

SAFETY DATA SHEET

According to HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

Section 1. Identification of the material and the supplier

Product: **CHEETAH®**
 Product Use: **Selective Herbicide**
 Restriction of Use: Refer to Section 15

New Zealand Supplier: **Agrisource 2000 Ltd**
 Address: 45 Kitchener Road
 Pukekohe, Auckland

Telephone: +64 9 237 0422
Emergency No: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 22 February 2023

Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No: HSR100855

Pictograms



Signal Word: **Danger**

GHS Classification and Category	Hazard Code	Hazard Statement
Flammable Liquids Cat. 4	H227	Combustible liquid.
Acute oral toxicity Cat. 4	H302	Harmful if swallowed.
Acute inhalation toxicity Cat. 4	H332	Harmful if inhaled.
Aspiration hazard Cat. 1	H304	May be fatal if swallowed and enters airways.
Skin irritation Cat. 2	H315	Causes skin irritation.
Eye irritation Cat. 2	H319	Causes serious eye irritation.
Skin sensitisation Cat. 1	H317	May cause an allergic skin reaction.
Reproductive toxicity Cat. 1	H360	May damage fertility or the unborn child ...
Specific target organ toxicity – repeated exposure Cat. 2	H373	May cause damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment acute Cat. 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment chronic Cat. 1	H410	Very toxic to aquatic life with long lasting effects.

Hazardous to soil organisms	H421	Hazardous to soil organisms
Hazardous to terrestrial vertebrates	H431	Hazardous to terrestrial vertebrates

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust, fumes, gas, mist, vapours or spray.
P261	Avoid breathing dust, fumes, gas, mist, vapours or spray.
P264	Wash ... thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.
P281	Use personal protective equipment as required.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P321	Specific treatment (see ... <reference to supplemental first aid instruction> on this label).*
P330	Rinse mouth.
P331	Do NOT induce vomiting.
P338	Remove contact lenses, if present and easy to do. Continue rinsing.
P362	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
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.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use ... <specify appropriate media> to extinguish. – This statement applies if water increases risk.

Storage Code	Storage Statement
P405	Store locked up.
P403 + P235	Store in a well-ventilated place. Keep cool.

Disposal Code	Disposal Statement
P501	Dispose of contents/container in accordance with Local Regulations.

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt%	CAS NUMBER.
Diflufenican	2.3	83164-33-4
Bromoxynil octanoate ester	34	1689-84-5
Solvent Naptha	30-40	64742-94-5
N-Methyl-2-pyrrolidone	10 - 20	872-50-4
Proprietary surfactants	10 – 15	-

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.
If on Skin	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Take off contaminated clothing and shoes immediately. Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician. Oxygen or artificial respiration if needed. If symptoms persist, call a physician.
If Swallowed	Rinse mouth. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms: Local:, Sensitisation, Irritation, Systemic:, Lethargy, Thirst, Anxiety, Hyperventilation, Tachycardia, Muscle rigidity, Nausea, Vomiting, Sweating, Salivation, Convulsions.

Notes to Doctor: Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.

Section 5. Fire Fighting Measures

Hazard Type	This product is combustible. Dangerous gases are evolved in the event of a fire.
Hazards from combustion products	In the event of fire the following may be released: Hydrogen bromide (HBr), Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Nitrogen oxides (NO _x), Carbon dioxide (CO ₂), Carbon monoxide (CO).
Suitable Extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Do not use high volume water jet.
Precautions for firefighters and special protective clothing	Wear protective clothing and self-contained breathing apparatus. Do not breath smoke or gases.
Further advise to firefighters	Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth. Do not allow run-off from firefighting to enter drains or water courses
HAZCHEM CODE	3Z

Section 6. Accidental Release Measures

Keep people away from and upwind of spill/leak. Avoid contact with skin and eyes. Do not inhale spray or vapours. Wear long sleeved shirt, long pants, waterproof gloves and safety goggles or face shield. Do not eat, drink or smoke when using. Wash hands and face before meals and after work.

In the case of spillage, contain spilled material. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

Retain and dispose of contaminated wash water. Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains, inform respective authorities.

Section 7. Handling and Storage

Precautions for Handling:

- Read carefully and follow all instructions.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Do not breathe fumes, mist, vapours or spray.
- Avoid release to the environment.
- When mixing or applying, avoid breathing vapours or fumes and avoid contact with skin and eyes.
- Wear protective clothing, gloves and goggles as detailed in Section 8.
- Do not eat or drink while using.
- Wash hands and face before meals and after work.
- Wash protective clothing after work.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Store in original container tightly closed and in a locked, dry, cool, well-ventilated area, away from feed, seeds and foodstuffs.
- Keep out of reach of children.
- Store in accordance with the New Zealand Standard for the Management of Agrichemicals (NZS8409).

Section 8. Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³
Solvent Naphtha: [64742-94-5] [Rubber solvent]	400	1600		
N-Methyl-2-pyrrolidone: [872-50-4]		25 103	75	309
Methylpropan-1-ol : [78-83-1]				

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 13TH EDITION.

Engineering Controls

Ensure ventilation is adequate, as product is used outdoors generally natural ventilation is adequate.

Personal Protection Equipment



Eyes	Wear goggles (conforming to EN166, Field of Use = 5 or equivalent) and faceshield (conforming to EN166, Field of Use = 3 or equivalent).
Skin and body protection:	Wear standard coveralls and Category 3 Type 3 suit. Wear two layers of clothing wherever possible. Polyester/cotton or Cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently. If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.
Hands	Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness of 0,4 mm). Wash when contaminated and dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, Smoking or using the toilet.
Respiratory	Respiratory protection Wear respirator with an organic vapours and gas filter mask (protection factor 10) conforming to EN140 type A or equivalent.
General Hygiene	Avoid inhaling aerosols and vapours. Avoid contact with eyes and skin. Store work clothes and street clothes separately. Wash hand before breaks and at the end of work. Change contaminated protective clothing. Keep away from food, drinks and tobacco.

Section 9. Physical and Chemical Properties

Appearance	Clear Liquid
Colour	Light yellow to dark brown Almost odourless
Odour	Aromatic
Odour Threshold	Not available
pH	6-8 ca. 4.2 at 10 % (23 °C) (deionized water)
Boiling Point	Not available
Melting /Freezing Point	Not available
Flash Point	66°C
Ignition Temperature	> 200 °C – (Based on solvent content)
Upper explosion limit	7.00 %(V) – (Based on solvent content)
Lower explosion limit	0.6 %(V) – (Based on solvent content)
Flammability	Not flammable
Upper and Lower Explosive Limits	Not available
Vapour Pressure (kPa)	Not available
Vapour Density	Not available
Specific Gravity or Density	Approx. 1.95 g/cm ³ (20°C)
Solubility	Emulsifiable
Octanol/water partition coefficient:	Not Available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Octanol/Water Particle Coefficient	Not available

Section 10. Stability and Reactivity

Stability of Substance	Stable under normal conditions of use.
Possibility of hazardous reactions	None expected when stored and handled according to the label.
Conditions to Avoid	Elevated temperatures Heat, flames and sparks.
Incompatible Materials	Strong acids, Strong bases, Oxidizing agents, Store only in the original container.
Hazardous Decomposition Products	May include nitrogen and Carbon dioxides, hydrogen chloride gas.

Section 11. Toxicological Information**Acute Effects:**

Swallowed	Harmful if swallowed
Dermal	Not acutely dermally toxic
Inhalation	Harmful by inhalation
Eye	Irritating (Rabbit)
Skin	Irritating (Rabbit)
Contact sensitisation	Sensitising (Guinea Pig)

Chronic Effects:

Carcinogenicity	The bromoxynil component caused carcinogenic responses in test animals at very high dose rates. The formulated product is not considered carcinogenic when used in accordance with label recommendations.
Reproductive Toxicity	Suspected of damaging fertility or the unborn child
Germ Cell Mutagenicity	Not considered to be a mutagen.
Aspiration	May be fatal if swallowed and enters airways.
STOT/SE	Not applicable.
STOT/RE	May cause damage to organs through prolonged or repeated exposure.

Toxicological Effects:

Acute toxicity – Oral	LD ₅₀ (Rat) 1,113 mg/kg Test on a similar formulation)
Acute toxicity - Dermal	LD ₅₀ (Rat) > 2,000 mg/kg Test on a similar formulation
Acute toxicity – Inhalation	LC ₅₀ (Rat) 2.1 mg/l Exposure time: 4 h Irritating to Respiratory system technical. (Formulation component derived data.)

Section 12. Ecotoxicological Information

Toxic to aquatic life with long lasting effects. Do not allow to enter waterways.

Product:	
Persistence and degradability	No data available
Bioaccumulation	Bioaccumulation Lepomis macrochirus (Bluegill sunfish) Bioconcentration factor (BCF): 230 The value mentioned relates to the combination of bromoxynil phenol and the active ingredient bromoxynil octanoate. Lepomis macrochirus (Bluegill sunfish) Bioconcentration factor (BCF): 1,596 The value mentioned relates to the active ingredient diflufenican.
Mobility in Soil	No data available
Other adverse effects	No data available

Data for technical active ingredients:

Fish toxicity:	Diflufenican: LC50 (Oncorhynchus mykiss (rainbow trout)) >0.109 mg/l Exposure time: 96 h Bromoxynil octanoate: EC50 (Oncorhynchus mykiss (rainbow trout)) >1.7 mg/l
Daphnia toxicity:	Diflufenican: EC50 (Daphnia magna (Water flea)) > 0.24 mg/l Exposure time: 48 h Bromoxynil octanoate: EC50 (Daphnia magna (Water flea)) 0.046 mg/l Exposure time: 48 h
Algae toxicity:	Diflufenican: EC50 (Algae) > 10 mg/l Exposure time: 96 Bromoxynil octanoate: EC50 (Desmodesmus subspicatus (green algae)) 1 mg/l Exposure time: 96 h

Bird toxicity:	No Data
Bee toxicity:	No Data
Earthworm toxicity:	No Data

Section 13. Disposal Considerations

Disposal Method:

Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, follow the recommendations in NZS 8409.

Container Disposal: Triple rinse container and add rinsate to spray tank. Dispose of cleaned container at your local AGRECOVERY container collection site.

Precautions or methods to avoid: Avoid release to the environment.

Section 14. Transport Information

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012



Road, Rail, Sea and Air Transport

UN No	3082
Class - Primary	9
Packing Group	III
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BROMOXYNIL, DIFLUFENICAN SOLUTION)
Marine Pollutant	Yes
Special Provisions	If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15. Regulatory Information

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No: HSR100855

HSW (HS) Regulations 2017	Trigger Quantity
Signage Trigger Quantities (Schedule 3)	1000L
Emergency Response Plan (Schedule 5)	1000L
Secondary Containment (Schedule 5)	1000L
Tracking (Schedule 26)	Not required
Certified Handlers	Not required
Location Certificate	Not required
Restrictions of use	Refer to EPA website for full control details www.epa.govt.co.nz
ACVM Registration Number (See www.foodsafety.govt.nz for registration Conditions).	P9975

Glossary

EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact the Agrisource 2000 Ltd, if further information is required.

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