

OzCrop Pty Ltd Chemwatch: 5340-03

Version No: 3.1.1.1 Safety Data Sheet according to WHS and ADG requirements Chemwatch Hazard Alert Code: 2

Issue Date: 01/11/2019 Print Date: 29/01/2020 S.GHS.AUS.EN

# SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### **Product Identifier**

Product name	OzCrop Propaz Herbicide
Synonyms	APVMA Code: 66883
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains propyzamide)
Other means of identification	Not Available
	substance or mixture and uses advised against

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

Relevant identified uses Agricultural herbicide.

### Details of the supplier of the safety data sheet

Registered company name	OzCrop Pty Ltd
Address	G13/25 Solent Circuit Norwest NSW 2153 Australia
Telephone	(02) 8123 0170
Fax	(02) 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

Poisons Schedule	S6	
Classification <sup>[1]</sup>	Skin Corrosion/Irritation Category 2, Carcinogenicity Category 2, Acute Aquatic Hazard Category 1, Chronic Aquatic Hazard Category 1	
Legend:	1. Classified by Chernwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI	

Label elements



SIGNAL WORD	WARNING
Hazard statement(s)	
H315	Causes skin irritation.
H351	Suspected of causing cancer.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary statement(s) Pre	vention
P201	Obtain special instructions before use.
P281	Use personal protective equipment as required.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

P308+P313	IF exposed or concerned: Get medical advice/attention.
P321	Specific treatment (see advice on this label).
P362	Take off contaminated clothing and wash before reuse.
P391	Collect spillage.
P302+P352	IF ON SKIN: Wash with plenty of water.
P332+P313	If skin irritation occurs: Get medical advice/attention.

#### Precautionary statement(s) Storage

P405 Store locked up.

#### Precautionary statement(s) Disposal

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

#### **SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**

P501

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
23950-58-5	30-60	propyzamide
Not Available		(500g/L)
107-21-1	1-10	ethylene glycol
Not Available		(42g/L)
Not Available	<10	Ingredients determined not to be hazardous
7732-18-5	balance	water

### SECTION 4 FIRST AID MEASURES

#### Description of first aid measures

Eye Contact	<ul> <li>If this product comes in contact with the eyes:</li> <li>Wash out immediately with fresh running water.</li> <li>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 lids.</li> <li>Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
Skin Contact	<ul> <li>If skin contact occurs:</li> <li>Immediately remove all contaminated clothing, including footwear.</li> <li>Flush skin and hair with running water (and soap if available).</li> <li>Seek medical attention in event of irritation.</li> </ul>
Inhalation	<ul> <li>If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>Other measures are usually unnecessary.</li> </ul>
Ingestion	<ul> <li>For advice, contact a Poisons Information Centre or a doctor at once.</li> <li>Urgent hospital treatment is likely to be needed.</li> <li>If swallowed do NOT induce vomiting.</li> <li>If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>Observe the patient carefully.</li> <li>Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>Transport to hospital or doctor without delay.</li> </ul>

### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

- For acute or short term repeated exposures to ethylene glycol:
- Early treatment of ingestion is important. Ensure emesis is satisfactory.
- Test and correct for metabolic acidosis and hypocalcaemia.
- Apply sustained diuresis when possible with hypertonic mannitol.
- Evaluate renal status and begin haemodialysis if indicated. [I.L.O]
- Rapid absorption is an indication that emesis or lavage is effective only in the first few hours. Cathartics and charcoal are generally not effective.
- Correct acidosis, fluid/electrolyte balance and respiratory depression in the usual manner. Systemic acidosis (below 7.2) can be treated with intravenous sodium bicarbonate solution.
- Ethanol therapy prolongs the half-life of ethylene glycol and reduces the formation of toxic metabolites.
- Pyridoxine and thiamine are cofactors for ethylene glycol metabolism and should be given (50 to 100 mg respectively) intramuscularly, four times per day for 2 days.
- Magnesium is also a cofactor and should be replenished. The status of 4-methylpyrazole, in the treatment regime, is still uncertain. For clearance of the material and its metabolites, haemodialysis is much superior to peritoneal dialysis.
- [Ellenhorn and Barceloux: Medical Toxicology]

It has been suggested that there is a need for establishing a new biological exposure limit before a workshift that is clearly below 100 mmol ethoxy-acetic acids per mole creatinine in morning urine of people occupationally exposed to ethylene glycol ethers. This arises from the finding that an increase in urinary stones may be associated with such exposures. *Laitinen J., et al: Occupational & Environmental Medicine 1996; 53, 595-600* 

# Extinguishing media

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances. In such an event consider:

- In foam.
- dry chemical powder.
- carbon dioxide.

### Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
Advice for firefighters	
Fire Fighting	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>Prevent, by any means available, spillage from entering drains or water courses.</li> <li>Use fire fighting procedures suitable for surrounding area.</li> <li>DO NOT approach containers suspected to be hot.</li> <li>Cool fire exposed containers with water spray from a protected location.</li> <li>If safe to do so, remove containers from path of fire.</li> <li>Equipment should be thoroughly decontaminated after use.</li> </ul>
Fire/Explosion Hazard	<ul> <li>The material is not readily combustible under normal conditions.</li> <li>However, it will break down under fire conditions and the organic component may burn.</li> <li>Not considered to be a significant fire risk.</li> <li>Heat may cause expansion or decomposition with violent rupture of containers.</li> <li>Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).</li> <li>May emit acrid smoke.</li> </ul> Decomposes on heating and produces toxic fumes of: <ul> <li>carbon dioxide (CO2)</li> <li>hydrogen chloride</li> <li>phosgene</li> <li>nitrogen oxides (NOx)</li> <li>other pyrolysis products typical of burning organic material.</li> </ul>
HAZCHEM	•3Z

# 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

Minor Spills	<ul> <li>Environmental hazard - contain spillage.</li> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb spill with sand, earth, inert material or vermiculite.</li> <li>Wipe up.</li> <li>Place in a suitable, labelled container for waste disposal.</li> </ul>
Major Spills	<ul> <li>Environmental hazard - contain spillage.</li> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear breathing apparatus plus protective gloves.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Stop leak if safe to do so.</li> <li>Contain spill with sand, earth or vermiculite.</li> <li>Collect recoverable product into labelled containers for recycling.</li> <li>Neutralise/decontaminate residue (see Section 13 for specific agent).</li> <li>Collect solid residues and seal in labelled drums for disposal.</li> <li>Wash area and prevent runoff into drains.</li> <li>After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.</li> <li>If contamination of drains or waterways occurs, advise emergency services.</li> </ul>

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

# SECTION 7 HANDLING AND STORAGE

Precautions for safe handling	
Safe handling	<ul> <li>DO NOT allow clothing wet with material to stay in contact with skin</li> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Avoid contact with moisture.</li> <li>Avoid contact with incompatible materials.</li> <li>When handling, DO NOT eat, drink or smoke.</li> </ul>

	<ul> <li>Avoid physical damage to containers.</li> <li>Always wash hands with soap and water after handling.</li> <li>Work clothes should be laundered separately. Launder contaminated clothing before re-use.</li> <li>Use good occupational work practice.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> </ul>
	Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Other information	<ul> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>Store in a cool, dry, well-ventilated area.</li> <li>Store away from incompatible materials and foodstuff containers.</li> <li>Protect containers against physical damage and check regularly for leaks.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> </ul>
itions for safe storage, in	cluding any incompatibilities
Suitable container	<ul> <li>Polyethylene or polypropylene container.</li> <li>Packing as recommended by manufacturer.</li> <li>Check all containers are clearly labelled and free from leaks.</li> </ul>

# **Control parameters**

# OCCUPATIONAL EXPOSURE LIMITS (OEL)

# INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	ethylene glycol	Ethylene glycol (vapour)	20 ppm / 52 mg/m3	104 mg/m3 / 40 ppm	Not Available	Not Available
Australia Exposure Standards	ethylene glycol	Ethylene glycol (particulate)	10 mg/m3	Not Available	Not Available	Not Available

# EMERGENCY LIMITS

Ingredient	Material name	TEEL-1		TEEL-2	TEEL-3
ethylene glycol	Ethylene glycol	30 ppm		40 ppm	60 ppm
Ingredient	Original IDLH		Revise	d IDLH	
propyzamide	Not Available		Not Ava	Not Available	
ethylene glycol	Not Available		Not Available		
water	Not Available		Not Available		

# OCCUPATIONAL EXPOSURE BANDING

Ingredient	Occupational Exposure Band Rating Occupational Exposure Band Limit	
propyzamide	C > 0.1 to ≤ milligrams per cubic meter of air (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 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 engine be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protecting workers and will typically be independent of worker interactions to provide this high level of protecting workers and will typically 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 "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The 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. General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circums overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventila or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, dete velocities" of fresh circulating air required to effectively remove the contaminant.			of protection. tilation that strategically ty. The design of a rcumstances. If risk of entilation in warehouse
	Type of Contaminant:		Air Speed:
Appropriate engineering controls	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 conta drift, plating acid fumes, pickling (released at low velocity in		0.5-1 m/s (100-200 f/min.)
	direct spray, spray painting in shallow booths, drum filling, generation into zone of rapid air motion)	conveyer loading, crusher dusts, gas discharge (active	1-2.5 m/s (200-500 f/min.)
	grinding, abrasive blasting, tumbling, high speed wheel ge very high rapid air motion).	nerated dusts (released at high initial velocity into zone of	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	

	3: Intermittent, low production.	3: High production, heavy use
	4: Large hood or large air mass in motion	4: Small hood-local control only
	with the square of distance from the extraction p accordingly, after reference to distance from the 1-2 m/s (200-400 f/min) for extraction of solvent	y with distance away from the opening of a simple extraction pipe. Velocity generally decreases yoint (in simple cases). Therefore the air speed at the extraction point should be adjusted, contaminating source. The air velocity at the extraction fan, for example, should be a minimum s generated in a tank 2 meters distant from the extraction point. Other mechanical consideration tion apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or sed.
Personal protection		
Eye and face protection	the wearing of lenses or restrictions on use, and adsorption for the class of chemicals in their removal and suitable equipment should remove contact lens as soon as practicable	soft contact lenses may absorb and concentrate irritants. A written policy document, describing , should be created for each workplace or task. This should include a review of lens absorption use and an account of injury experience. Medical and first-aid personnel should be trained in d be readily available. In the event of chemical exposure, begin eye irrigation immediately and . Lens should be removed at the first signs of eye redness or irritation - lens should be removed e washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or
Skin protection	See Hand protection below	
Hands/feet protection	manufacturer. Where the chemical is a preparat and has therefore to be checked prior to the app The exact break through time for substances ha making a final choice. Personal hygiene is a key element of effective h washed and dried thoroughly. Application of a m Suitability and durability of glove type is depend frequency and duration of conta chemical resistance of glove m glove thickness and dexterity Select gloves tested to a relevant standard (e.g. When prolonged or frequently r greater than 240 minutes according to When only brief contact is expe according to EN 374, AS/NZS 2161.1 Some glove plymer types are long-term use. Contaminated gloves should be As defined in ASTM F-739-96 in any application Excellent when breakthrough time Fair when breakthrough time Fair when breakthrough time Fair when glove material degra It should be emphasised that glove thickness is efficiency of the glove will be dependent on the consideration of the task requirements and know Glove thickness may also vary depending on the technical data should always be taken into acco Note: Depending on the activity being conducte Thinner gloves (down to 0.1 mr gloves are only likely to give short dur Thicker gloves (up to 3 mm or abrasion or puncture potential	<ul> <li>e.g. Rubber epend on the material, but also on further marks of quality which vary from manufacturer to ion of several substances, the resistance of the glove material can not be calculated in advance oblication.</li> <li>is to be obtained from the manufacturer of the protective gloves and has to be observed when and care. Gloves must only be worn on clean hands. After using gloves, hands should be on-perfumed moisturiser is recommended.</li> <li>ent on usage. Important factors in the selection of gloves include: act, aterial,</li> <li>Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).</li> <li>repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time o EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.</li> <li>octed, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes 0.1 or national equivalent) is recommended.</li> <li>less affected by movement and this should be taken into account when considering gloves for e replaced.</li> <li>gloves are rated as: me &gt; 480 min &gt; 20 min 20 min ades</li> <li>s typically greater than 0.35 mm, are recommended. not necessarily a good predictor of glove resistance to a specific chemical, as the permeation exact composition of the glove material. Therefore, glove selection should also be based on</li> </ul>
Body protection	moisturiser is recommended. See Other protection below	
Other protection	<ul> <li>Overalls.</li> <li>P.V.C. apron.</li> <li>Barrier cream.</li> </ul>	

# Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the *computer-generated* selection:

OzCrop Propaz Herbicide

Material	СРІ
BUTYL	С
NATURAL RUBBER	С

### **Respiratory protection**

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

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum	Half-Face	Full-Face	Powered Air
Protection Factor	Respirator	Respirator	Respirator

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# **OzCrop Propaz Herbicide**

NATURAL+NEOPRENE	С
NEOPRENE	С
NEOPRENE/NATURAL	С
NITRILE	С
NITRILE+PVC	С
PE/EVAL/PE	С
PVA	С
PVC	С
TEFLON	С
VITON	С

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

up to 10 x ES	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

#### ^ - Full-face

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

Appearance	Light brown coloured liquid with mild odour; mixes with water		
Physical state	Liquid	Relative density (Water = 1)	1.1-1.2 @20C
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Neutral	Decomposition temperature	Not Available
Melting point / freezing point (°C)	<0	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	~100	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	*2.37 @20C (water)	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

# SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
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

#### Information on toxicological effects

Inhaled	The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion	Accidental ingestion of the material may be damaging to the health of the individual.

Skin Contact	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Open cuts, abraded or irritated skin should not be exposed to this material 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.		
Eye	There is some evidence to suggest that this material can o	ause eye irritation and damage in some persons.	
Chronic	There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. There is some evidence from animal testing that exposure to this material may result in reduced fertility. There is some evidence from animal testing that exposure to this material may result in toxic effects to the unborn baby. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).		
	ΤΟΧΙΟΙΤΥ	IRRITATION	
OzCrop Propaz Herbicide	Not Available	Not Available	
propyzamide	TOXICITY           Dermal (rabbit) LD50: >3160 mg/kg <sup>[2]</sup> Oral (rat) LD50: 3350 mg/kg <sup>[2]</sup>	IRRITATION Eye: slight Skin: slight	
	ΤΟΧΙΟΙΤΥ	IRRITATION	
	Dermal (rabbit) LD50: 9530 mg/kg <sup>[2]</sup>	Eye (rabbit): 100 mg/1h - mild	
	Inhalation (rat) LC50: 100.2 mg/l/8hr <sup>[2]</sup>	Eye (rabbit): 12 mg/m3/3D	
	Oral (rat) LD50: =3.58-12.7 mg/kg <sup>[2]</sup>	Eye (rabbit): 1440mg/6h-moderate	
ethylene glycol		Eye (rabbit): 500 mg/24h - mild	
		Eye: no adverse effect observed (not irritating) <sup>[1]</sup>	
		Skin (rabbit): 555 mg(open)-mild	
		Skin: no adverse effect observed (not irritating) <sup>[1]</sup>	
	ΤΟΧΙΟΙΤΥ	IRRITATION	
water	Oral (rat) LD50: >90000 mg/kg <sup>[2]</sup>	Not Available	
Legend:	<ol> <li>Value obtained from Europe ECHA Registered Substan specified data extracted from RTECS - Register of Toxic E</li> </ol>	ices - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise Effect of chemical Substances	

For propyzamide (pronamide): Pronamide is practically non-toxic via swallowing and is slightly toxic through skin contact, causing slight local irritation. Chronic exposure can cause changes to thyroid, adrenal gland, and pituitary function, with decreases in food consumption and changes in blood chemistry in animal testing at sufficient doses. It is unlikely to cause reproductive toxicity, birth defects or mutations. Data suggests that pronamide may cause cancer PROPYZAMIDE at sufficient doses, notably of the liver. [\* The Pesticides Manual, Incorporating The Agrochemicals Handbook, 10th Edition, Editor Clive Tomlin, 1994, British Crop Protection Council1 NOEL: (chronic studies) dogs 300, rats 200, mice 13 mg/kg diet \* ADI 0.08 mg/kg \* Toxicity Class WHO Table 5; EPA IV \* [Estimated Lethal Dose (human) 100 ml; RTECS quoted by Orica] Substance is reproductive effector in rats (birth defects). Mutagenic to rat cells. For ethylene glycol: Ethylene glycol is quickly and extensively absorbed throughout the gastrointestinal tract. Limited information suggests that it is also absorbed through the airways; absorption through skin is apparently slow. Following absorption, it is distributed throughout the body. In humans, it is initially metabolized by alcohol dehydrogenase to form glycoaldehyde, which is rapidly converted to glycolic acid and glyoxal. These breakdown products are oxidized to glyoxylate, which may be further metabolized to formic acid, oxalic acid, and glycine. Breakdown of both glycine and formic acid can generate carbon dioxide, which is one of the major elimination products of ethylene glycol. In addition to exhaled carbon dioxide, ethylene glycol is eliminated in the urine as both the parent compound and glycolic acid. Elimination is rapid and occurs within a few hours. Respiratory effects: Respiratory system involvement occurs 12-24 hours after swallowing sufficient amounts of ethylene glycol. Symptoms include hyperventilation, shallow rapid breathing, and generalized swelling of the lungs with calcium oxalate deposits occasionally appearing in the lungs. Respiratory system involvement appears to be dose-dependent and occurs at the same time as cardiovascular changes. Later, there may be other changes compatible with adult respiratory distress syndrome (ARDS). Swelling of the lung can be a result of heart failure, ARDS, or aspiration of stomach contents. Symptoms related to acidosis such as fast or excessive breathing are frequently observed; however, major symptoms such as swelling of the lung and inflammation of the bronchi and lungs are relatively rare, and are usually seen only in extreme poisoning Cardiovascular effects: Cardiovascular system involvement in humans occurs at the same time as respiratory system involvement, during the second phase of ethylene glycol poisoning by swallowing, which is 12-24 hours after acute exposure. The symptoms of poisoning involving the ETHYLENE GLYCOL heart include increased heart rate, heart enlargement and ventricular gallop. There may also be high or low blood pressure, which may progress to cardiogenic shock. In lethal cases, inflammation of the heart muscle has been observed at autopsy. Cardiovascular involvement appears to be rare and usually seen after swallowing higher doses of ethylene glycol. In summary, acute exposure to high levels of ethylene glycol can cause serious cardiovascular effects in humans. The effects of a long-term, low-dose exposure are unknown. Gastrointestinal effects: Common early acute effects of swallowing ethylene glycol include nausea, vomiting with or without blood, heartburn and abdominal cramping and pain. One patient showed intermittent diarrhea and pain, and after surgery, deposition of oxalate crystals was shown to have occurred. Musculoskeletal effects: Reported musculoskeletal effects in cases of acute ethylene glycol poisoning include diffuse muscle tenderness and pain, associated with high levels of creatinine in the blood, and jerks and contractions associated with low calcium. Liver effects: Autopsies carried out on people who died following acute ethylene glycol poisoning showed deposition of calcium oxalate in the liver as well as hydropic and fatty degeneration and cell death (necrosis) of the liver. Kidney effects: Adverse kidney effects are seen during the third stage of ethylene glycol poisoning, 2-3 days after acute exposure. Calcium oxalate crystals are deposited in the tubules and are seen in the urine. There may also be degeneration and death of tubule cells, and inflammation of the tubule interstitium. If untreated, the degree of kidney damage progresses and leads to blood and protein in the urine, decreased kidney function, reduction in urine output and ultimately, kidney failure. With adequate supportive therapy, kidney function can return to normal or near normal. Metabolic effects: Metabolic changes can occur within 12 hours of exposure to ethylene glycol. There may be metabolic acidosis, caused by

	accumulation of glycolic acid in the blood and therefore a reduction in blood pH. The anion gap is increased, due to increased unmeasured anions (mainly glycolate). Effects on the nervous system: Adverse reactions involving the nervous system are among the first symptoms to appear in humans after ethylene glycol is swallowed. These early effects are also the only symptoms caused by unmetabolised ethylene glycol. Together with metabolic effects (see above), they occur from 0.5-12 hours after exposure and are considered to be part of the first stage in ethylene glycol poisoning. Inco-ordination, slurred speech, confusion and sleepiness are common in the early stages, as are irritation, restlessness and disorientation. Later, there may be effects on cranial nerves (which may be reversible over many months). Swelling of the brain (cerebrum) and crystal deposits of calcium oxalate in the walls of the small blood vessels of the brain were found at autopsy in people who died after acute ethylene glycol poisoning. Reproductive effects: Animal testing showed that ethylene glycol may affect fertility, survival of fetuses and the male reproductive organs. Effects on development: Animal studies indicate that birth defects may occur after exposure in pregnancy; there may also be reduction in foetal weight. Cancer: No studies are known regarding cancer effects in humans or animal, after skin exposure to ethylene glycol. Genetic toxicity: No human studies available, but animal testing results are consistently negative.			
WATER	No significant acute toxicological data identified in literature search.			
Acute Toxicity	X Carcinogenicity			
Skin Irritation/Corrosion	×	Reproductivity	×	
Serious Eye Damage/Irritation	× STOT - Single Exposure ×			
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×	
Mutagenicity	×	Aspiration Hazard	×	
	Legend: X – Data either not available or does not fill the criteria for classification			

Data available to make classification

# **SECTION 12 ECOLOGICAL INFORMATION**

# Toxicity

OzCrop Propaz Herbicide	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURC
	Not Available	Not Available	Not Available	Not Available	Not Available
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURC
	LC50	96	Fish	3.070mg/L	3
propyzamide	EC50	48	Crustacea	>5.6mg/L	4
	EC50	72	Algae or other aquatic plants	0.287mg/L	4
	NOEC	72	Algae or other aquatic plants	0.05mg/L	4
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURC
	LC50	96	Fish	>72-860mg/L	2
ethylene glycol	EC50	48	Crustacea	>100mg/L	2
	EC50	96	Algae or other aquatic plants	3-536mg/L	2
	NOEC	552	Crustacea	>=1-mg/L	2
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURC
water	LC50	96	Fish	897.520mg/L	3
	EC50	96	Algae or other aquatic plants	8768.874mg/L	3
Legend:		,	A Registered Substances - Ecotoxicological Info S EPA, Ecotox database - Aquatic Toxicity Data	, ,	

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
propyzamide	HIGH	HIGH
ethylene glycol	LOW (Half-life = 24 days)	LOW (Half-life = 3.46 days)
water	LOW	LOW

### **Bioaccumulative potential**

Ingredient	Bioaccumulation
propyzamide	LOW (LogKOW = 3.5747)
ethylene glycol	LOW (BCF = 200)
water	LOW (LogKOW = -1.38)

# Mobility in soil

propyzamide	LOW (KOC = 1587)
ethylene glycol	HIGH (KOC = 1)
water	LOW (KOC = 14.3)

# SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods	
Product / Packaging disposal	<ul> <li>Containers may still present a chemical hazard/ danger when empty.</li> <li>Return to supplier for reuse/ recycling if possible.</li> <li>Otherwise:</li> <li>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.</li> <li>Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> <li>DO NOT allow wash water from cleaning or process equipment to enter drains.</li> <li>It may be necessary to collect all wash water for treatment before disposal.</li> <li>In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>Where in doubt contact the responsible authority.</li> <li>Recycle wherever possible or consult manufacturer for recycling options.</li> <li>Consult State Land Waste Authority for disposal.</li> <li>Bury or incinerate residue at an approved site.</li> <li>Recycle containers if possible, or dispose of in an authorised landfill.</li> </ul>

# **SECTION 14 TRANSPORT INFORMATION**

# Labels Required

Marine Pollutant	
HAZCHEM	•3Z

# Land transport (ADG)

UN number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains propyzamide)
Transport hazard class(es)	Class 9 Subrisk Not Applicable
Packing group	III
Environmental hazard	Environmentally hazardous
Special precautions for user	Special provisions274 331 335 375 AU01Limited quantity5 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 propyzamide)	
Transport hazard class(es)	ICAO/IATA Class 9 ICAO / IATA Subrisk Not Applicable ERG Code 9L		
Packing group	ERG Code   9L		
Environmental hazard	Environmentally hazardous		
	Special provisions	A97 A158 A197	
Special precautions for user	Cargo Only Packing Instructions	964	
	Cargo Only Maximum Qty / Pack	450 L	

Passenger and Cargo Packing Instructions	964
Passenger and Cargo Maximum Qty / Pack	450 L
Passenger and Cargo Limited Quantity Packing Instructions	Y964
Passenger and Cargo Limited Maximum Qty / Pack	30 kg G

#### Sea transport (IMDG-Code / GGVSee)

UN number	3082	
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains propyzamide)	
Transport hazard class(es)	IMDG Class     9       IMDG Subrisk     Not Applicable	
Packing group	III	
Environmental hazard	Marine Pollutant	
Special precautions for user	EMS NumberF-A , S-FSpecial provisions274 335 969Limited Quantities5 L	

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

Not Applicable

### **SECTION 15 REGULATORY INFORMATION**

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

#### PROPYZAMIDE IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Dangerous Goods Code (ADG Code) - Dangerous Goods List Australia Dangerous Goods Code (ADG Code) - List of Emergency Action Codes Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals Australia Inventory of Chemical Substances (AICS)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

#### ETHYLENE GLYCOL IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals Australia Inventory of Chemical Substances (AICS)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 10 / Appendix C

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5  $\,$ 

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule  ${\bf 6}$ 

Chemical Footprint Project - Chemicals of High Concern List

#### WATER IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

International Air Transport Association (IATA) Dangerous Goods Regulations International Maritime Dangerous Goods Requirements (IMDG Code) United Nations Recommendations on the Transport of Dangerous Goods Model Regulations

Chemical Footprint Project - Chemicals of High Concern List

GESAMP/EHS Composite List - GESAMP Hazard Profiles IMO IBC Code Chapter 17: Summary of minimum requirements IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO IMO Provisional Categorization of Liquid Substances - List 3: (Trade-named) mixtures containing at least 99% by weight of components already assessed by IMO, presenting safety hazards IMO Provisional Categorization of Liquid Substances - List 4: Pollutant only mixtures

containing one or more components, forming more than 1% by weight of the mixture, which have not yet been assessed by IMO

IMO IBC Code Chapter 18: List of products to which the Code does not apply

#### **National Inventory Status**

National Inventory	Status			
Australia - AICS	Yes			
Canada - DSL	No (propyzamide)			
Canada - NDSL	No (propyzamide; water; ethylene glycol)			
China - IECSC	No (propyzamide)			
Europe - EINEC / ELINCS / NLP	Yes			
Japan - ENCS	No (propyzamide)			
Korea - KECI	Yes			
New Zealand - NZIoC	Yes			
Philippines - PICCS	No (propyzamide)			
USA - TSCA	No (propyzamide)			
Taiwan - TCSI	Yes			
Mexico - INSQ	Yes			
Vietnam - NCI	Yes			
Russia - ARIPS	No (propyzamide)			

Legend:

Yes = All CAS declared ingredients are on the inventory

No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

# **SECTION 16 OTHER INFORMATION**

Revision Date	01/11/2019
Initial Date	27/12/2018

### **SDS Version Summary**

Version	Issue Date	Sections Updated
2.1.1.1	27/12/2018	Acute Health (eye)
3.1.1.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification

#### 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。 IDLH: Immediately Dangerous to Life or Health Concentrations
- 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

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end of SDS