

# OzCrop

Chemwatch: 5477-73

Version No: 3.1 Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements Chemwatch Hazard Alert Code: 3 Issue Date: 10/12/2021

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

#### **Product Identifier**

Product name	OzCrop Fluroxypyr 400EC Herbicide
Chemical Name	Not Applicable
Synonyms	APVMA Approval No: 90957/130582
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains fluroxypyr methylheptyl ester)
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 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

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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	S5
Classification <sup>[1]</sup>	Aspiration Hazard Category 1, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2A, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, Reproductive Toxicity Category 1A, Hazardous to the Aquatic Environment Long-Term 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

Hazard pictogram(s)		
Hazard pictogram(s)		¥

Signal word Danger

### Hazard statement(s)

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H360D	May damage the unborn child.
H410	Very toxic to aquatic life with long lasting effects.

## Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P261	Avoid breathing mist/vapours/spray.
P273	Avoid release to the environment.
P264	Wash all exposed external body areas thoroughly after handling.

### Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider.
P331	Do NOT induce vomiting.
P308+P313	IF exposed or concerned: Get medical advice/ attention.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P391	Collect spillage.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

## Precautionary statement(s) Storage

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

#### Precautionary statement(s) Disposal

**P501** D

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
69377-81-7		fluroxypyr
Not Available		present as
81406-37-3	30-60	fluroxypyr methylheptyl ester
Not Available		(400 g/L)
Various	30-60	liquid hydrocarbons
Not Available		(316 g/L)
872-50-4	10-30	N-methyl-2-pyrrolidone
Not Available		(100 g/L)
Legend:	1. Classified by Chemwatch; 2. Classification Classification drawn from C&L * EU IOELVs	drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. available

## **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 or combustion products are inhaled remove from contaminated area.</li> <li>Lay patient down. Keep warm and rested.</li> <li>Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>Transport to hospital, or doctor, without delay.</li> </ul>	

Ingestion	<ul> <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>Seek medical advice.</li> <li>If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.</li> </ul>
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#### 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.

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- + 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. Combustible. 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). May emit acrid smoke. Mists containing combustible materials may be explosive Fire/Explosion Hazard 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 •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
 Environmental hazard - contain spillage.

 • Clean up all spills immediately.

 • Avoid breathing vapours and contact with skin and eyes.

 • Control personal contact with the substance, by using protective equipment.

	<ul> <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>Moderate hazard.</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>No smoking, naked lights or ignition sources.</li> <li>Increase ventilation.</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>Absorb remaining product with sand, earth or vermiculite.</li> <li>Collect solid residues and seal in labelled drums for disposal.</li> <li>Wash area and prevent runoff into drains.</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>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.</li> <li>Containers, even those that have been emptied, may contain explosive vapours.</li> <li>Do NOT cut, drill, grind, weld or perform similar operations on or near containers.</li> <li>DO NOT allow clothing wet with material to stay in contact with skin</li> <li>Electrostatic discharge may be generated during pumping - this may result in fire.</li> <li>Ensure electrical continuity by bonding and grounding (earthing) all equipment.</li> <li>Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (&lt;=1 m/sec until fill pipe submerged to twice its diameter, then &lt;= 7 m/sec).</li> <li>Avoid splash filling.</li> <li>Do NOT electronic continuity in halation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Prevent concentration in hollows and sumps.</li> <li>Do NOT enter confined spaces until atmosphere has been checked.</li> <li>Avoid smoking, naked lights or ignition sources.</li> <li>Avoid smoking, not of this or synces.</li> <li>Avoid physical damage to containers.</li> <li>Work clothes should be laundered separately.</li> <li>Use good occupational with soan and water fare handling.</li> <li>Work clothes should be laundered separately.</li> <li>Use good occupational work practice.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.</li> </ul>
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>

#### Conditions for safe storage, including any incompatibilities

Suitable container	<ul> <li>Metal can or drum</li> <li>Packaging as recommended by manufacturer.</li> <li>Check all containers are clearly labelled and free from leaks.</li> </ul>
Storage incompatibility	<ul> <li>CARE: Water in contact with heated material may cause foaming or a steam explosion with possible severe burns from wide scattering of hot material. Resultant overflow of containers may result in fire.</li> <li>Oil leaks in a pressurized circuit may result in a fine flammable spray (the lower flammability limit for oil mist is reached for a concentration of about 45 g/m3</li> <li>Autoignition temperatures may be significantly lower under particular conditions (slow oxidation on finely divided materials</li> <li>Avoid reaction with oxidising agents</li> </ul>

## **SECTION 8 Exposure controls / personal protection**

## **Control parameters**

## Occupational Exposure Limits (OEL)

## INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	N-methyl-2-pyrrolidone	1-Methyl-2-pyrrolidone	25 ppm / 103 mg/m3	309 mg/m3 / 75 ppm	Not Available	Not Available

Ingredient	TEEL-1	TEEL-2		TEEL-3
-				
N-methyl-2-pyrrolidone	30 ppm	32 ppm		190 ppm
Ingredient	Original IDLH		Revised IDLH	
fluroxypyr	Not Available		Not Available	
fluroxypyr methylheptyl ester	Not Available		Not Available	
liquid hydrocarbons	Not Available		Not Available	
N-methyl-2-pyrrolidone	Not Available		Not Available	
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.

	Type of Contaminant:		Air Speed:
	solvent, vapours, degreasing etc., evaporating from tank (ir	0.25-0.5 m/s (50-100 f/min.)	
Appropriate engineering	aerosols, fumes from pouring operations, intermittent conta drift, plating acid fumes, pickling (released at low velocity in	ay 0.5-1 m/s (100-200 f/min.)	
controls	direct spray, spray painting in shallow booths, drum filling, o 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).		of 2.5-10 m/s (500-2000 f/min.)
	Within each range the appropriate value depends on:		
	Lower 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.		

 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.

Personal protection	
Eye and face protection	<ul> <li>Safety glasses with side shields.</li> <li>Chemical goggles.</li> <li>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]</li> </ul>
Skin protection	See Hand protection below
Hands/feet protection	<ul> <li>Wear chemical protective gloves, e.g. PVC.</li> <li>Wear safety footwear or safety gumboots, e.g. Rubber</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:         <ul> <li>frequency and duration of contact,</li> <li>chemical resistance of glove material,</li> <li>glove thickness and</li> <li>dexterity</li> </ul> </li> <li>Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).</li> </ul>

	<ul> <li>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.</li> <li>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.</li> </ul>
	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
	· Excellent when breakthrough time > 480 min
	Fair when breakting the 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
	puncture potential
	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
	• Overalls.
	P.V.C apron.
Other protection	Barrier cream.
	<ul> <li>Skin cleansing cream.</li> <li>Eve wash unit.</li> </ul>
	r Eve wash unit.

#### 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 Fluroxypyr 400EC Herbicide

Material	СРІ
BUTYL	А
PE/EVAL/PE	А
NATURAL RUBBER	В
PVA	В

\* 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.

#### Respiratory protection

Type AK-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 Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 5 x ES	AK-AUS / Class 1 P2	-	AK-PAPR-AUS / Class 1 P2
up to 25 x ES	Air-line*	AK-2 P2	AK-PAPR-2 P2
up to 50 x ES	-	AK-3 P2	-
50+ x ES	-	Air-line**	-

^ - 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

## **SECTION 9** Physical and chemical properties

#### Information on basic physical and chemical properties

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Appearance	Liquid.		
Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available

Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	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)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Not Available	pH as a solution (Not Available%)	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 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 of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual. 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 loss, drowsiness, tremors and stupor. Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal. Nerve damage can be caused by some non-ring hydrocarbons. Symptoms are temporary, and include weakness, tremors, increased saliva, some convulsions, excessive tears with discolouration and inco-ordination lasting up to 24 hours.		
Ingestion	Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733) Accidental ingestion of the material may be damaging to the health of the individual. Isoparaffinic hydrocarbons cause temporary lethargy, weakness, inco-ordination and diarrhoea. 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.		
Skin Contact	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Skin exposure to isoparaffins may produce slight to moderate irritation in animals and humans. Rare sensitisation reactions in humans have occurred. 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. 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.		
Eye	Instillation of isoparaffins into rabbit eyes produces only slight irritation. Direct eye contact with petroleum hydrocarbons can be painful, and the corneal epithelium may be temporarily damaged. Aromatic species can cause irritation and excessive tear secretion. Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals. Prolonged eye contact may cause inflammation characterised by a temporary redness of the conjunctiva (similar to windburn).		
Chronic	Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Ample evidence exists that developmental disorders are directly caused by human exposure to the material. Oil may contact the skin or be inhaled. Extended exposure can lead to eczema, inflammation of hair follicles, pigmentation of the face and warts on the soles of the feet. Constant or exposure over long periods to mixed hydrocarbons may produce stupor with dizziness, weakness and visual disturbance, weight loss and anaemia, and reduced liver and kidney function. Skin exposure may result in drying and cracking and redness of the skin. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.		
OzCrop Fluroxypyr 400EC	ΤΟΧΙΟΙΤΥ	IRRITATION	
Herbicide	Not Available	Not Available	

	ΤΟΧΙCΙΤΥ	IRRITATION
fluroxypyr	dermal (rat) LD50: >2000 mg/kg <sup>[2]</sup>	Eye (rabbit): mild *
	Inhalation(Rat) LC50; >0.296 mg/l4h <sup>[2]</sup>	Skin (rabbit): non-irritating *
	Oral (Rat) LD50; 2405 mg/kg <sup>[2]</sup>	
	ΤΟΧΙΟΙΤΥ	IRRITATION
	dermal (rat) LD50: >2000 mg/kg <sup>[2]</sup>	Eye (rabbit): mild *
fluroxypyr methylheptyl ester	Inhalation(Rat) LC50; >1 mg/l4h <sup>[2]</sup>	
	Oral (Rat) LD50; >5000 mg/kg <sup>[2]</sup>	
	тохісіту	IRRITATION
liquid hydrocarbons	Not Available	Not Available
	ΤΟΧΙΟΙΤΥ	IRRITATION
	Dermal (rabbit) LD50: 8000 mg/kg <sup>[2]</sup>	Eye (rabbit): 100 mg - moderate
N-methyl-2-pyrrolidone	Inhalation(Rat) LC50; 3.1-8.8 mg/l4h <sup>[2]</sup>	
	Oral (Rat) LD50; 3914 mg/kg <sup>[2]</sup>	
Legend:	1. Value obtained from Europe ECHA Registered Substanc specified data extracted from RTECS - Register of Toxic Efi	es - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise fect of chemical Substances
FLUROXYPYR	ADI 0.8 mg/kg b.w. * NOEL (2 y) for rats 80 mg/kg daily; (1.	5 y) for mice 320 mg/kg daily
FLUROXYPYR METHYLHEPTYL ESTER	[ * The Pesticides Manual, Incorporating The Agrochem Council]	icals Handbook, 10th Edition, Editor Clive Tomlin, 1994, British Crop Protection
LIQUID HYDROCARBONS	minimal skin and eye irritation, but do not sensitise the skin. nervous system effects, including anaesthesia (loss of sens upper airway. The available data indicate normal alpha olefi kidney. Olefins are not expected to cause reproductive or developm	no toxic effect on animals except if inhaled in high concentrations. They may produce Exposure to very high levels of C6-C16 normal alpha olefin vapours caused centra ation). If C20+ products are heated, fumes may produce nausea and irritation of the ns do not cause mutations. Repeated exposure in animals has affected the liver an inental toxicity. Based on the available evidence, this group of substances does not agarding cancer-causing potential, the structure of these substances does not raise search.
	known as reactive airways dysfunction syndrome (RADS) w criteria for diagnosing RADS include the absence of previou asthma-like symptoms within minutes to hours of a docume	ars after exposure to the material ends. This may be due to a non-allergic condition which can occur after exposure to high levels of highly irritating compound. Main is airways disease in a non-atopic individual, with sudden onset of persistent nted exposure to the irritant. Other criteria for diagnosis of RADS include a reversibl onchial hyperreactivity on methacholine challenge testing, and the lack of minimal

disorder is characterized by difficulty breathing, cough and mucus production. For N-methyl-2-pyrrolidone (NMP):

Acute toxicity: Animal testing shows NMP is quickly absorbed after inhalation, swallowing and administration on skin, distributed throughout the body, and eliminated mostly by hydroxylation to polar compounds, which are excreted in the urine. In animal testing NMP has a low potential for skin irritation and a moderate potential for eye irritation. Repeated daily doses of high amounts on the skin have caused severe, painful bleeding and eschar formation. In general, animal testing suggests NMP has low acute toxicity. Exposure to toxic amounts caused functional disturbances and depression of the central nervous system. Local irritation of the airway occurred after inhalation, and irritation of the gastrointestinal tract occurred after swallowing in animals.

lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The

Repeat dose toxicity: There is no clear toxicity profile for NMP after multiple administration. In animal testing, shrinking of the testes and thymus gland were observed, together with an increase in red blood cells, after exposure to high amounts. There is no data for humans after repeated-dose exposure.

Cancer-causing potential: NMP did not show any clear evidence for cancer-causing ability in an animal test for inhalation.

Genetic toxicity: The potential for NMP to cause mutations is rare. Tests do reveal that NMP may cause chromosome aberrations with bacteria and yeast. No tests involving human cells are available.

Reproductive toxicity: In animal tests, exposure to NMP resulted in a decrease in foetal weight.

Developmental toxicity: Animal testing showed that NMP can result in decreased foetal weights and delayed bone development.

A substance (or part of a group of chemical substances) of very high concern (SVHC) - or product containing an SVHC:

It is proposed that use within the European Union be subject to authorisation under the REACH Regulation. Indeed, listing of a substance as an SVHC by the European Chemicals Agency (ECHA) is the first step in the procedure for authorisation or restriction of use of a chemical. The criteria are given in article 57 of the REACH Regulation. A substance may be proposed as an SVHC if it meets one or more of the following criteria:

it is carcinogenic \*;

N-METHYL-2-PYRROLIDONE

- it is mutagenic \*;
- it is toxic for reproduction \*;
- it is persistent, bioaccumulative and toxic (PBT substances);
- it is very persistent and very bioaccumulative (vPvB substances);
- there is "scientific evidence of probable serious effects to human health or the environment which give rise to an equivalent level of concern"; such substances are identified on a case-by-case basis.
- \* Collectively described as CMR substances

The "equivalent concern" criterion is significant because it is this classification which allows substances which are, for example, neurotoxic, endocrine-disrupting or otherwise present an unanticipated environmental health risk to be regulated under REACH] Simply because a substance meets one or more of the criteria does not necessarily mean that it will be proposed as an SVHC. Many such substances are already subject to restrictions on their use within the European Union, such as those in Annex XVII of the REACH Regulation SVHCs are substances for which the current restrictions on use (where these exist) might be insufficient. There are three priority groups for assessment:

	<ul> <li>PBT substances and vPvB substances;</li> <li>substances which are widely dispersed during use</li> <li>substances which are used in large quantities.</li> </ul>	θ;	
FLUROXYPYR & FLUROXYPYR METHYLHEPTYL ESTER	Toxicity Class WHO Table 5 * The material may be irritating to the eye, with prolonge conjunctivitis.	ed contact causing inflammation. Rep	eated or prolonged exposure to irritants may produce
Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	✓
Serious Eye Damage/Irritation	×	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	✓
			not available or does not fill the criteria for classification le to make classification

## **SECTION 12 Ecological information**

0.0.5	Endpoint	Test Duration (hr)		Species		Value	Source
OzCrop Fluroxypyr 400EC Herbicide	Not Available	Not Available		Not Available		Not Available	Not Availabl
	Endpoint	Test Duration (hr)	S	pecies	Value	•	Sourc
	EC50(ECx)	720h	A	lgae or other aquatic plants	0.04-	0.11mg/l	4
fluroxypyr	EC50	48h	С	rustacea	>109	mg/L	4
	LC50	96h	Fi	ish	12.97	'1-20.819mg/L	4
	EC50	96h	A	lgae or other aquatic plants	3.044	ŀmg/l	4
	Endpoint	Test Duration (hr)		Species		Value	Sourc
fluroxypyr methylheptyl ester	EC50(ECx)	120h		Algae or other aquatic plants		0.074mg/L	4
	LC50	96h		Fish		>0.115mg/L	4
	EC50	96h		Algae or other aquatic plants		>1.864mg/L	4
	Endpoint	Test Duration (hr)		Species		Value	Source
liquid hydrocarbons	Not Available	Not Available		Not Available		Not Available	Not Availabl
	Endpoint	Test Duration (hr)		Species		Value	Sourc
	NOEC(ECx)	504h		Crustacea		12.5mg/l	2
N-methyl-2-pyrrolidone	EC50	72h		Algae or other aquatic plants		>500mg/l	1
	EC50	48h		Crustacea		ca.4897mg/l	1
	LC50	96h		Fish		464mg/l	1
Legend:				ed Substances - Ecotoxicological Info ard Assessment Data 6. NITE (Japan,			

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

be not discharge into sewer of waterway

## Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
fluroxypyr	HIGH	HIGH
fluroxypyr methylheptyl ester	HIGH	HIGH
N-methyl-2-pyrrolidone	LOW	LOW

## **Bioaccumulative potential**

Ingredient	Bioaccumulation
fluroxypyr	LOW (LogKOW = 1.6066)
fluroxypyr methylheptyl ester	HIGH (LogKOW = 5.2571)
N-methyl-2-pyrrolidone	LOW (BCF = 0.16)

## Mobility in soil

Ingredient	Mobility
fluroxypyr	LOW (KOC = 13.72)
fluroxypyr methylheptyl ester	LOW (KOC = 4678)

Continued...

## OzCrop Fluroxypyr 400EC Herbicide

 Ingredient
 Mobility

 N-methyl-2-pyrrolidone
 LOW (KOC = 20.94)

## **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 fluroxypyr methylheptyl ester)		
Transport hazard class(es)	Class     9       Subrisk     Not Applicable		
Packing group	Ш		
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 fluroxypyr methylheptyl ester)			
	ICAO/IATA Class	9		
Transport hazard class(es)	ICAO / IATA Subrisk	Not Applicable		
	ERG Code	9L		
Packing group	III			
Environmental hazard	Environmentally hazardous			
	Special provisions		A97 A158 A197 A215	
	Cargo Only Packing Ir	nstructions	964	
Special precautions for user	Cargo Only Maximum Qty / Pack		450 L	
Special precautions for user	Passenger and Cargo Packing Instructions			
Special precautions for user	Passenger and Cargo	Packing Instructions	964	

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 fluroxypyr methylheptyl ester)		
Transport hazard class(es)		9 Not Applicable	
Packing group	ш		
Environmental hazard	Marine Pollutant		
Special precautions for user	EMS Number Special provisions Limited Quantities		

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
fluroxypyr	Not Available
fluroxypyr methylheptyl ester	Not Available
liquid hydrocarbons	Not Available
N-methyl-2-pyrrolidone	Not Available

## Transport in bulk in accordance with the ICG Code

Product name	Ship Type
fluroxypyr	Not Available
fluroxypyr methylheptyl ester	Not Available
liquid hydrocarbons	Not Available
N-methyl-2-pyrrolidone	Not Available

## **SECTION 15 Regulatory information**

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

#### fluroxypyr is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

### fluroxypyr methylheptyl ester is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

### Iquid hydrocarbons is found on the following regulatory lists Not Applicable

#### N-methyl-2-pyrrolidone is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals 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  ${\rm 6}$ 

## National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	No (fluroxypyr; fluroxypyr methylheptyl ester)
Canada - DSL	No (fluroxypyr; fluroxypyr methylheptyl ester)
Canada - NDSL	No (fluroxypyr; fluroxypyr methylheptyl ester; N-methyl-2-pyrrolidone)
China - IECSC	No (fluroxypyr; fluroxypyr methylheptyl ester)
Europe - EINEC / ELINCS / NLP	No (fluroxypyr)
Japan - ENCS	No (fluroxypyr; fluroxypyr methylheptyl ester)
Korea - KECI	No (fluroxypyr)
New Zealand - NZIoC	Yes
Philippines - PICCS	No (fluroxypyr; fluroxypyr methylheptyl ester)
USA - TSCA	No (fluroxypyr; fluroxypyr methylheptyl ester)
Taiwan - TCSI	Yes

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

National Inventory	Status
Mexico - INSQ	No (fluroxypyr)
Vietnam - NCI	Yes
Russia - FBEPH	No (fluroxypyr; fluroxypyr methylheptyl ester)
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	02/08/2021

## SDS Version Summary

Version	Date of Update	Sections Updated
3.1	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

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	
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	
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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