Grosafe Chemicals Limited

SAFETY DATA SHEET

HexaGard™ 750

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND COMPANY

1.1 Identifiers

Product name:	**HexaGard™ 750**
Other Name(s):	Water dispersible granule containing 637.5 g/kg terbuthylazine and 112.5 g/kg hexazinone

1.2 Recommended use of the chemical and restrictions on use

Product Use:	Herbicide for selective weed control in forestry and non-selective weed control in industrial situations.

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 telephone 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
HSNO Substance Approval: HSR101467
Hazard classifications: Acute oral toxicity, Category 4; Eye irritation, Category 2; Specific target organ toxicity (repeated exposure) Category 2; Hazardous to aquatic environment (acute and chronic exposure), Category 1; Hazardous to soil organisms; Hazardous to terrestrial vertebrates.

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.
H421	Very toxic to the soil environment.
H433	Harmful to terrestrial vertebrates.

Additional labelling statements required under Hazardous Substances (Labelling Notice 2017

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 water.

Precautionary statements:

Prevention	
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe dust/mist/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 eye/ face protection and protective clothing/gloves.
P391	Collect spillage.
Response	
P101	If medical advice is needed, have product container or label at hand.
P314	Get medical advice if you feel unwell.
P301 + P312	IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.
P330	Rinse mouth.
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.
Storage	
	-
Disposal	
P501	Dispose of contents/container in accordance with local regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS No	Proportion % w/w
Terbuthylazine	5915-41-3	63.75
Hexazinone	51235-04-2	11.25
Other ingredients*	Trade secret	balance

This is a commercial product whose exact ratio of components may vary slightly.

*Do not affect the hazardous classifications of the product.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Information:

For advice call the National Poisons Centre, telephone 0800 POISON [0800 764 766]. Have label or Safety Data Sheet at hand.

Ingestion: If swallowed, rinse mouth with water. Call the NATIONAL POISONS CENTRE or doctor for advice if 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 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 person feels unwell.

4.2 Symptoms caused by exposure

Unlikely to cause harmful effects under normal conditions of handling and use.

4.3 Medical attention and special treatment

Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

Non-flammable solid. Use water spray , CO_2, fog or foam as appropriate for surrounding materials. Contain extinguishing media to prevent runoff into drains, sewers, waterways.

5.2 Specific hazards arising from the chemical

Fine dust dispersed in air may ignite if exposed to a high temperature source. Fire decomposition products may be toxic/harmful and/or irritating if inhaled. 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, eye and skin protection. Wash contaminated personal protective equipment and clothing, and dry before re-use.

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. Collect/sweep up granules without generating dust, into labelled container for use if possible, or disposal.

For small liquid spills, use absorbent material and recover into labelled drums that can be sealed for safe disposal. For large liquid spills, recover liquid into labelled containers then absorb remaining liquid 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 handle until all safety precautions have been read and understood.

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.

Avoid contact with eyes. Avoid inhalation of spray mist/aerosols. Wear protective equipment such as coat/trouser (overalls), boots, gloves and eye protection. Do not eat, drink or smoke when using this product. Wash hands and exposed skin with soap and water after handling and before rest or meal breaks.

Do not use spray equipment contaminated with this product for any other purpose unless first thoroughly cleaned with a suitable cleaning detergent.

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 food, drink and animal feedstuffs. Storage of 100 kg 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

Ingredient	TWA (mg/m^3)	STEL (mg/m^3)

No biological limits applicable.

8.2 Engineering controls

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 safety glass/chemical goggles if eye contact is possible.

Skin Protection: Wear impervious chemical resistant gloves (e.g. nitrile, butyl), coveralls, socks and chemical resistant footwear. For overhead spray exposure, wear chemical resistant headgear. Ensure all skin areas are covered.

Respirator: Use outdoors in well-ventilated area. Where product is being sprayed and a mist could be produced a respirator should be worn. It should be fitted with a cartridge, suitable for particulates.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to beige granules
Odour	Non-specific
Odour threshold	Not known
pH	6.0 – 8.0 (1% aqueous)
Melting/Freezing Point	No data available
Boiling Point /Range	>100 ^{0}C
Flash point	Non flammable
Flammability (solid, gas)	Not applicable
Vapour Pressure	No data available
Vapour density	No data available
Specific gravity	Not available
Solubility	Product disperses in water
Partition Co-efficient n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Not applicable

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

Heat, flames, spark/sources of ignition.

10.4 Incompatible materials and possible hazardous reactions

None identified. Hazardous decomposition products formed at high temperatures.

10.5 Hazardous decomposition products

Fire Decomposition: Carbon dioxide, carbon monoxide, smoke 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 toxicity:	Harmful if ingested.
Aspiration hazard:	Product is not classified with aspiration hazard.
Respiratory irritation:	May be slightly irritating to throat and upper respiratory system.
Skin corrosion/irritation	Not classified as skin irritant.
Serious eye damage/irritation	Classified as serious eye irritant.
Respiratory or skin sensitisation	Not classified.
Germ cell mutagenicity:	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity – single/repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Narcotic effects	Product contains no ingredient identified as causing narcotic effects.

11.3 Toxicological data:

Product	Not available
Terbuthylazine	Oral, rat LD_{50} 1503 mg/kg b.w Dermal, rat LD_{50} 2000 mg/kg b.w Inhalation, rat LC_{50} (4 hr)(nose only) >5.3 mg/L
Hexazinone	Oral, rat LD_{50} 860 mg/kg b.w Dermal, rat LD_{50} 5000 mg/kg b.w Inhalation, rat LC_{50} (4 hr) 3.94 mg/L

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

This product is classified as being very toxic to aquatic life and with long lasting effects, very toxic to the soil environment and harmful to terrestrial vertebrates.

12.2 Environmental Fate

Breakdown in soil and groundwater: Terbuthylazine DT_{50}, 30 - 60 days; Hexazinone DT_{50} 30 -180 days.

Bioaccumulation: Not expected to bioaccumulative.

Partition coefficient (octanol/water): Not available.

Soil mobility: Expected to be slightly to moderately mobile.

12.3 Ecotoxicity data:

Terbuthylazine	Fish; *Oncorhynchus mykiss* LC_{50} (96 hr) 2.2 mg/L Crustacea; *Daphnia magna* EC_{50} (48 hr) 0.09 mg/L Aquatic plant; *Lemna gibba* EC_{50} (14d) growth 0.0128 mg/L Algae; *Pseudokirchneriella subcapitata* EC_{50} (72 hr) 0.012 mg/L Bird; *Colinus virginianus* LD_{50} >1236 mg/kg
Hexazinone	Fish; *Oncorhynchus mykiss* LC_{50} (96 hr) >320 mg/L Crustacea; *Daphnia magna* EC_{50} (48 hr) >85 mg/L Aquatic plant; *Lemna gibba* EC_{50} (14d) growth >0.072 mg/L Algae; *Pseudokirchneriella subcapitata* EC_{50} (72 hr) 0.0145mg/L Bird; *Colinus virginianus* LD_{50} >2258 mg/kg

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Product Disposal

Refer to product label. If possible, dispose of by using according to the label. Otherwise dispose of to an approved landfill in accordance with local regulations.

13.2 Container Disposal

Refer to product label. Do not use packaging for storage of other products. Empty packaging should be disposed of to an approved recycler or crushed and sent to approved landfill.

SECTION 14: TRANSPORT INFORMAITON

Road and Rail Transport:

Classified as Dangerous Good Class 9 according to NZS5433 Transport of Dangerous Goods on Land

Marine Transport (IMO/IMDG):

Classified as Dangerous Good Class 9 by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport (ICAO/IATA):

Classified as Dangerous Good Class 9 by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulation for transport by air.

UN Number:	3077
UN Proper Shipping Name:	ENVIRONMENTALLY HAZARODUS SUBSTANCE, SOLID, N.O.S. (CONTAINS 63.75% TERBUTHYLAZINE, 11.25% HEXAZINONE
Transport hazard class(es)	9
Packing Group:	III
HAZCHEM:	2Z
Special Precautions for User:	
IMDG Marine pollutant:	YES
Transport in Bulk:	-

SECTION 15: REGULATORY INFORMATION

15.1 HSNO Act 1996

Hazardous substance according to Hazardous Substances (Classification) Notice 2017.

Approved substance number: HSR101467

Hazardous classifications: Acute oral toxicity, Category 4; Eye irritation, Category 2; Specific target organ toxicity (repeated exposure) Category 2; Hazardous to aquatic environment (acute and chronic exposure), Category 1; Hazardous to soil organisms; Hazardous to terrestrial vertebrates.

Controls: Refer to control on www.epa.govt.nz for complete wording for variation Controls.

Safety Data Sheet:	Any quantity
Restricted to workplace only:	No
Quantity that requires management in accordance with HSW HS Regulations:	1000 kg
Quantity for secondary containment and emergency response plan:	100 kg
Quantity for signage:	100 kg
Certified Handler:	No
Qualified Handler:	Yes
Record keeping (3kg or more applied within 24 hours in a lace where likely to enter air or water and leave application area)	Yes

Additional HSNO substance specific Controls

The maximum application rate of this substance, as specified by the Authority in accordance with clause 50(1) of the Hazardous Property Controls Notice, is 16.2 kg/ha (equating to 10.65 kg terbuthylazine/ha and 1.86 kg hexazinone/ha).
The maximum application frequency of this substance must not be more than two applications per calendar year, with a minimum interval period of six months between applications.

The substance label must include the following statements, or words to the same effect:
• DO NOT apply when wind speeds are less than 3 km/hr or more than 20 km/hr as measured at the application site.
• WARNING: exposure to this substance may injure or kill susceptible agricultural crops and native vegetation. Care should be taken to avoid spray to neighbouring vegetation. It is recommended to conduct a site specific risk assessment that considers the potential movement of spray drift downwind to sensitive areas. This includes assessment of the weather conditions, application equipment, topography and species of plants downwind.
• WARNING: The use of this substance in areas where soils are permeable, particularly where the water table is shallow, may result in the substance leaching into ground water.
• This substance must be used by ground-based methods only, except when used in forestry plantations, where it can also be used by aerial application.
• When applied using aerial methods, the nozzle must be set to coarse droplet quality spray, as defined by the American Society of Agricultural and Biological Engineers ASABE Standard (S572) or the British Crop Production Council guideline.

Additional information: Refer to HS Notices (www.epa.govt.nz) and HSW HS Regulations (www.worksafe.govt.nz)

15.2 ACVM Act 1997

Registration number: Not applicable (exempt use)

Refer to www.foodsafety.govt.nz for registration conditions.

SECTION 16: OTHER INFORMATION

16.1 Date of preparation or last revision of SDS

SDS issued	25th May 2022
SDS supersedes	Not applicable
Reason issued	New product

16.2 ABREVIATIONS

ADI	Acceptable Daily Intakes
CAS number	Chemical Abstracts Service Registry Number
CCID	Chemical Classification Identification Database
EPA	Environmental Protection Authority
ErC_{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 Sheets
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

16.3 REFERENCES

EPA CCID and Approved Substance databases

PPDB- Pesticides Properties DataBase

16.4 OTHER

HEXAGARD™ is a trademark of Grosafe Chemicals Ltd

End of Safety Data Sheet