(200g/L)	
Various	30-60 <u>liquid hydrocarbons</u>		
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available		

SECTION 4 First aid measures

Description of first aid measures

If this product comes in contact with the eyes:

Eye Contact

- Wash out immediately with fresh running water.
 Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lide.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Lay patient down. Keep warm and rested.

Inhalation

- If fumes or combustion products are inhaled remove from contaminated area.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained.

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Perform CPR if necessary.

Transport to hospital, or doctor, without delay.

For advice, contact a Poisons Information Centre or a doctor at once.

Urgent hospital treatment is likely to be needed.

If swallowed do NOT induce vomiting.

If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

Observe the patient carefully.

Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.

Transport to hospital or doctor without delay.

Avoid giving milk or oils.

Avoid giving alcohol.

Indication of any immediate medical attention and special treatment needed

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

For petroleum distillates

- In case of ingestion, gastric lavage with activated charcoal can be used promptly to prevent absorption decontamination (induced emesis or lavage) is controversial and should be considered on the merits of each individual case; of course the usual precautions of an endotracheal tube should be considered prior to lavage, to prevent aspiration.
- Individuals intoxicated by petroleum distillates should be hospitalized immediately, with acute and continuing attention to neurologic and cardiopulmonary function.
- Positive pressure ventilation may be necessary.
- · Acute central nervous system signs and symptoms may result from large ingestions of aspiration-induced hypoxia.
- After the initial episode,individuals should be followed for changes in blood variables and the delayed appearance of pulmonary oedema and chemical pneumonitis. Such patients should be followed for several days or weeks for delayed effects, including bone marrow toxicity, hepatic and renal impairment Individuals with chronic pulmonary disease will be more seriously impaired, and recovery from inhalation exposure may be complicated.
- · Gastrointestinal symptoms are usually minor and pathological changes of the liver and kidneys are reported to be uncommon in acute intoxications.
- Chlorinated and non-chlorinated hydrocarbons may sensitize the heart to epinephrine and other circulating catecholamines so that arrhythmias may occur. Careful consideration of this potential adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators.

BP America Product Safety & Toxicology Department

for dinitrophenols:

Marked fatigue, tremendous thirst, profuse sweating, flushing of the face are all characteristics of intoxication by dinitrophenol derivatives. These may be followed by restlessness, anxiety, excitement which may occasionally lead to convulsions. Rises in body temperature (proportional to dose) may result in severe hyperpyexia. tachycardia, hyperpnoea, dyspnoea, cyanosis and muscle cramps characterise later symptomatology. Late complications include decreased urine output with albuminuria, casts, pigment, and sometimes blood cells due to toxic nephritis. Jaundice and liver tenderness also develop as a result of toxic hepatitis.

TREATMENT for dinitrophenol intoxications:

- Gastric lavage with large quantities of 5% sodium bicarbonate solution leaving 1-2 pints in the stomach.
- ▶ Saline cathartics e.g. 15-30 gm sodium or magnesium sulfate in water
- Cold packs and alcohol sponges to reduce body temperature. Antipyretic drugs are ineffective here. Cold water enemas have been used. Intensive efforts to correct a dinitrophenol fever are justified. If it can be accomplished, mild hypothermia (rectal temperature between 33.5 and 36 deg. C) is desirable because dinitrophenol appears to lose its metabolic activity at reduced temperature. [DO NOT give atropine, aspirin, and other salicylates to control hyperthermia, as these agents appear likely to enhance the toxicity of phenolic substances. Aspirin also enhances the uncoupling of oxidative phosphorylation.]
- Fluids, orally or intravenously (e.g. glucose in saline, 1000 ml) to correct dehydration and acidosis.
- Because dinitrophenol is actively transported by the renal organic acid transport processes in some species, a trial of forced diuresis with alkalisation of the urine is warranted.
- Oxygen therapy. Artificial ventilation is needed. [Administer oxygen by mask to minimise anoxia].
- Prophylactic measures in anticipation of kidney and liver insufficiency.

GOSSELIN, SMITH HODGE; Clinical Toxicology of Commercial Products 5th Ed.

Diazepam may be used, if necessary, for the treatment of convulsions, to reduce body heat and control agitation. Be prepared to counter respirator depression and hypotension which may occur following administration of anticonvulsants.

- Heavy and persistent skin contamination over many years may lead to dysplastic changes. Pre-existing skin disorders may be aggravated by exposure to this product.
- In general, emesis induction is unnecessary with high viscosity, low volatility products, i.e. most oils and greases
- ▶ High pressure accidental injection through the skin should be assessed for possible incision, irrigation and/or debridement.

NOTE: Injuries may not seem serious at first, but within a few hours tissue may become swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Product may be forced through considerable distances along tissue planes.

SECTION 5 Firefighting measures

Extinguishing media

- ► Foam
- Dry chemical powder.
- ▶ BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog Large fires only.

Special hazards arising from the substrate or mixture

Fire Incompatibility Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Advice for firefighters

- Alert Fire Brigade and tell them location and nature of hazard.
- ▶ Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- ▶ Use water delivered as a fine spray to control fire and cool adjacent area.
- Fire Fighting
- Avoid spraying water onto liquid pools.
- **DO NOT** approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.

Fire/Explosion Hazard

- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).

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May emit acrid smoke.

Mists containing combustible materials may be explosive.

Combustion products include

carbon dioxide (CO2)

nitrogen oxides (NOx)

other pyrolysis products typical of burning organic material.

CARE: Water in contact with hot liquid may cause foaming and a steam explosion with wide scattering of hot oil and possible severe burns.

Foaming may cause overflow of containers and may result in possible fire.

HAZCHEM

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Environmental hazard - contain spillage.

Minor Spills

Slippery when spilt.

- ► Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- ▶ Wipe up.
- Place in a suitable, labelled container for waste disposal.

Environmental hazard - contain spillage.

Slippery when spilt.

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves
- Prevent, by any means available, spillage from entering drains or water course.
- No smoking, naked lights or ignition sources.
- **Major Spills** Increase ventilation.
 - Stop leak if safe to do so.
 - Contain spill with sand, earth or vermiculite.
 - Collect recoverable product into labelled containers for recycling.
 - Absorb remaining product with sand, earth or vermiculite
 - Collect solid residues and seal in labelled drums for disposal
 - Wash area and prevent runoff into drains.
 - If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

The conductivity of this material may make it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000 pS/m., Whether a liquid is nonconductive or semi-conductive, the precautions are the same., A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid.

- ▶ Containers, even those that have been emptied, may contain explosive vapours.
- Do NOT cut, drill, grind, weld or perform similar operations on or near containers.
- DO NOT allow clothing wet with material to stay in contact with skin
- ▶ Electrostatic discharge may be generated during pumping this may result in fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment.
- Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (<=1 m/sec until fill pipe submerged to twice its diameter, then <= 7 m/sec)
- Avoid splash filling.
 - Do NOT use compressed air for filling discharging or handling operations.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- ▶ Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- When handling, **DO NOT** eat, drink or smoke Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice
- Observe manufacturer's storage and handling recommendations contained within this SDS.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.

Other information

Safe handling

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers.

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- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container

- Metal can or drum
- ▶ Packaging as recommended by manufacturer.
- ▶ Check all containers are clearly labelled and free from leaks.

Storage incompatibility

Avoid reaction with oxidising agents

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2		TEEL-3
OzCrop Bromoxynil 200 Selective Herbicide	Not Available	Not Available		Not Available
Ingredient	Original IDLH		Revised IDLH	
Ingredient bromoxynil octanoate	Original IDLH Not Available		Revised IDLH Not Available	

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit	
bromoxynil octanoate	Е	≤ 0.01 mg/m³	
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.		

Exposure controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. An approved self contained breathing apparatus (SCBA) may be required in some situations.

Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Appropriate engineering controls

rype of Contaminant.	All Speed.
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

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Personal protection











Eye and face protection

Safety glasses with side shields.

- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

Skin protection

Hands/feet protection

See Hand protection below

- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

NOTE:

- F The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- · frequency and duration of contact.
- · chemical resistance of glove material,
- · glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).

- · When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- · When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374. AS/NZS 2161.10.1 or national equivalent) is recommended.
- · Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.
- · Contaminated gloves should be replaced.

As defined in ASTM F-739-96 in any application, gloves are rated as:

- · Excellent when breakthrough time > 480 min
- · Good when breakthrough time > 20 min
- · Fair when breakthrough time < 20 min
- · Poor when glove material degrades

For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- · Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- · Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Body protection

See Other protection below

Other protection

- Overalls
- P.V.C apron. Barrier cream.
- Skin cleansing cream.
- Eve wash unit.

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

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Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	A-AUS / Class1 P2	-
up to 50	1000	-	A-AUS / Class 1 P2
up to 50	5000	Airline *	-
up to 100	5000	-	A-2 P2
up to 100	10000	-	A-3 P2
100+			Airline**

^{* -} Continuous Flow ** - Continuous-flow or positive pressure demand

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- ▶ Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

information on basic physical	normation on basic physical and chemical properties		
Appearance	Clear liquid with aromatic hydrocarbon odour; does not mix with water.		
Physical state	Liquid	Relative density (Water = 1)	1.03 @20C
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Applicable	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	~178	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	>68	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Combustible.	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Negligible
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (Not Available%)	Not Applicable
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Inhaled

Information on toxicological effects

Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful.

There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can

cause further lung damage.

Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.

Inhalation hazard is increased at higher temperatures.

Inhaling high concentrations of mixed hydrocarbons can cause narcosis, with nausea, vomiting and lightheadedness. Low molecular weight (C2-C12) hydrocarbons can irritate mucous membranes and cause incoordination, giddiness, nausea, vertigo, confusion, headache, appetite

Continued...

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Skin Irritation/Corrosion	×	Reproductivity	✓
Acute Toxicity	~	Carcinogenicity	×
LIQUID HYDROCARBONS	Studies have shown that normal alpha olefins have little or no toxic effect on animals except if inhaled in high concentrations. They may produce minimal skin and eye irritation, but do not sensitise the skin. Exposure to very high levels of C6-C16 normal alpha olefin vapours caused central nervous system effects, including anaesthesia (loss of sensation). If C20+ products are heated, fumes may produce nausea and irritation of the upper airway. The available data indicate normal alpha olefins do not cause mutations. Repeated exposure in animals has affected the liver and kidney. Olefins are not expected to cause reproductive or developmental toxicity. Based on the available evidence, this group of substances does not cause genetic toxicity. Although there is no available data regarding cancer-causing potential, the structure of these substances does not raise concern for humans. No significant acute toxicological data identified in literature search.		
BROMOXYNIL OCTANOATE	NOEL (90 day) for rats 15.6 mg/kg, dogs 5 mg/kg da The following information refers to contact allergens a Contact allergies quickly manifest themselves as con eczema involves a cell-mediated (T lymphocytes) imi involve antibody-mediated immune reactions. The sig distribution of the substance and the opportunities for distributed can be a more important allergen than on- clinical point of view, substances are noteworthy if the For olefins:	as a group and may not be specific to be tact eczema, more rarely as urticaria of mune reaction of the delayed type. Oth gnificance of the contact allergen is not r contact with it are equally important. If e with stronger sensitising potential wit	or Quincke's oedema. The pathogenesis of contact the allergic skin reactions, e.g. contact urticaria, a simply determined by its sensitisation potential: the A weakly sensitising substance which is widely h which few individuals come into contact. From a
Legeла:	specified data extracted from RTECS - Register of To		anisa nom manaladale a 3003. Offices Office Wise
liquid hydrocarbons	TOXICITY Not Available 1. Value obtained from Europe ECHA Registered Su	IRRITATION Not Available hstances - Acute toxicity 2 * Value obt	ained from manufacturar's SDS . Unless otherwise
bromoxynil octanoate	Dermal (rabbit) LD50: 1675 mg/kg ^[2] Oral (Mouse) LD50; 245 mg/kg ^[2]	Not Available	
	TOXICITY	IRRITATION	
OzCrop Bromoxynil 200 Selective Herbicide	Not Available	IRRITATION Not Available	
Chronic	on the soles of the feet. Constant or exposure over long periods to mixed hyd and anaemia, and reduced liver and kidney function. Animal testing showed that subchronic exposure to b of liver cancer also increased. Exposure at work to ioxynil and bromoxynil produce i loss, and pain in the legs. The onset of these effects temporary increase in creatinine phosphokinase, LDt 2,4-dinitrophenol can cause skin eruption, peripheral contact may produce an allergic or irritant inflammatic Exposure over a long period of time to nitrophenols in and enlargement of the spleen may occur.	drocarbons may produce stupor with discreposure may result in drying an oromoxynil caused increased deaths of nordinate sweating and thirst, fever, he is insidious. Removal from exposure red (lactate dehydrogenase), aldolase ar nerve damage, liver and kidney dama on of the skin. In any produce kidney and liver damage.	zziness, weakness and visual disturbance, weight los d cracking and redness of the skin. fetuses and multiple deformities in offspring. The rate eadache, dizziness, vomiting, muscle pain, weight esulted in quick recovery. Blood tests showed a nd SGOT (serum glutamic oxaloacetic transaminase) ge, and rarely cataracts. Repeated or prolonged
	cause irritation and excessive tear secretion. Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Based on experience with animal studies, exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother. Oil may contact the skin or be inhaled. Extended exposure can lead to eczema, inflammation of hair follicles, pigmentation of the face and warts		
Eye	This material can cause eye irritation and damage in Instillation of isoparaffins into rabbit eyes produces or Direct eye contact with petroleum hydrocarbons can	nly slight irritation.	may be temporarily damaged. Aromatic species can
Skin Contact	Skin contact with the material may be harmful; systemic effects may result following absorption. Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons. Open cuts, abraded or irritated skin should not be exposed to this material The material may accentuate any pre-existing dermatitis condition Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. Aromatic hydrocarbons may produce sensitivity and redness of the skin. They are not likely to be absorbed into the body through the skin but branched species are more likely to.		
Ingestion	Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733) Exposure may give rise to abnormal sweating followed by thirst, emaciation and kidney impairment. Increased blood flow in all organs and fluid accumulation in the lungs and brain may result. Signs of poisoning include fever, rapid breathing, disorientation and excitability. Ingestion of petroleum hydrocarbons can irritate the pharynx, oesophagus, stomach and small intestine, and cause swellings and ulcers of the mucous. Symptoms include a burning mouth and throat; larger amounts can cause nausea and vomiting, narcosis, weakness, dizziness, slow and shallow breathing, abdominal swelling, unconsciousness and convulsions. Symptoms of dinitrophenol poisoning include a rapid increase in body temperature, breathing rate and heart rate. Oxygen demand is raised even faster, causing oxygen deficiency and acid-base imbalance (acidosis) to occur. Accidental ingestion of the material may be damaging to the health of the individual.		
	loss, drowsiness, tremors and stupor. Central nervous system (CNS) depression may inclueffects, slowed reaction time, slurred speech and ma may be fatal.		

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Serious Eye Damage/Irritation	✓	STOT - Single Exposure	~
Respiratory or Skin sensitisation	✓	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	✓

Legend:

💢 – Data either not available or does not fill the criteria for classification 🎤 – Data available to make classification

SECTION 12 Ecological information

Toxicity

0.0	Endpoint	Test Duration (hr)	Species		Value	Source
OzCrop Bromoxynil 200 Selective Herbicide	Not Available	Not Available	Not Available		Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Valu	ıe	Source
	EC50	48h	Crustacea	0.01	5-0.056mg/L	4
bromoxynil octanoate	NOEC(ECx)	504h	Crustacea	0.00	3mg/L	4
	LC50	96h	Fish	0.02	8-0.062mg/L	4
	EC50	96h	Algae or other aquatic plants	4.43	mg/l	4
	Endpoint	Test Duration (hr)	Species		Value	Source
liquid hydrocarbons	Not Available	Not Available	Not Available		Not Available	Not Available
Legend:	Ecotox databas		CHA Registered Substances - Ecotoxicological Ir C Aquatic Hazard Assessment Data 6. NITE (Jap			

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
bromoxynil octanoate	LOW (Half-life = 44 days)	LOW (Half-life = 2.65 days)

Bioaccumulative potential

Ingredient	Bioaccumulation
bromoxynil octanoate	HIGH (LogKOW = 5.8634)

Mobility in soil

Ingredient	Mobility
bromoxynil octanoate	LOW (KOC = 4847)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal

- ▶ Containers may still present a chemical hazard/ danger when empty.
- ▶ Return to supplier for reuse/ recycling if possible.

Otherwise:

- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
- ▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.
- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- ▶ Where in doubt contact the responsible authority.
- ▶ Recycle wherever possible or consult manufacturer for recycling options.
- ► Consult State Land Waste Authority for disposal.
- ▶ Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 Transport information

Labels Required



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Marine Pollutant



HAZCHEM

CHEM •3Z

Land transport (ADG)

UN number	3082		
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bromoxynil octanoate)		
Transport hazard class(es)	Class 9 Subrisk Not Applicable		
Packing group	III		
Environmental hazard	Environmentally hazardous		
Special precautions for user	Special provisions 274 331 335 375 AU01 Limited quantity 5 L		

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082

are not subject to this Code when transported by road or rail in;

- (a) packagings;
- (b) IBCs; or
- (c) any other receptacle not exceeding 500 kg(L).
- Australian Special Provisions (SP AU01) ADG Code 7th Ed.

Air transport (ICAO-IATA / DGR)

UN number	3082			
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. * (contains bromoxynil octanoate)			
Transport hazard class(es)	ICAO/IATA Class ICAO / IATA Subrisk ERG Code	9 Not Applicable 9L		
Packing group	III			
Environmental hazard	Environmentally hazardous			
Special precautions for user	Special provisions Cargo Only Packing Instructions Cargo Only Maximum Qty / Pack Passenger and Cargo Packing Instructions Passenger and Cargo Maximum Qty / Pack Passenger and Cargo Limited Quantity Packing Instructions Passenger and Cargo Limited Maximum Qty / Pack		A97 A158 A197 A215 964 450 L 964 450 L Y964 30 kg G	

Sea transport (IMDG-Code / GGVSee)

UN number	3082		
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bromoxynil octanoate)		
Transport hazard class(es)	IMDG Class 9 IMDG Subrisk Not Applicable		
Packing group	III		
Environmental hazard	Marine Pollutant		
Special precautions for user	EMS Number Special provisions Limited Quantities	F-A, S-F 274 335 969 5 L	

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

•	
Product name	Group
bromoxynil octanoate	Not Available
liquid hydrocarbons	Not Available

Transport in bulk in accordance with the ICG Code

Product name	Ship Type

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Product name	Ship Type
bromoxynil octanoate	Not Available
liquid hydrocarbons	Not Available

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

bromoxynil octanoate is found on the following regulatory lists

Australia Chemicals with non-industrial uses removed from the Australian Inventory of Chemical Substances (old Inventory)

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

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

Chemical Footprint Project - Chemicals of High Concern List

liquid hydrocarbons is found on the following regulatory lists

Not Applicable

National Inventory Status

National Inventory	Status	
Australia - AIIC / Australia Non-Industrial Use	Yes	
Canada - DSL	No (bromoxynil octanoate)	
Canada - NDSL	Yes	
China - IECSC	Yes	
Europe - EINEC / ELINCS / NLP	Yes	
Japan - ENCS	No (bromoxynil octanoate)	
Korea - KECI	No (bromoxynil octanoate)	
New Zealand - NZIoC	Yes	
Philippines - PICCS	No (bromoxynil octanoate)	
USA - TSCA	Yes	
Taiwan - TCSI	No (bromoxynil octanoate)	
Mexico - INSQ	No (bromoxynil octanoate)	
Vietnam - NCI	Yes	
Russia - FBEPH	Yes	
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.	

SECTION 16 Other information

Revision Date	10/12/2021
Initial Date	13/12/2018

SDS Version Summary

Version	Date of Update	Sections Updated
4.1	03/09/2020	Classification change due to full database hazard calculation/update.
5.1	10/12/2021	Classification change due to full database hazard calculation/update.

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average

PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit $_{\circ}$

IDLH: Immediately Dangerous to Life or Health Concentrations

ES: Exposure Standard

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value BCF: BioConcentration Factors

BEI: Biological Exposure Index

AIIC: Australian Inventory of Industrial Chemicals

DSL: Domestic Substances List NDSL: Non-Domestic Substances List

Continued...

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IECSC: Inventory of Existing Chemical Substance in China

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

NLP: No-Longer Polymers

ENCS: Existing and New Chemical Substances Inventory

KECI: Korea Existing Chemicals Inventory NZIoC: New Zealand Inventory of Chemicals

PICCS: Philippine Inventory of Chemicals and Chemical Substances

TSCA: Toxic Substances Control Act TCSI: Taiwan Chemical Substance Inventory INSQ: Inventario Nacional de Sustancias Químicas

NCI: National Chemical Inventory

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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