

1. Identification of Substance & Company

Product

Product name	TAG® G2
Product code	NA
ACVM	P007734
HSNO approval	HSR007866
Approval description	TNL 2347
UN number	3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Terbutylazine, Glyphosate, Amitrole & Oxyfluorfen)
DG class	9
Packaging group	III
Hazchem code	3Z
Uses	Herbicide: Fast acting Knockdown & Residual Herbicide. Total vegetation control for non-croplands and selected orchard crops.

Company Details

Company:	Arxada NZ Limited
Address:	13-15 Hudson Rd Bell Block New Plymouth New Zealand
Telephone:	+64 6 755 9234
Fax:	+64 6 755 1174
Website:	www.arxada.co.nz
Email:	office-newplymouth@arxada.com

Emergency Telephone Number: 0800CHEMCALL (0800 243 622)
International Emergency Phone: +64 4 917 9888

2. Hazard Identification

Approval

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR007866, TNL 2347). The substance has been classified as hazardous according to the criteria in the Hazardous substances (Hazard Classification) Notice 2020.

GHS Classes

Eye irritant category 2
Reproductive toxicity category 2
STOT* repeated exposure category 2
Acute aquatic category 1
Chronic aquatic category 1
Hazardous to soil organisms
Hazardous to terrestrial vertebrates

Hazard Statements

H319 - Causes serious eye irritation.
H361 - Suspected of damaging fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.
H400 - Very toxic to aquatic life.
H410 - Very toxic to aquatic life with long lasting effects.
H421 - Very toxic to the soil environment.
H433 - Harmful to terrestrial vertebrates.

*STOT – System Target Organ Toxicity

SYMBOLS

WARNING



Other Classifications

There are no other classifications that are known to apply.

Precautionary Statements

Prevention	P103 - Read label before use. P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P260 - Do not breathe vapour/spray. P264 - Wash hands thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection. P281 - Use personal protective equipment as required.
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. P337+P313 - If eye irritation persists: Get medical advice/attention. P308+P313 - IF exposed or concerned: Get medical advice/ attention. P391 - Collect spillage.
Storage	P405 - Store locked up.
Disposal	P501 - Dispose of contents/container in accordance with local/regional/national/international regulation.

3. Composition / Information on Ingredients

Component	CAS/ Identification	Concentration
Terbutylazine	5915-41-3	25-35%
Amitrole	61-82-5	1-<10%
Glyphosate	1071-83-6	1-15%
Oxyfluorfen	42874-03-3	1-<3%
Inert ingredients including water	Mixture	balance

This is a commercial product whose exact ratio of components may vary slightly. Trace quantities of impurities are also likely.

4. First Aid

General Information

Arxada NZ Limited has an emergency contact phone number: 0800 243 622, +64 4 917 9888

If medical advice is needed, have product container or label at hand. You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

Recommended first aid facilities Ready access to running water is recommended. Accessible eyewash is recommended.

Exposure

Swallowed	IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting. Give a glass of water to drink.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin contact	IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash before re-use.
Inhaled	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. P312 - Call a POISON CENTRE or doctor/physician if you feel unwell.

Advice to Doctor

Treat symptomatically

5. Firefighting Measures

Fire and explosion hazards:	There are no specific risks for fire/explosion for this chemical. It is non-flammable.
Suitable extinguishing substances:	Carbon dioxide, extinguishing powder, foam.
Unsuitable extinguishing substances:	Unknown.
Products of combustion:	Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
Protective equipment:	Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.
Hazchem code:	3Z

6. Accidental Release Measures

Containment	If greater than 100L is stored, secondary containment and emergency plans to manage any potential spills must be in place. In all cases design storage to prevent discharge to storm water.
Emergency procedures	In the event of spillage alert the fire brigade to location and give brief description of hazard. Stop the source of the leak, if safe to do so. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Do not use sawdust. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).
Clean-up method	Use absorbent (soil, sand or other inert material). Rags are not recommended for the clean-up of spills, as they may create fire or environmental hazard. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.
Disposal	Mop up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
Precautions	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation.

7. Storage & Handling

Storage	Avoid storage of harmful substances with food. Store out of reach of children. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames. Avoid contact with incompatible substances as listed in Section 10. Containers (and outer packaging) must bear the prescribed labelling, including the Hazchem code, UN number, ecotoxicity warning and name of contents. Store locked up. Store in accordance with NZS 8409 Management of Agrichemicals.
Handling	Read entire label before use. Shake well before use. Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 3mg/m³ for respirable particulates and 10mg/m³ for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds	Ingredient	WES-TWA	WES-STEL
	Amitrole	0.2mg/m ³	data unavailable

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

General	Personal Protective Equipment (PPE) should not be used as the primary means of exposure protection, except in the event of an accident or emergency situation or where all other means of protection have proven to inadequate. Clean PPE after use or dispose of as appropriate. Store PPE for re-use in a clean place. Regular training on the correct use of PPE should be provided. In particular the correct fitting and use of respirators and where applicable the cleaning of respirators should be undertaken.
Eyes	Avoid contact with eyes. Use safety glasses and or chemical splash goggles if splashes are possible. Select eye protection in accordance with AS/NZS 1337.



Skin

Protective gloves and clothing are not normally necessary. However, it is prudent to wear gloves when handling chemicals in bulk or for an extended period of time.

Respiratory



A respirator when airborne concentrations approach the WES (section 8). Respirators must have filters appropriate to the duty and comply with AS/NZS1716 and selected, used and maintained in accordance with AS/NS 1715. Use a respirator with an organic vapour cartridge and a particulate filter. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order. Fit testing and clear guidelines and training for use and maintenance of PPE are necessary.

WES Additional Information

Not applicable

9. Physical & Chemical Properties

Appearance	light brown liquid
Odour	faint odour
pH	3.5-4.5
Vapour pressure	no data
Viscosity	no data
Boiling point	Initial boiling point: 100°C
Volatile materials	no data
Freezing / melting point	no data
Solubility	miscible in water
Specific gravity / density	1.03-1.06
Flash point	>100°C
Danger of explosion	no data
Auto-ignition temperature	no data
Upper & lower flammable limits	no data
Corrosiveness	non corrosive

10. Stability & Reactivity

Stability	Stable
Conditions to be avoided	Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames.
Incompatible groups	None known
Substance Specific Incompatibility	None known
Hazardous decomposition products	Hydrogen cyanide, other cyanide compounds, hydrogen sulfide, sulfur dioxide, hydrogen, ammonia, oxides of carbon, oxides of nitrogen and other potentially toxic combustion products may be present.
Hazardous reactions	None known

11. Toxicological Information

Summary

IF SWALLOWED: may be harmful. See chronic toxicity.
 IF IN EYES: may cause eye irritation.
 IF ON SKIN: not expected to cause skin irritation.
 IF INHALED: vapours/spray may cause health effects.
 CHRONIC TOXICITY: Amitrole is classed by the EPA as a suspected reproductive toxicant.

Supporting Data

Acute	Oral	Using LD ₅₀ 's for ingredients, the Acute Toxicity Estimate (ATE) (oral) for the mixture is >2,000 mg/kg. Data considered includes: Terbutylazine 1503mg/kg (rat), Oxyfluorfen >5000mg/kg (dog).
	Dermal	Using LD ₅₀ 's for ingredients, the Acute Toxicity Estimate (ATE) (dermal) for the mixture is >2,000 mg/kg. Data considered includes: Oxyfluorfen >10000mg/kg (rabbit).
	Inhaled	Using LD ₅₀ 's for ingredients, the Acute Toxicity Estimate (ATE) (inhalation) for the mixture is >5mg/L/4h.
	Eye	The mixture is considered to be an eye irritant, because some of the ingredients (amitrole, glyphosate, oxyfluorfen) present are considered eye irritants in more concentrated form.
	Skin	The mixture is not considered to be a skin irritant.
Chronic	Sensitisation	No ingredient present at concentrations > 0.1% is considered a sensitizer.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No ingredient present at concentrations > 0.1% is considered a carcinogen.

Reproductive / Developmental	The mixture is considered to be a suspected reproductive or developmental toxicant. Amitrole is classed as a suspected reproductive toxicant. Amitrole may damage a developing fetus through oral exposure. Adverse effect observed NOAEL 120 µg/kg bw/day (subchronic, rat) - fertility, route: oral, Adverse effect observed NOAEL 3 mg/kg bw/day (subacute, rabbit) - developmental toxicity, route: oral. In a two-generation study in rats, dams fed 5 or 25 mg/kg/day of amitrole had fewer pups per litter, and their weight at weaning was reduced. Dietary doses of 1.25 mg/kg/day had no significant effect on reproduction.
Systemic	This mixture is considered a systemic target organ toxicant (repeated exposure) cat 2 - Amitrole: Oral route - systemic effects: Adverse effect observed LOAEL 1.5 mg/kg bw/day (subchronic, rat), Amitrol may affect thyroid and liver.
Aggravation of existing conditions	None known.

12. Ecological Data

Summary

This mixture is considered very toxic towards aquatic organisms with long lasting effects and hazardous to soil organisms. Avoid contamination of any water supply with this product or empty container. This mixture is a selective herbicide and is very toxic to some plant species (certain plants may be killed or damaged from root uptake of this product).

Supporting Data

Aquatic	Using EC ₅₀ 's for ingredients, the calculated EC ₅₀ for the mixture is <1 mg/L. Data considered includes: Terbuthylazine 0.109mg/L (96h, Mysidopsis bahia), 0.0032mg/L (5 day, Selenastrum capricornum), 3.4mg/L (96hr, rainbow trout), Amitrole 1.54mg/L (48hr, Daphnia magna), 2.3mg/L (96h, Scenedesmus subspicatus (Algae)), 65mg/L (96h, rainbow trout), Glyphosate 485mg/l (72h, algae), 2.6-3.4mg/L (48h, Crustacean), 0.53mg/L (96h, Fish), 0.64mg/L (168h, Algae), 1.3mg/L (96h, algae), Oxyfluorfen 0.15mg/L (96h, Pimephales promelas (fathead minnow)), 0.5mg/L (48h, Daphnia magna), inert ingredients data unavailable, water n/a, 0 0, 0 0, 0 0
Bioaccumulation	No data
Degradability	No data
Soil	EPA has classified the mixture as hazardous to the soil environment.
Terrestrial vertebrate	The mixture has been classified by EPA as hazardous to terrestrial vertebrates. See acute toxicity. Amitrole is practically nontoxic to upland game birds [6,18]. The LD50 for amitrole in mallard ducks is 2000 mg/kg.
Terrestrial invertebrate	No evidence of ecotoxicity towards terrestrial invertebrates.
Biocidal	no data

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the Hazardous Substances (Disposal) Notice 2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
Contaminated packaging	Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Triple rinse empty container placing rinse water in the spray tank. If recycling, discard cap and deliver clean container to an Agrecovery depot or crush and bury in an approved landfill.

14. Transport Information

Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good for transport.

UN number:	3082	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Terbutylazine, Glyphosate, Amitrole & Oxyfluorfen)
Class(es)	9	Packing group:	III
Precautions:	Ecotoxic.	Hazchem code:	3Z

15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR007866, TNL 2347. All ingredients appear on the New Zealand Inventory of Chemicals NZIoC.

Specific Controls

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Emergency plan	Required if > 100L is stored.
Certified handler	Required (Certified handlers and supervision and training of workers)
Tracking	Not required.
Bunding & secondary containment	Required if > 100L is stored.
Signage	Required if > 100L is stored.
Location compliance certificate	Not required.
Flammable zone	Not required.
Fire extinguisher	Not required.
Additional controls	Maximum application rates have been set. Please consult label for details.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

ACVM approval: P007734

16. Other Information

Abbreviations

Approval Code	Approval HSR007866, TNL 2347 Controls, EPA. www.epa.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
EC₅₀	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
EPA	Environmental Protection Authority (New Zealand)
GHS	Globally Harmonised System of Classification and Labelling of Chemicals, 7 th revised edition, 2017, published by the United Nations.
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD₅₀	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC₅₀	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
NZIoC	New Zealand Inventory of Chemicals

STEL	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
STOT RE	System Target Organ Toxicity – Repeated Exposure
STOT SE	System Target Organ Toxicity – Single Exposure
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
WES	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

References

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
Controls	EPA notices, www.epa.govt.nz , Health and Safety at Work (Hazardous Substances) Regulations 2017, www.legislation.govt.nz
WES	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz .
Other References:	Suppliers SDS

Review

Date	Reason for review
March 2022	Not applicable - New SDS

Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely GHS 7 classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email info@datachem.co.nz or phone: +64 21 1040951.

