Grosafe Chemicals Limited

SAFETY DATA SHEET

LAWN GUARD

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND COMPANY

1.1 Identifiers

Product name:	**LAWN GUARD**
Other Name(s):	Selective Herbicide containing 2,4-D and Dicamba as amine salts

1.2 Recommended use of the chemical and restrictions on use

Product Use:	Selective Herbicide to control many woody species and hard to kill weeds in lawns.

1.3 Supplier contact details:

Company name:	Grosafe Chemicals Limited
Address:	20 Jean Batten Drive Mt Maunganui, 3116
Telephone:	0800 220 002
Email:	info@grosafe.co.nz
EMERGENCY PHONE NUMBER:	**0800 CHEMCALL (0800 243 622)**

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the Hazardous Chemical

Hazardous substance according to Hazardous Substances and New Organisms (HSNO) Act 1996 and the Hazardous Substances (Hazard Classification) Notice 2020.
HSNO Substance Approval: HSR000371
Classifications: Acute toxicity (oral) Category 4; Serious Eye Damage / Irritation Category 2; Specific Target Organ Toxicity – repeated exposure Category 2; Hazardous to the aquatic environment – Category 1; Hazardous to soil organisms; Hazardous to Terrestrial Vertebrates; Hazardous to Terrestrial Invertebrates.

2.2 Label elements:

Pictograms:

Signal Word: **WARNING**

Hazard statements:

H302	Harmful if swallowed
H319	Causes serious eye irritation
H373	May cause damage to organs through prolonged or repeated exposure
H410	Very toxic to aquatic life with long lasting effects
H423	Harmful to the soil environment
H433	Harmful to terrestrial vertebrates
H443	Harmful to terrestrial invertebrates

Additional labelling statements required under Hazardous Substances (Labelling) Notice 2017 (EPA Consolidation 30 April 2021)

Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

Do not apply directly into or onto waterways.

Precautionary statements:

Prevention

P102	Keep out of reach of children
P103	Read label before use.
P260	Do not breathe mist/vapours or spray
P264	Watch exposed parts of the body thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P273	Avoid release to the environment.
P280	Wear protective clothing

Response

P101	If medical advice is needed, have the product container or label at hand.
P301 + P312	IF SWALLOWED: Call a Poison Centre or doctor / physician if you feel unwell
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present, and easy to do. Continue rinsing.
P314	Get medical advice / attention if you feel unwell.
P330	Rinse mouth
P337+ P313	If eye irritation persists: Get medical advice / attention
P391	Collect spillage

Storage

Disposal

P501	Dispose of contents/container in accordance with local regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS	Proportion % w/w
2,4-D (triethanolamine salt)	2569-01-9	10 – 30%
Dicamba (dimethylamine salt)	1918-00-9	<10.0%
Other ingredients	Proprietary	balance

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Information:

For advice contact 0800 CHEMCALL (0800 243622). Have label or Safety Data Sheet at hand.

Ingestion: If swallowed, rinse mouth with water. Do not induce vomiting. Call the NATIONAL POISONS CENTRE or doctor for advice if concerned or person feels unwell.

Skin Contact: Remove contaminated clothing and wash skin with plenty of soap and water. Get medical advice if irritation persists.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention if irritation persists.

Inhalation: Remove person to fresh air and keep at rest in a position comfortable for breathing. Call the NATIONAL POISONS CENTRE or doctor for advice if concerned or person feels unwell.

4.2 Symptoms caused by exposure

Treat symptomatically

4.3 Medical attention and special treatment

Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

Use water spray or fog, foam, CO2 or dry chemical as appropriate for surrounding materials. Contain extinguishing media to prevent runoff into drains, sewers, waterways.

Addition of water may cause excessive foaming.

5.2 Specific hazards arising from the chemical

Fire decomposition products may be toxic/harmful and/or irritating if inhaled.

Vapours may be toxic – use of self-contained breathing apparatus may be required.

Evacuate people to safe area upwind of fire.

5.3 Special protective equipment and precautions for fire fighters

Wear full personal protective equipment including with self-contained breathing apparatus (SCBA).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Have this SDS available. In the event of a spill, wear appropriate protective clothing and eye/hand protection. Wash contaminated personal protective equipment and clothing and dry before re-use.

Spills may be slippery and should be cleaned up immediately.

6.2 Environmental precautions

Prevent spillage from entering drains or waterways. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

6.3 Methods and materials for containment and cleaning up

Contain spilled material. For small spills, use absorbent material such as sand, soil, vermiculite and recover into labelled drums that can be sealed for safe disposal. For large spills, recover into labelled containers then absorb remaining gel and transfer to drums for disposal. Clean area with water and detergent.

Dispose of contaminated materials to approved landfill in accordance with local regulations.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Read the label before use.
Do not apply directly into or onto water.
Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area
When applying product avoid inhalation of vapours. Wear protective equipment.
Wash hands and exposed skin with soap and water after handling and before rest or meal breaks.
Do not eat, drink or smoke when using.
Keep containers away from foodstuffs, seeds, fertilisers and other pesticides.

7.2 Conditions for safe storage

Store securely in the closed original packaging out of reach of children and in a dry, cool, well-ventilated area and out of direct sunlight. Keep away from sources of heat, food, drink and animal feedstuffs.
Storage of 100 L or more of this product requires an emergency response plan, secondary containment and signage.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters – exposure standards, biological monitoring

(Worksafe New Zealand – Workplace exposure standards and biological exposure indices – Edition 13, April 2022)

Ingredient	WES-TWA	WES-STEL	WES Ceiling
2,4-D (salts)	None established	None established	None established
Dicamba	None established	None established	None established

8.2 Engineering controls

Recommended to use in well-ventilated area or outdoors.

8.3 Personal protective equipment (PPE)

The following Standards provide general advice regarding safety clothing and equipment:
Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**,
Occupational Protective Clothing: **AS/NZS 4501**,
Industrial Eye Protection: **AS1336** and **AS/NZS 1337**,
Occupational Protective Footwear: **AS/NZS2210**.
Eye/Face Protection: Wear chemical splash goggles if eye contact with product is possible.
Skin Protection: Wear impervious chemical resistant gloves (e.g. nitrile, butyl), coveralls, socks and chemical resistant footwear. Ensure all skin areas are covered.
Respirator: Use outdoors in well-ventilated area or use local exhaust ventilation

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid (clear light yellow to golden brown)
Odour	Sweet odour
Odour threshold	Not known
pH	7.0 – 8.0
Melting/Freezing Point	No data available
Boiling Point /Range	No data available
Flash point	Not flammable
Flammability (solid, gas)	Not applicable
Vapour Pressure	No data available
Vapour density	No data available
Specific gravity/bulk density	1.06 – 1.08 g/ml (approx.)
Solubility	Soluble in water
Partition Co-efficient n-octanol/water	No data available
Auto-ignition temperature	Not applicable
Decomposition temperature	No data available
Viscosity	No data available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

This product is unlikely to react or decompose under normal storage conditions.

10.2 Chemical stability

Stable under normal temperatures and pressure for storage and use.

10.3 Conditions to Avoid

Avoid storage in direct sunlight, exposure to heat or contact with incompatible materials.

10.4 Incompatible materials and possible hazardous reactions

Strong acids, strong alkalis and oxidising agents such as chlorine compounds etc.

10.5 Hazardous decomposition products

Fire Decomposition: Smoke, carbon oxides and other unspecified compounds.

10.6 Polymerisation

Not known to occur.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Health hazard information

The product is classified for health hazards according to an assessment of information on product.

11.2 Toxicological information

Acute oral toxicity:	Classified as an acute oral toxicant (Acute Toxicity (oral) Category 4
Acute dermal toxicity:	Not classified.
Acute inhalation toxicity:	Not classified.
Skin corrosion/irritation	Not classified.
Serious eye damage/irritation	Classified as an eye irritant (Serious eye damage / irritation Category 2)

Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity:	No ingredients identified as presumed mutagens.
Carcinogenicity	No ingredients identified as presumed mutagens
Reproductive toxicity	No ingredients identified / suspected of damaging fertility or the unborn child.
Specific target organ toxicity – single/repeated exposure	Classified for adverse effects to organs or systems from repeated exposure (STOT Repeated Category 2).
Narcotic effects	No ingredient identified as causing narcotic effects.

11.3 Toxicological data:

2,4-D (salts) (Data ex US NPIC)	LD_{50} values range from 639 to 1646 mg/kg in rats depending on the chemical form of 2,4-D utilized in the study. Researchers found 2,4-D was more toxic for mice, reporting an LD_{50} of 138 mg/kg. All chemical forms of 2,4-D are considered low in toxicity for acute oral exposure based on tests with rats.
Dicamba (salts) (Data ex US NPIC)	The acute oral LD_{50} in rats varies by strains and gender. The acute oral LD_{50} of technical grade dicamba in male semi-adult Wistar rats was 757 mg/kg. Pure dicamba has an acute oral LD_{50} of 2560 mg/kg in semi-adult Wistar females.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

This product is classified as ecotoxic to the aquatic environments and is also hazardous to soil organisms and terrestrial vertebrates and invertebrates

12.2 Environmental Fate

2,4-D amine salts and esters are not persistent under most environmental conditions. Typically, the ester and amine forms of 2,4-D are expected to degrade to the acid form. Soil half-life values have been estimated at 10 days for the acid, diethylamine salt, and ester forms.

Dicamba does not pose a significant threat to groundwater due to its short half-life. Dicamba is not expected to bioaccumulate in organisms and at recommended application rates nor is it expected to exceed threshold levels of concern for aquatic plants or fish.

12.3 Ecotoxicity data:

2,4-D (salts) (Data ex CCID & US EPA)	Fish: *Rainbow trout* LC_{50} (96 hr) 100mg/L Crustacea: *Daphnia spp* EC_{50} (48 h) 4mg/L Alga: EC_{50} (14D) 0.3mg/L Bees: LD_{50} (48h) approx.100ug/bee Bird: LC_{50} approx. 10000ppm
Dicamba (salts) (Data ex CCID & US EPA)	Fish: *Rainbow trout* LC_{50} (96 hr) 28mg/L Crustacea: *Daphnia spp* EC_{50} (48 h) 4mg/L Alga: EC_{50} (5D) 0.5mg/L Bees: LD_{50} (48h) not toxic

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Product Disposal

Dispose of to an approved landfill or waste management facility in accordance with local regulations.

13.2 Container Disposal

Empty packaging should be disposed of to an approved (pesticide) recycler or crushed and sent to approved landfill. Do not use packaging for storage of other products

SECTION 14: TRANSPORT INFORMATION

Road and Rail Transport:

Classified as dangerous goods by the criteria of NZS 5433:2012: Transport of Dangerous Goods on Land.

Marine Transport (IMO/IMDG):

Classified as dangerous goods under the IMDG Code, 2020 Edition (inc. Amendment 40-20) 1 June 2022.

Air Transport (ICAO/IATA):

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulation for transport by air.

UN Number:	3082
UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID N.O.S (2,4-D & Dicamba)
Transport hazard class(es)	9
Packing Group:	III
HAZCHEM:	3Z
Special Precautions for User:	N/A
Limited Quantity	5L
Maximum gross mass of combination packaging (LQ)	30kg

SECTION 15: REGULATORY INFORMATION

15.1 Hazardous Substances and New Organisms (HSNO) Act 1996

Classified as a hazardous substance according to Hazardous Substances (Hazard Classification) Notice 2020.

Approved Hazardous Substance Number: HSR000371: Soluble concentrate containing 100g/litre 2,4-D and 50g/litre dicamba as amine salts.

15.2 ACVM Act 1997

The product is exempt from registration under ACVM Regulations. Refer to https://www.mpi.govt.nz/agriculture/agricultural-compounds-vet-medicines

15.3 NZ Health and Safety at Work (Hazardous Substances) Regulations 2017

(www.worksafe.govt.nz)
Certified Handler – not required
Quantity to be secured when left unattended – no limit
Location compliance certificate – not required
Emergency Management – fire extinguishers – not required
Emergency Management – signage – required (>100L or 100kg) - 9.1A
Emergency Management - secondary containment and emergency response plan threshold quantity – (>100L or 100kg) - 9.1A
Tracking hazardous substances – not required

15.4 Additional Controls

The substance must not be applied onto or into waterways
Do not apply on or around food or animal feed crops or areas to be grazed by animals

SECTION 16: OTHER INFORMATION

16.1 Date of preparation or last revision of SDS

SDS issued	30 June 2022
Version	2
SDS supersedes	14 January 2017
Reason issued	Update of SDS format and product information (NZ-GHS)

16.2 Abbreviations

ADI	Acceptable Daily Intakes
CAS number	Chemical Abstracts Service Registry Number
CCID	Chemical Classification Identification Database
EPA	Environmental Protection Authority
EC_{50}	Half maximal Effective Concentration
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
HSNO	Hazardous Substances and New Organisms
HS	Health and Safety
HSR	Hazardous Substances Register
IARC	International Agency for Research on Cancer
LC_{50}	Median Lethal Concentration
LD_{50}	Median Lethal Dose
SDS	Safety Data Sheet
NOAEL	No Observable Adverse Effect Level
NOEL	No Observable Effect Level
NOS	Not otherwise specified
STEL	Short Term Exposure Limit
SWA	Safety Work Australia

TWA	Time-Weighted Average
UN Number	United Nations Number
WES	Workplace Exposure Standard

16.3 References

ADR – ADRBOOK Dangerous Goods by Road
Ministry of Transport – October 2008.
NZ EPA CCID and Approved Substance databases
PPDB- Pesticides Properties Database
ECHA – European Chemical Agency
IMDG – The international Maritime Dangerous Goods Code
IATA Dangerous Goods Regulations (DGR)
PUBCHEM - maintained by the National Centre for Biotechnology Information, a component of the National Library of Medicine, which is part of the United States National Institutes of Health
WORKSAFE - New Zealand's primary workplace health and safety regulator
HSWA – Health & Safety at Work Act 2015

16.4 OTHER

End of Safety Data Sheet