

OzCrop

Chemwatch: 5338-79

Version No: 4.1 Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements Chemwatch Hazard Alert Code: 3 Issue Date: 03/09/2020

Print Date: 23/09/2022 S.GHS.AUS.EN.E

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

Product Identifier

Product name	DzCrop 2,4-D Ester 680 Herbicide	
Chemical Name	lot Applicable	
Synonyms	IA Code: 68429/58359	
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains 2,4-dichlorophenoxyacetic acid 2-ethylhexyl 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	Agricultural herbicide.

Details of the manufacturer or supplier of the safety data sheet

Registered company name	DzCrop	
Address	3/25 Solent Circuit Norwest NSW 2153 Australia	
Telephone	3123 0170	
Fax	31 2 8123 0171	
Website	http://www.ozcrop.com.au	
Email	orders@ozcrop.com.au	

Emergency telephone number

Emergency telephone namber		
Association / Organisation	In Transport Emergency DIAL 000	
Emergency telephone numbers	00 033 111 (24 hours - Australia wide)	
Other emergency telephone numbers	Not Available	

SECTION 2 Hazards identification

Classification of the substance or mixture

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

Label elements

Hazard pictogram(s)	
Signal word	Danger

Hazard statement(s)

H302	mful if swallowed.	
H312	Harmful in contact with skin.	
H332	Harmful if inhaled.	
H315	Causes skin irritation.	

H318	Causes serious eye damage.	
H317	ay cause an allergic skin reaction.	
H351	spected of causing cancer.	
H335	May cause respiratory irritation.	
H373	May cause damage to organs through prolonged or repeated exposure.	
H410	Very toxic to aquatic life with long lasting effects.	
H227	H227 Combustible liquid.	

Precautionary statement(s) Prevention

P201	Dbtain special instructions before use.	
P210	ep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.	
P260	o not breathe mist/vapours/spray.	
P271	e only outdoors or in a well-ventilated area.	
P280	Wear protective gloves, protective clothing, eye protection and face protection.	
P264	Wash all exposed external body areas thoroughly after handling.	
P270	Do not eat, drink or smoke when using this product.	
P273	Avoid release to the environment.	
P272	P272 Contaminated work clothing should not be allowed out of the workplace.	

Precautionary statement(s) Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P308+P313	IF exposed or concerned: Get medical advice/ attention.	
P310	Immediately call a POISON CENTER/doctor/physician/first aider.	
P370+P378	n case of fire: Use alcohol resistant foam or normal protein foam to extinguish.	
P302+P352	F ON SKIN: Wash with plenty of water.	
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.	
P362+P364	Take off contaminated clothing and wash it before reuse.	
P391	Collect spillage.	
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider if you feel unwell.	
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.	
P330	Rinse mouth.	

Precautionary statement(s) Storage

• • • • • • •	0	
P405	Store locked up.	
P403+P233	Store in a well-ventilated place. Keep container tightly closed.	

Precautionary statement(s) Disposal

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

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
1928-43-4	30-60	2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester
Not Available		(680g/L)
Not Available	balance	Ingredients determined not to be hazardous
Legend:	 Classified by Chernwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available 	

SECTION 4 First aid measures

Description of first aid measures		
Eye Contact	 If this product comes in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. 	

Skin Contact	 If skin or hair contact occurs: Immediately flush body and clothes with large amounts of water, using safety shower if available. Quickly remove all contaminated clothing, including footwear. Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. Transport to hospital, or doctor.
Inhalation	 If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay.
Ingestion	 IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. For advice, contact a Poisons Information Centre or a doctor. Urgent hospital treatment is likely to be needed. In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist. If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS. Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise: INDUCE vomiting with fingers down the back of the throat, ONLY IF CONSCIOUS. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. NOTE: Wear a protective glove when inducing vomiting by mechanical means.

Indication of any immediate medical attention and special treatment needed

Following exposures to chlorophenoxy compounds:

- Acute toxic reactions are rare. The by-product of production, dioxin, may be implicated in subacute features such as hepatic enlargement, chloracne, neuromuscular symptoms and deranged porphyrin metabolism.
- Large intentional overdoses result in coma, metabolic acidosis, myalgias, muscle weakness, elevated serum creatine kinase, myoglobinuria, irritation of the skin, eyes, respiratory tract and gut and mild renal and hepatic dysfunction.
- Several cases of sensorimotor peripheral neuropathies have been associated with chronic dermal exposure to 2,4-D. For acute exposures the usual methods of gut and skin contamination (lavage, charcoal, cathartic) are recommended in the first several hours. Alkalisation of the urine and generous fluid replacement have the added benefit of treating any myoglobinuria present. Monitor metabolic acidosis, hyperthermia, hyperkalaemia, myoglobinuria and hepatic/renal dysfunction. for 2,4-dichlorophenoxyacetic acid (2,4-D) and its derivatives
- Gastric lavage if there are no signs of impending convulsions.
- Cautious administration of short-acting anticonvulsant drug if convulsions appear imminent.
- General supportive measures for central nervous system depression.
- If hypotension appears, search vigorously for a contributing cause (e.g. dehydration, electrolyte balance, acidosis, myocardial disturbances and hyperpyrexia).
- As appropriate, treat dehydration, electrolyte disturbances, acidosis, and hyperexia.
- To promote excretion of 2,4-D, initiate alkaline diuresis, as in salicylate poisoning by injecting sodium bicarbonate, intravenously, until the urine pH exceeds 7.5 and then infuse mannitol; renal clearance rises sharply as urine pH rises above 7.5 above pH 8.0, it is said to be 100-fold greater than pH 6.0.
- I drania disturbances are suspected, monitor ECG continuously when possible. Prepare to deliver defibrillating shocks in the event of ventricular fibrillation.
- If hypotension intensifies, a trial with a vasopressor drug may be appropriate. Adrenalin (epinephrine) should be avoided because of possible fibrillation.
- If myotonia appears, a trial with quinidine may be helpful.
- Physiotherapy may be necessary for motion disorders associated with peripheral neuritis, myopathy or brain stem dysfunction.
- GOSSELIN, SMITH HODGE: Clinical Toxicology of Commercial Products, 5th Ed.

In general, chlorophenoxy herbicides are rapidly absorbed from the gastrointestinal tract and evenly distributed throughout the body; accumulation in human tissues is not expected A steady-state level in the human body will be achieved within 3–5 days of exposure. The herbicides are eliminated mainly in the urine, mostly unchanged, although fenoprop may be conjugated to a significant extent Biological half-lives of chlorophenoxy herbicides in mammals range from 10 to 33 h; between 75% and 95% of the ingested amount is excreted within 96 h. Dogs appear to retain chlorophenoxy acids longer than other species as a result of relatively poor urinary clearance and thus may be more susceptible to their toxic effects. Metabolic conversions occur only at high doses. The salt and ester forms are rapidly hydrolysed and follow the same pharmacokinetic pathways as the free acids

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
dvice for firefighters	
Fire Fighting	 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. Avoid spraying water onto liquid pools. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.
Fire/Explosion Hazard	 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. Combustion products include: carbon dioxide (CO2) hydrogen chloride phosgene other pyrolysis products typical of burning organic material.
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. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable, labelled container for waste disposal.
Major Spills	 Environmental hazard - contain spillage. Moderate hazard. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. No smoking, naked lights or ignition sources. Increase ventilation. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains. If contamination of drains or waterways occurs, advise emergency services.

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

SECTION 7 Handling and storage

Precautions for safe handling Safe handling	 DO NOT allow clothing wet with material to stay in contact with skin Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately.
	 Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.
Other information	 Store in original containers. Keep containers securely sealed. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container	 Metal can or drum Packaging as recommended by manufacturer. Check all containers are clearly labelled and free from leaks. 	
Storage incompatibility	 Avoid reaction with oxidising agents Avoid strong acids, bases. 	

SECTION 8 Exposure controls / personal protection

Occupational Exposure Limits (DEL)				
Not Available					
Emergency Limits					
Ingredient	TEEL-1 TEEL-2 TEEL-3		TEEL-3		
OzCrop 2,4-D Ester 680 Herbicide	TEEL-1 TEEL-2 Not Available Not Available		Not Available		
Ingredient	Original IDLH		Revised IDLH	1	
2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester	Not Available		Not Available		
Occupational Exposure Banding	3				
Ingredient	Occupational Exposure Band Rating		Occupational Expos	ure Band Limit	
2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester	E		≤ 0.1 ppm		
Notes:	Occupational exposure banding is a process of ass adverse health outcomes associated with exposure range of exposure concentrations that are expecte	e. The output of this pr	ocess is an occupational		
Exposure controls	'				
	Engineering controls are used to remove a hazard be highly effective in protecting workers and will typ The basic types of engineering controls are: Process controls which involve changing the way a Enclosure and/or isolation of emission source whic "adds" and "removes" air in the work environment. ventilation system must match the particular process Employers may need to use multiple types of contr Local exhaust ventilation usually required. If risk of protection. Supplied-air type respirator may be required	pically be independent a job activity or process ch keeps a selected ha: Ventilation can remove ss and chemical or cor rols to prevent employe f overexposure exists, v	of worker interactions to s is done to reduce the ris zard "physically" away fro e or dilute an air contamin itaminant in use. se overexposure. wear approved respirator.	provide this high level k. om the worker and ven hant if designed proper . Correct fit is essential	of protection. tilation that strategically ly. The design of a I to obtain adequate
	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:				minant.
	solvent, vapours, degreasing etc., evaporating from tank (in still air).			0.25-0.5 m/s (50-100 f/min.)	
Appropriate engineering	aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)			0.5-1 m/s (100-200 f/min.)	
controls	direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active 1-2.5 m/s (200-500 f/min.)				
				2.5-10 m/s (500-2000 f/min.)	
	Within each range the appropriate value depends on:				
	Lower end of the range	Upper en	nd of the range		
	1: Room air currents minimal or favourable to ca	pture 1: Disturb	ping room air currents		
	2: Contaminants of low toxicity or of nuisance va	-	ninants of high toxicity		
	3: Intermittent, low production.		oduction, heavy use		
	4: Large hood or large air mass in motion 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	 Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent] 				
Skin protection	See Hand protection below				

Hands/feet protection	 Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber NOTE: The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. Contaminated leather items, such as shoes, beits and watch-bands should be removed and destroyed. The exact break through time for substances has to be obtained form the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a on-perfumed moisturiser is recommended. Suitability and duration of contact, chemical resistance of glove material, glove thickness and dwerrity Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, ASINZS 2161.1 or national equivalent). When only bried contact is expected, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, ASINZS 2161.1 or national equivalent) is recommended. Some glove should be replaced. So defined in ASIN F7.379, 61 anny application, gloves are rated as: Excellent whe
Body protection	moisturiser is recommended. See Other protection below
	► Overalls.
Other protection	 Verails. P.V.C apron. Barrier cream. Skin cleansing cream. Eye wash unit.

Respiratory protection

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

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

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

* - Continuous Flow ** - Continuous-flow or positive pressure demand

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

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

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance Yellow to brown liquid with slight phenolic odour; partially mixes with water.

Physical state Liquid

Continued...

Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	~500
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	-5	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	190-350	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	>75	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Combustible.	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Negligible
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Partly miscible	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	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

information on toxicological effects	Information on toxicologic	cal effects
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Inhaled	Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of chlorophenoxy dusts or mists may result in sore throat, burning sensations in the throat and chest, cough, tears, inflamed nose, dizziness and inco-ordination, as a result of absorption from the lungs.		
Ingestion	Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. Chlorphenoxy compounds irritate the digestive system and cause nausea and vomiting, chest pain, and diarrhoea. Taking large doses can result in mineral imbalance, temperature changes, hyperventilation, low blood pressure, dilated blood vessels, damage to the heart and liver with death of white blood cells, and convulsions.		
Skin Contact	Skin contact with the material may be harmful; systemic effects may result following absorption. 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 2,4-D and its derivatives can all be absorbed through the skin of humans. Severe peripheral neuropathy has followed causing limb paralysis and loss of sensation. 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	If applied to the eyes, this material causes severe eye damage. Corneal injury resulting from 2,4-D exposure may be slow to heal.		
Chronic	There has been concern that this material can cause cancer or mutation Long-term exposure to respiratory irritants may result in airways disease Skin contact with the material is more likely to cause a sensitisation rear Substance accumulation, in the human body, may occur and may cause Based on experience with animal studies, there is a possibility that expor foetus, at levels which do not cause significant toxic effects to the mothe 2-Ethylhexanoic acid, its esters and salts may induce cancer (specifical toxicity as evidenced on histological analysis. It may also cause mild ski and skin routes but also fully excreted through the urine. Chlorophenoxy herbicides cause an increased risk of cancers of soft tis contact.	e, involving difficulty breathing and related whole-body problems. ction in some persons compared to the general population. Is some concern following repeated or long-term occupational exposure. Is sure to the material may result in toxic effects to the development of the in. y, liver cancer), liver damage, and developmental and reproductive n and severe eye irritation. They are absorbed through inhalation, oral	
OzCrop 2,4-D Ester 680	тохісітү	IRRITATION	
Herbicide	Not Available	Not Available	
2,4-dichlorophenoxyacetic	TOXICITY	IRRITATION	

Legend:

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise

2,4-DICHLOROPHENOXYACETIC ACID 2-ETHYLHEXYL ESTER	eczema involves a cell-mediated (T lymphocytes) ir involve antibody-mediated immune reactions. The s distribution of the substance and the opportunities f distributed can be a more important allergen than o clinical point of view, substances are noteworthy if t Asthma-like symptoms may continue for months or known as reactive airways dysfunction syndrome (F criteria for diagnosing RADS include the absence of asthma-like symptoms within minutes to hours of a reversible airflow attem on lung function tests.	as a group and may not be specific t intact eczema, more rarely as urticaria inmune reaction of the delayed type. C ignificance of the contact allergen is r or contact with it are equally importan ne with stronger sensitising potential to hey produce an allergic test reaction i even years after exposure to the matt RADS) which can occur after exposure f previous airways disease in a non-al documented exposure to the irritant. C derate to severe bronchial hyperreact ophila. RADS (or asthma) following an exposure to the irritating substance. (ofte difficulty breathing, cough and mucus the IARC as Group 2B: Possibly Carc mpound may result in the production of ly their alkali salts, can condense abor can cause effects on hormones and m	a or Quincke's oedema. The pathogenesis of contact Other allergic skin reactions, e.g. contact urticaria, not simply determined by its sensitisation potential: the t. A weakly sensitising substance which is widely with which few individuals come into contact. From a n more than 1% of the persons tested. erial ends. This may be due to a non-allergic condition to high levels of highly irritating compound. Main topic individual, with sudden onset of persistent Other criteria for diagnosis of RADS include a ivity on methacholine challenge testing, and the lack n irritating inhalation is an infrequent disorder with On the other hand, industrial bronchitis is a disorder en particles) and is completely reversible after production.
Acute Toxicity	Exposure to the material for prolonged periods may		
Acute Toxicity Skin Irritation/Corrosion	× •	Carcinogenicity	×
Serious Eye Damage/Irritation	× · · · · · · · · · · · · · · · · · · ·	STOT - Single Exposure	\$
Respiratory or Skin sensitisation	v 	STOT - Repeated Exposure	 ✓

Aspiration Hazard 🗙 – Data either not available or does not fill the criteria for classification Legend:

✔ – Data available to make classification

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SECTION 12 Ecological information

sensitisation

Mutagenicity

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Toxicity

OzCrop 2,4-D Ester 680 Herbicide	Endpoint	Test Duration (hr)	Species		Value	Source
	Not Available	Not Available	Not Available		Not Available	Not Available
2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester	Endpoint	Test Duration (hr)	Species	Valu	ue	Source
	EC50	48h	Crustacea	0.01	14-0.025mg/L	4
	EC25(ECx)	120h	Algae or other aquatic plants	0.1r	ng/l	1
	LC50	96h	Fish	>0.2	24mg/L	4
Legend:	Ecotox databas	, ,	IA Registered Substances - Ecotoxicological Inf Aquatic Hazard Assessment Data 6. NITE (Japa	,		,

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
2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester	HIGH (LogKOW = 6.2677)

Mobility in soil

Ingredient	Mobility
2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester	LOW (KOC = 10510)

Waste treatment methods

Product / Packaging disposal

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 2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester)		
Transport hazard class(es)	Class 9 Subrisk Not Applicable		
Packing group	II		
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 2,4-dichlorophenoxyacetic acid 2-ethylhexyl 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	
	Cargo Only Maximum Qty / Pack		450 L	
Special precautions for user	Passenger and Cargo Packing Instructions		964	
P	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 2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester)		
Transport hazard class(es)	IMDG Class IMDG Subrisk	9 Not Applicable	
Packing group	III		
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

Product name	Group
2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester	Not Available

Transport in bulk in accordance with the ICG Code

Product name	Ship Type
2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester	Not Available

SECTION 15 Regulatory information

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

2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester 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 $\,$

National Inventory Status

National Inventory	Status	
Australia - AIIC / Australia Non-Industrial Use	No (2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester)	
Canada - DSL	No (2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester)	
Canada - NDSL	No (2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester)	
China - IECSC	No (2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester)	
Europe - EINEC / ELINCS / NLP	Yes	
Japan - ENCS	No (2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester)	
Korea - KECI	No (2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester)	
New Zealand - NZIoC	Yes	
Philippines - PICCS	No (2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester)	
USA - TSCA	No (2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester)	
Taiwan - TCSI	No (2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester)	
Mexico - INSQ	No (2,4-dichlorophenoxyacetic acid 2-ethylhexyl ester)	
Vietnam - NCI	Yes	
Russia - FBEPH	No (2,4-dichlorophenoxyacetic acid 2-ethylhexyl 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	03/09/2020
Initial Date	13/12/2018

SDS Version Summary

Version	Date of Update	Sections Updated
3.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification
4.1	03/09/2020	Classification change due to full database hazard calculation/update.

Other information

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

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

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average PC-STEL: Permissible Concentration-Short Term Exposure Limit IARC: International Agency for Research on Cancer ACGIH: American Conference of Governmental Industrial Hygienists STEL: Short Term Exposure Limit TEEL: Temporary Emergency Exposure Limit。 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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