

Target 200 Herbicide

Crop Smart Pty Ltd

Chemwatch: 5558-77

Version No: 2.1

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

Chemwatch Hazard Alert Code: 3

Issue Date: **25/08/2022**

Print Date: **29/08/2022**

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

Product Identifier

Product name	Target 200 Herbicide
Chemical Name	Not Applicable
Synonyms	APVMA Approval Number: 66622
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains aromatic 150 and quizalofop-P-ethyl)
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, For the control of certain grass weeds in broadleaf crops as per directions for use table.
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Details of the supplier of the safety data sheet

Registered company name	Crop Smart Pty Ltd
Address	2409/ 4 Daydream Street WARRIEWOOD NSW 2102 Australia
Telephone	+61 1300 783 481
Fax	Not Available
Website	www.cropsmart.com.au
Email	Compliance@cropsmart.com.au

Emergency telephone number

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE
Emergency telephone numbers	+61 1800 951 288
Other emergency telephone numbers	+61 3 9573 3188

Once connected and if the message is not in your preferred language then please dial 01

SECTION 2 Hazards identification

Classification of the substance or mixture

COMBUSTIBLE LIQUID, regulated for storage purposes only

Poisons Schedule	S6
Classification [1]	Flammable Liquids Category 4, Aspiration Hazard Category 1, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2A, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, Reproductive Toxicity Category 1A, Hazardous to the Aquatic Environment Long-Term Hazard Category 2
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)

H227	Combustible liquid.
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H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360D	May damage the unborn child.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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.
P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.
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	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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Not Applicable

SECTION 3 Composition / information on ingredients**Substances**

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
64742-94-5	40-60	<u>aromatic 150</u>
Not Available		(g/L)
100646-51-3	10-20	<u>quizalofop-P-ethyl</u>
Not Available		(g/L)
872-50-4	10-20	<u>N-methyl-2-pyrrolidone</u>
Not Available		(g/L)
Not Available	balance	Ingredients determined not to be hazardous
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available	

SECTION 4 First aid measures**Description of first aid measures**

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Wash out immediately with fresh running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper
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Continued...

	<ul style="list-style-type: none"> and lower lids. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> ▶ 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	<ul style="list-style-type: none"> ▶ For advice, contact a Poisons Information Centre or a doctor at once. ▶ Urgent hospital treatment is likely to be needed. ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Transport to hospital or doctor without delay.

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.

Treat symptomatically.

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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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
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Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"> ▶ 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	<ul style="list-style-type: none"> ▶ 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. <p>Combustion products include: carbon dioxide (CO₂) hydrogen chloride phosgene nitrogen oxides (NO_x) sulfur oxides (SO_x) other pyrolysis products typical of burning organic material.</p>
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SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Continued...

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	<p>Environmental hazard - contain spillage.</p> <ul style="list-style-type: none"> ▶ 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	<p>Environmental hazard - contain spillage. Moderate hazard.</p> <ul style="list-style-type: none"> ▶ 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	<ul style="list-style-type: none"> ▶ Containers, even those that have been emptied, may contain explosive vapours. ▶ Do NOT cut, drill, grind, weld or perform similar operations on or near containers. ▶ DO NOT allow clothing wet with material to stay in contact with skin ▶ 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	<ul style="list-style-type: none"> ▶ 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	<ul style="list-style-type: none"> ▶ Metal can or drum ▶ Packaging as recommended by manufacturer. ▶ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	<ul style="list-style-type: none"> ▶ Avoid reaction with oxidising agents

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

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
aromatic 150	1,200 mg/m3	6,700 mg/m3	40,000 mg/m3

Target 200 Herbicide

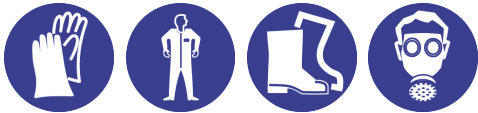
Ingredient	TEEL-1	TEEL-2	TEEL-3
N-methyl-2-pyrrolidone	30 ppm	32 ppm	190 ppm

Ingredient	Original IDLH	Revised IDLH
aromatic 150	Not Available	Not Available
quizalofop-P-ethyl	Not Available	Not Available
N-methyl-2-pyrrolidone	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
aromatic 150	E	≤ 0.1 ppm
Notes:	<i>Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.</i>	

Exposure controls

Appropriate engineering controls	<p>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:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>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.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> <p>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.</p> <p>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.</p> <table border="1"> <thead> <tr> <th>Type of Contaminant:</th> <th>Air Speed:</th> </tr> </thead> <tbody> <tr> <td>solvent, vapours, degreasing etc., evaporating from tank (in still air).</td> <td>0.25-0.5 m/s (50-100 f/min.)</td> </tr> <tr> <td>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)</td> <td>0.5-1 m/s (100-200 f/min.)</td> </tr> <tr> <td>direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)</td> <td>1-2.5 m/s (200-500 f/min.)</td> </tr> <tr> <td>grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).</td> <td>2.5-10 m/s (500-2000 f/min.)</td> </tr> </tbody> </table> <p>Within each range the appropriate value depends on:</p> <table border="1"> <thead> <tr> <th>Lower end of the range</th> <th>Upper end of the range</th> </tr> </thead> <tbody> <tr> <td>1: Room air currents minimal or favourable to capture</td> <td>1: Disturbing room air currents</td> </tr> <tr> <td>2: Contaminants of low toxicity or of nuisance value only.</td> <td>2: Contaminants of high toxicity</td> </tr> <tr> <td>3: Intermittent, low production.</td> <td>3: High production, heavy use</td> </tr> <tr> <td>4: Large hood or large air mass in motion</td> <td>4: Small hood-local control only</td> </tr> </tbody> </table> <p>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.</p>	Type of Contaminant:	Air Speed:	solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min.)	aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)	direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)	grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)	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Personal protection																					
Eye and face protection	<ul style="list-style-type: none"> ▶ 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	<ul style="list-style-type: none"> ▶ Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber <p>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.</p> <p>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.</p> <p>Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be</p>																				

washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

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

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

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

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

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

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

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

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

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

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

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

Other protection

- ▶ Overalls.
- ▶ P.V.C apron.
- ▶ Barrier cream.
- ▶ Skin cleansing cream.
- ▶ Eye 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:

Target 200 Herbicide

Material	CPI
BUTYL	A
PE/EVAL/PE	A
NATURAL RUBBER	B
PVA	B

* 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 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	-	AK-PAPR-AUS / Class 1
up to 25 x ES	Air-line*	AK-2	AK-PAPR-2
up to 50 x ES	-	AK-3	-
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

Appearance	Dark amber coloured liquid with faint paint like odour; emulsifies with water.		
Physical state	Liquid	Relative density (Water = 1)	1.06
Odour	Not Available	Partition coefficient n-octanol / water	Not Available

Continued...

Target 200 Herbicide

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)	>61	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)	Not Available
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	<ul style="list-style-type: none"> ▶ 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

Inhaled	<p>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.</p> <p>Inhalation of high vapour concentrations of N-methyl-2-pyrrolidone (NMP) may produce mucous membrane irritation, headache, giddiness, mental confusion and nausea. Fatalities were not recorded following inhalation of 180-200 mg/m³ for 2 hours by mice and following a 6 hour exposure to saturated vapours by rats.</p> <p>Laboratory animals exposed to concentrations of 50 ppm for 8 hours daily for 20 days or 370 ppm for 6 hours daily for 10 days showed no gross or histopathological abnormalities</p> <p>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.</p> <p>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.</p> <p>Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.</p>
Ingestion	<p>Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733)</p> <p>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.</p>
Skin Contact	<p>This material can cause inflammation of the skin on contact in some persons.</p> <p>The material may accentuate any pre-existing dermatitis condition</p> <p>Prolonged contact with N-methyl-2-pyrrolidone (NMP) reportedly causes severe irritation and dermatitis with redness, cracking, swelling, blisters and oedema. Latex gloves are not sufficiently protective.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>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.</p> <p>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.</p>
Eye	<p>Direct contact with liquid N-methyl-2-pyrrolidone (NMP) may produce painful burning or stinging of the eyes and lids, watering and inflammation of the conjunctiva and temporary clouding of the cornea.</p> <p>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.</p> <p>This material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.</p>
Chronic	<p>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.</p> <p>Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.</p> <p>In animal testing, N-methyl-2-pyrrolidone (NMP) has not been shown to cause cancer. There is no evidence of it being toxic to the kidney. In animals, reproductive effects have been reported, and very high doses are toxic to the embryo.</p> <p>Constant or exposure over long periods to mixed hydrocarbons may produce stupor with dizziness, weakness and visual disturbance, weight loss</p>

Target 200 Herbicide

	and anaemia, and reduced liver and kidney function. Skin exposure may result in drying and cracking and redness of the skin.	
Target 200 Herbicide	TOXICITY	IRRITATION
	Not Available	Not Available
aromatic 150	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >1900 mg/kg ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
	Inhalation(Rat) LC50; >4.42 mg/L4h ^[1]	Skin: adverse effect observed (irritating) ^[1]
	Oral (Rat) LD50; >4500 mg/kg ^[1]	
quizalofop-P-ethyl	TOXICITY	IRRITATION
	dermal (rat) LD50: 1852 mg/kg ^[2]	Skin (rabbit): None *
	Inhalation(Rat) LC50; 2.6 mg/l4h ^[2]	
	Oral (Rat) LD50; 1182 mg/kg ^[2]	
N-methyl-2-pyrrolidone	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 8000 mg/kg ^[2]	Eye (rabbit): 100 mg - moderate
	Inhalation(Rat) LC50; 3.1-8.8 mg/l4h ^[2]	
	Oral (Rat) LD50; 3914 mg/kg ^[2]	
Legend:	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	

AROMATIC 150	<p>For petroleum: This product contains benzene, which can cause acute myeloid leukaemia, and n-hexane, which can be metabolized to compounds which are toxic to the nervous system. This product contains toluene, and animal studies suggest high concentrations of toluene lead to hearing loss. This product contains ethyl benzene and naphthalene, from which animal testing shows evidence of tumour formation. Cancer-causing potential: Animal testing shows inhaling petroleum causes tumours of the liver and kidney; these are however not considered to be relevant in humans.</p> <p>Mutation-causing potential: Most studies involving gasoline have returned negative results regarding the potential to cause mutations, including all recent studies in living human subjects (such as in petrol service station attendants).</p> <p>Reproductive toxicity: Animal studies show that high concentrations of toluene (>0.1%) can cause developmental effects such as lower birth weight and developmental toxicity to the nervous system of the foetus. Other studies show no adverse effects on the foetus.</p> <p>Human effects: Prolonged or repeated contact may cause defatting of the skin which can lead to skin inflammation and may make the skin more susceptible to irritation and penetration by other materials.</p> <p>Animal testing shows that exposure to gasoline over a lifetime can cause kidney cancer, but the relevance in humans is questionable.</p>
	<p>- for quizalofop-P-ethyl Inhalation (rat) LC50: 4.4 mg/l4h female ** NOEL (90 d) for rats 128 mg/kg * Toxicity Class: EPA III for quizalofop-ethyl NOEL (104 weeks) for rats 25 ppm; (78 weeks) for mice 10 ppm * Toxicity Class WHO III; EPA III * Non-mutagenic in Ames and REC tests * Non-sensitising to guinea pig skin * * The Pesticide Manual. NOTE: The Pesticide Manual appears to have confused acute dermal results with subcutaneous data reported in RTECS. ** DuPont MSDS Targa Herbicide (9.64 % active ingredient)</p> <p>ACCCase plays a vital role in mammalian systems for fatty acid biosynthesis, the enzyme existing in two isozymic forms. This enzyme is highly regulated in the brain and non-neural tissue. None of these forms are inhibited by cyclohexanediones or aryloxyphenoxypropionates. Although these herbicides affect common target sites in plants and mammals, they have no effect on ACCCase in mammals.</p> <p>for quizalofop-p-ethyl (as a representative of the aryloxyphenoxypropionate group of herbicides):</p> <p>Acute toxicity: Quizalofop-p-ethyl is nonirritating to the skin and only slightly irritating to the eyes in rabbits It is nonsensitising to the skin of guinea pigs</p> <p>Chronic toxicity: In a 1-year feeding study on dogs, doses of up to 10 mg/kg/day quizalofop-p-ethyl (the highest dose tested in that study) caused no observed effects . In a 90-day feeding study in rats, doses of 6.4 mg/kg/day and higher produced liver lesions and increased liver weight</p> <p>In a 2-year feeding study conducted with rats with the racemic mixture of quizalofop-p-ethyl isomers the no-observable-effect level (NOEL) was 25 ppm (1.25 mg/kg/day) based on liver effects which occurred at 100 ppm. There was a slight but non-significant increase in female liver tumours at 400 ppm. The material was non-oncogenic in this species. In an 18 month feeding study with mice the NOEL was 10 ppm (1.5 mg/kg/day) based on effects on liver and testes at 80 ppm. An increase in liver carcinomas was observed in male mice and an increased incidence of ovarian tumours (leuteomas and granulosa cell tumours) were observed in female mice. These effects were statistically significant at 320 ppm (48 mg/kg/day). In a 1-year feeding study with dogs the NOEL was 400 mg (30 mg/kg/day) with no compound related effects apparent.</p> <p>Reproductive toxicity: Data from reproductive studies indicated only decreased body weight gains, and did not report findings of impaired reproductive function in test animals A 6-month study in dogs found atrophy of the seminiferous tubules at doses of 2.5 mg/kg/day, but was unclear whether this was extensive enough to result in impaired reproductive function. These data are insufficient to draw conclusions regarding the likely reproductive effects of quizalofop-p-ethyl in animals, but suggest that effects on human reproduction are unlikely under normal circumstances</p> <p>In a reproductive study conducted with rats, parents and off-spring showed body weight decreases at 400 ppm. Histological changes in liver were observed at 100 ppm. The NOEL was 25 ppm (approximately 1.25 mg/kg/day).</p> <p>Developmental toxicity: In teratogenic studies there was no evidence of teratogenicity or embryotoxicity at levels up to 60 mg/kg/day. Body weight gain and other toxic effects were seen in pregnant rabbits at 60 mg/kg/day. Overall NOEL was 30 mg/kg/day. The product was not teratogenic to rats at dose levels of up to 300 mg/kg/day. Reduced body weight gains were evident in dams at 300 mg/kg. Offspring of this treatment group exhibited reduced survival and a transient increase in skeletal variations. The NOEL for this group was 30 mg/kg/day.</p> <p>Genotoxicity: The results of many assays for mutagenicity and genotoxicity of quizalofop-p-ethyl show no mutagenic or genotoxic activity Negative results were obtained in the Ames and Chinese hamster ovary (CHO) test for gene mutation, the CHO and mouse micronucleus tests for chromosomal aberration, DNA repair assays in B.subtilis and rat liver cells, and sister chromatid exchange assay in Chinese hamster cells.</p> <p>Carcinogenic effects: In an 18-month carcinogenicity study on mice, increased liver weights, changes in blood chemistry, and some changes in liver tissue structure were detected, but no carcinogenic or tumor-causing activity was reported . This study suggests that this compound is not carcinogenic.</p> <p>Organ toxicity: Available data show that the target organ in test animals has consistently been the liver in rats and dogs [8]. It is possible that testes may be a target organ in some species; e.g., dogs.</p> <p>Fate in humans and animals: Quizalofop-p appears to be rapidly broken down in mammals. More than 90% of a single oral dose is eliminated in urine within 3 days</p> <p>Inhibitors of acetyl CoA carboxylase, the target enzyme of certain herbicides, have the capacity, in mammals, to alter blood lipid levels. In the male rat, a reduction (p < 0.05) in blood cholesterol and total lipids in a chronic study may be a reflection of inhibition of this enzyme. However, in the female mouse, there was an increase in blood cholesterol at the highest dose tested, in a subchronic study . Male mice in this study showed</p>
QUIZALOFOP-P-ETHYL	<p>- for quizalofop-P-ethyl Inhalation (rat) LC50: 4.4 mg/l4h female ** NOEL (90 d) for rats 128 mg/kg * Toxicity Class: EPA III for quizalofop-ethyl NOEL (104 weeks) for rats 25 ppm; (78 weeks) for mice 10 ppm * Toxicity Class WHO III; EPA III * Non-mutagenic in Ames and REC tests * Non-sensitising to guinea pig skin * * The Pesticide Manual. NOTE: The Pesticide Manual appears to have confused acute dermal results with subcutaneous data reported in RTECS. ** DuPont MSDS Targa Herbicide (9.64 % active ingredient)</p> <p>ACCCase plays a vital role in mammalian systems for fatty acid biosynthesis, the enzyme existing in two isozymic forms. This enzyme is highly regulated in the brain and non-neural tissue. None of these forms are inhibited by cyclohexanediones or aryloxyphenoxypropionates. 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It is possible that testes may be a target organ in some species; e.g., dogs.</p> <p>Fate in humans and animals: Quizalofop-p appears to be rapidly broken down in mammals. More than 90% of a single oral dose is eliminated in urine within 3 days</p> <p>Inhibitors of acetyl CoA carboxylase, the target enzyme of certain herbicides, have the capacity, in mammals, to alter blood lipid levels. In the male rat, a reduction (p < 0.05) in blood cholesterol and total lipids in a chronic study may be a reflection of inhibition of this enzyme. However, in the female mouse, there was an increase in blood cholesterol at the highest dose tested, in a subchronic study . Male mice in this study showed</p>

	<p>an increase in total lipids at the two highest doses. It is therefore possible that many of the effects reported in acute, subchronic and chronic studies are manifestations of a compromise of normal liver function. The inhibition of fatty acid biosynthesis, in the liver, may account for the majority of the effects observed. However, increases in liver weight, seen in acute and sub-chronic studies, and decreases in liver weight, which are seen in chronic studies, alone, do not necessarily reflect an adverse effect. This is because liver weight changes have often been found to be reversible, in subchronic studies following the discontinuation of dosing, or through adaptation mechanisms, with the continued dietary intake of fenoxaprop-ethyl. in chronic studies.</p>
N-METHYL-2-PYRROLIDONE	<p>For N-methyl-2-pyrrolidone (NMP):</p> <p>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.</p> <p>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.</p> <p>Cancer-causing potential: NMP did not show any clear evidence for cancer-causing ability in an animal test for inhalation.</p> <p>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.</p> <p>Reproductive toxicity: In animal tests, exposure to NMP resulted in a decrease in foetal weight.</p> <p>Developmental toxicity: Animal testing showed that NMP can result in decreased foetal weights and delayed bone development.</p> <p>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:</p> <ul style="list-style-type: none"> ▶ it is carcinogenic *; ▶ 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. <p>* Collectively described as CMR substances</p> <p>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]</p> <p>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:</p> <ul style="list-style-type: none"> ▶ PBT substances and vPvB substances; ▶ substances which are widely dispersed during use; ▶ substances which are used in large quantities.
AROMATIC 150 & N-METHYL-2-PYRROLIDONE	<p>Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal 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 disorder is characterized by difficulty breathing, cough and mucus production.</p>

Acute Toxicity	✗	Carcinogenicity	✗
Skin Irritation/Corrosion	✓	Reproductivity	✓
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	✓
Respiratory or Skin sensitisation	✗	STOT - Repeated Exposure	✗
Mutagenicity	✗	Aspiration Hazard	✓

Legend: ✗ – Data either not available or does not fill the criteria for classification
 ✓ – Data available to make classification

SECTION 12 Ecological information

Toxicity

Target 200 Herbicide	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
aromatic 150	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50(ECx)	48h	Crustacea	0.95mg/l	1
	EC50	72h	Algae or other aquatic plants	<1mg/l	1
	EC50	48h	Crustacea	0.95mg/l	1
	LC50	96h	Fish	2-5mg/l	Not Available
	EC50	96h	Algae or other aquatic plants	1mg/l	2
	EC50	96h	Algae or other aquatic plants	64mg/l	2

Continued...

	NOEC(ECx)	72h	Algae or other aquatic plants	1mg/l	1
	EC50	72h	Algae or other aquatic plants	19mg/l	1
	EC50	48h	Crustacea	6.14mg/l	1
quizalofop-P-ethyl	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	37.8-82.35mg/L	4
	EC50	48h	Crustacea	0.405-0.54mg/L	4
	NOEC(ECx)	816h	Fish	0.066mg/L	4
	LC50	96h	Fish	0.216-0.378mg/L	4
	EC50	96h	Algae or other aquatic plants	0.47-1.91mg/l	4
N-methyl-2-pyrrolidone	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	504h	Crustacea	12.5mg/l	2
	EC50	72h	Algae or other aquatic plants	>500mg/l	1
	EC50	48h	Crustacea	ca.4897mg/l	1
	LC50	96h	Fish	464mg/l	1
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

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
quizalofop-P-ethyl	HIGH	HIGH
N-methyl-2-pyrrolidone	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
aromatic 150	LOW (BCF = 159)
quizalofop-P-ethyl	HIGH (LogKOW = 5.4699)
N-methyl-2-pyrrolidone	LOW (BCF = 0.16)

Mobility in soil

Ingredient	Mobility
quizalofop-P-ethyl	LOW (KOC = 50030)
N-methyl-2-pyrrolidone	LOW (KOC = 20.94)


SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> ▶ Containers may still present a chemical hazard/ danger when empty. ▶ Return to supplier for reuse/ recycling if possible. <p>Otherwise:</p> <ul style="list-style-type: none"> ▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. ▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product. ▶ DO NOT allow wash water from cleaning or process equipment to enter drains. ▶ It may be necessary to collect all wash water for treatment before disposal. ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▶ Where in doubt contact the responsible authority. ▶ Recycle wherever possible or consult manufacturer for recycling options. ▶ Consult State Land Waste Authority for disposal. ▶ Bury or incinerate residue at an approved site. ▶ Recycle containers if possible, or dispose of in an authorised landfill.
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SECTION 14 Transport information

Labels Required

	
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Marine Pollutant	
HAZCHEM	*3Z

Land transport (ADG)

UN number	3082	
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains aromatic 150 and quizalofop-P-ethyl)	
Transport hazard class(es)	Class	9
	Subrisk	Not Applicable
Packing group	III	
Environmental hazard	Environmentally hazardous	
Special precautions for user	Special provisions	274 331 335 375 AU01
	Limited quantity	5 L

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in;

(a) packagings;

(b) IBCs; or

(c) any other receptacle not exceeding 500 kg(L).

- Australian Special Provisions (SP AU01) - ADG Code 7th Ed.

Air transport (ICAO-IATA / DGR)

UN number	3082	
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. * (contains aromatic 150 and quizalofop-P-ethyl)	
Transport hazard class(es)	ICAO/IATA Class	9
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	9L
Packing group	III	
Environmental hazard	Environmentally hazardous	
Special precautions for user	Special provisions	A97 A158 A197 A215
	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 aromatic 150 and quizalofop-P-ethyl)	
Transport hazard class(es)	IMDG Class	9
	IMDG Subrisk	Not Applicable
Packing group	III	
Environmental hazard	Marine Pollutant	
Special precautions for user	EMS Number	F-A, S-F
	Special provisions	274 335 969
	Limited Quantities	5 L

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

Not Applicable

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

Product name	Group
aromatic 150	Not Available
quizalofop-P-ethyl	Not Available
N-methyl-2-pyrrolidone	Not Available

Transport in bulk in accordance with the ICG Code

Product name	Ship Type
aromatic 150	Not Available
quizalofop-P-ethyl	Not Available
N-methyl-2-pyrrolidone	Not Available

SECTION 15 Regulatory information

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

aromatic 150 is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

quizalofop-P-ethyl is found on the following regulatory lists

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 6

Chemical Footprint Project - Chemicals of High Concern List

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

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 6

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	No (quizalofop-P-ethyl)
Canada - DSL	No (quizalofop-P-ethyl)
Canada - NDSL	No (aromatic 150; quizalofop-P-ethyl; N-methyl-2-pyrrolidone)
China - IECSC	No (quizalofop-P-ethyl)
Europe - EINEC / ELINCS / NLP	No (quizalofop-P-ethyl)
Japan - ENCS	No (quizalofop-P-ethyl)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	No (quizalofop-P-ethyl)
USA - TSCA	No (quizalofop-P-ethyl)
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

Revision Date	25/08/2022
Initial Date	24/08/2022

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

TCST: 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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