



## SAFETY DATA SHEET

### QuadBeet™

#### SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND COMPANY

##### 1.1 Identifiers

Product name: **QuadBeet™**  
Suspo-emulsion containing phenmedipham 60 g/L,  
desmedipham 60 g/L, ethofumisate 60 g/L and metamitron 200 g/L

Other Name(s):

##### 1.2 Recommended use of the chemical and restrictions on use

Product Use: Herbicide for use in fodder beet, red beet and sugar beet

##### 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](mailto: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: HSR101145  
Classifications: 6.1D, 6.3B, 6.4A, 6.5B, 6.7B, 6.9B, 9.1A, 9.2A, 9.3C

##### 2.2 Label elements:

**Pictograms:**



**Signal Word:**

WARNING

**Hazard statements:**

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H316	Causes mild skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation
H332	Harmful if inhaled.

H351	Suspected of causing cancer.
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.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/mist/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear eye/ face protection and protective gloves.
P281	Use personal protective equipment as required.

*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.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P312	Call a POISON CENTRE or doctor if you feel unwell.
P363	Wash contaminated clothing before re-use.
P332 + P313	If skin irritation occurs: Get medical advice.
P333 + P313	If skin irritation or rash occurs: Get medical advice.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P312	Call a POISON CENTRE or doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice.
P308 + P313	If exposed or concerned: Get medical advice.
P391	Collect spillage.

*Storage*

P405	Store locked up.
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*Disposal*

P501	Dispose of contents/container in accordance with local regulations.
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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS	Proportion % w/w
Metamitron	41394-05-2	18.3
Phenmedipham	13684-63-4	5.5
Desmedipham	13684-56-5	5.5
Ethofumisate	26225-79-6	5.5
Solvent naphtha (petroleum) heavy aromatic*	64742-95-5	1 - 5
Other ingredients*	Trade secret	balance

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

\*Contains 1-methylnaphthalene (CAS No 90-12-0), 2-methylnaphthalene (CAS No 91-57-6) and naphthalene (CAS No 91-20-3)

\*\*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. If exposed or concerned, get medical advice.

**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 occurs or person feels unwell.

**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

Use water spray or 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

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. 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.

If spillage of this product is near trees or valuable plants, remove the top 50mm of soil after the spillage is cleaned up. For further information contact the supplier for advice.

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. To be used by people who are suitably trained and appropriately supervised.

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.

Use only outdoors or in well ventilated area.

Avoid contact with skin and eyes. Avoid inhalation of dust, 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 locked up 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 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

Ingredient	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Acetone	1185 (500 ppm)	2375 (1000 ppm)
Propylene glycol	474 (150 ppm)	

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 chemical splash 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 or use local exhaust ventilation. 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/cream liquid suspension
Odour	Aromatic
Odour threshold	Not known
pH	4.0 – 7.0 (as 1% aqueous)
Melting/Freezing Point	No data available
Boiling Point /Range	<100 °C
Flash point	Non flammable
Flammability (solid, gas)	Not applicable
Vapour Pressure	No data available
Vapour density	No data available
Specific gravity	ca 1.09
Solubility	Forms emulsion 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

Contact with oxidising agents.

### 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: Classified as harmful if ingested. May be harmful in contact with skin or if inhaled.

Aspiration hazard:	Product is not classified with aspiration hazard.
Respiratory irritation:	May be slightly irritating to throat.
Skin corrosion/irritation	Classified as causes mild skin irritation.
Serious eye damage/irritation	Classified as may cause serious eye irritation.
Respiratory or skin sensitisation	Desmedipham is identified as may cause an allergic skin reaction.
Germ cell mutagenicity:	No ingredients in product identified as presumed or suspected mutagens.
Carcinogenicity	Classified as suspected of causing cancer. Excipient ingredient in the formulated product contains naphthalene. Exposure to high concentrations of naphthalene may cause destruction of red blood cells, anaemia,
	and cataracts. Naphthalene caused cancer in laboratory animal studies, but the relevance of these findings to humans is uncertain.
Reproductive toxicity	No ingredients in product identified as suspected of damaging fertility or the unborn child.
Specific target organ toxicity – single/repeated exposure	May cause damage to organs through prolonged or repeated exposure at high doses. May affect liver, kidneys, spleen or blood.
Narcotic effects	Product contains no ingredient identified as causing narcotic effects.

### 11.3 Toxicological data:

Product	Not available
Metamitron	Oral, dog and mouse LD <sub>50</sub> 650 mg/kg b.w. Dermal, rat LD <sub>50</sub> 1000 mg/kg b.w. Inhalation, mouse and hamster LC <sub>50</sub> (4 hr) 0.206 mg/L
Phenmedipham	Oral, dog and guinea pig LD <sub>50</sub> 4000 mg/kg b.w. Dermal, rabbit LD <sub>50</sub> 1000 mg/kg b.w.
Desmedipham	Oral, rat LD <sub>50</sub> >2000 mg/kg b.w. Dermal, rat LD <sub>50</sub> >2000 mg/kg b.w. Inhalation, rat LC <sub>50</sub> (4 hr) >7.4 mg/L
Ethofumisate	Oral, rat LD <sub>50</sub> >2000 mg/kg b.w. Dermal, rat LD <sub>50</sub> >2000 mg/kg b.w. Inhalation, rat LC <sub>50</sub> (4 hr) > 0.16 mg/L

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Ecotoxicity

This product is classified as being very toxic to aquatic life, very toxic to the soil environment and harmful to terrestrial vertebrates

### 12.2 Environmental Fate

**Breakdown in soil and groundwater:** Not rapidly biodegradable.

Metamitron	DT <sub>50</sub> > 30 days
Phenmedipham	DT <sub>50</sub> > 25 days
Desmedipham	DT <sub>50</sub> ~ 34 days, DT <sub>90</sub> <115 days
Ethofumisate	DT <sub>50</sub> 10 – 122 days (laboratory); 84 -407 days (field)

**Bioaccumulation:** Not expected to bioaccumulate.

Metamitron	BCF = 75
Phenmedipham	BCF = 165
Desmedipham	BCF = 334
Ethofumisate	BCF = 144

**Partition coefficient (octanol/water):** Not available.

**Soil mobility:** Low

### 12.3 Ecotoxicity data:

Metamitron	Fish; <i>Oncorhynchus mykiss</i> LC <sub>50</sub> (96 hr) >190 mg/L Crustacea; <i>Daphnia magna</i> EC <sub>50</sub> (48 hr) 5.7 mg/L Algae; <i>Scenedemus subspicatus</i> EC <sub>50</sub> (72 hr) growth 0.22 mg/L <i>Pseudokirchneriella subcapitata</i> EC <sub>50</sub> (72 hr) 0.4 mg/L Bird; Japanese quail LC <sub>50</sub> 1875 -1930 mg/kg
Phenmedipham	Fish; <i>Oncorhynchus mykiss</i> LC <sub>50</sub> (96 hr) 1.71 mg/L Crustacea; <i>Daphnia magna</i> EC <sub>50</sub> (48 hr) 0.41 mg/L Algae: <i>Selenastrum capricornutum</i> EC <sub>50</sub> (72 hr) 0.192 mg/L Bird: chicken LD50 >2500 mg/kg; mallard duck LD50 >2100 mg/kg
Desmedipham	Fish; <i>Oncorhynchus mykiss</i> LC <sub>50</sub> (96 hr) 1.41 mg/L Crustacea; <i>Daphnia magna</i> EC <sub>50</sub> (48 hr) 0.35 mg/L Algae: <i>Raphidocelis subcapitata</i> EC <sub>50</sub> (72 hr) growth 0.01 mg/L Aquatic plant: <i>Lemna minor</i> EC <sub>50</sub> (7 d) biomass >5.2 mg/L
Ethofumisate	Fish; <i>Cyprinus carpio</i> LC <sub>50</sub> (96 hr) 11.0 mg/L Crustacea; <i>Daphnia magna</i> EC <sub>50</sub> (48 hr) 13.52 – 22.0 mg/L Bird: Mallard duck LD50 >3552 mg/kg; Bobwhite quail LD50 >8743 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 INFORMATION

### 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.

<b>UN Number:</b>	3082
<b>UN Proper Shipping Name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS METAMITRON 20%, PHENMEDIPHAM 6%, DESMEDIPHAM 6%, ETHOFUMISATE 6%)
<b>Transport hazard class(es)</b>	9
<b>Packing Group:</b>	III
<b>HAZCHEM:</b>	3Z

**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:** HSR101145

**Hazardous classifications:** 6.1D (all), 6.3B, 6.4A, 6.5B, 6.7B, 6.9B, 9.1A, 9.2A, 9.3C

**Controls:** Refer to control on [www.epa.govt.nz](http://www.epa.govt.nz) for complete wording for variation Controls.

77A Do not apply directly onto or into water.

**Additional information:** Refer to HS Notices ([www.epa.govt.nz](http://www.epa.govt.nz)) and HSW HS Regulations ([www.worksafe.govt.nz](http://www.worksafe.govt.nz))

### 15.2 ACVM Act 1997

**Registration number:** P9423 QuadBeet™

Refer to [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz) for registration conditions.

## SECTION 16: OTHER INFORMATION

### 16.1 Date of preparation or last revision of SDS

**SDS issued** 25<sup>th</sup> June 2020

**SDS supersedes** August 2017

**Reason issued** Review of product information and update SDS template

### 16.2 ABBREVIATIONS

<b>ADI</b>	Acceptable Daily Intakes
<b>CAS number</b>	Chemical Abstracts Service Registry Number
<b>CCID</b>	Chemical Classification Identification Database
<b>EPA</b>	Environmental Protection Authority
<b>ErC<sub>50</sub></b>	Half maximal Effective Concentration
<b>GHS</b>	Globally Harmonized System of Classification and Labelling of Chemicals
<b>Hazchem Code</b>	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
<b>HSNO</b>	Hazardous Substances and New Organisms
<b>HS</b>	Health and Safety
<b>HSR</b>	Hazardous Substances Register
<b>IARC</b>	International Agency for Research on Cancer
<b>LC<sub>50</sub></b>	Median Lethal Concentration
<b>LD<sub>50</sub></b>	Median Lethal Dose
<b>SDS</b>	Safety Data Sheets
<b>NOAEL</b>	No Observable Adverse Effect Level
<b>NOEL</b>	No Observable Effect Level
<b>NOS</b>	Not otherwise specified
<b>STEL</b>	Short Term Exposure Limit
<b>SWA</b>	Safety Work Australia
<b>TWA</b>	Time-Weighted Average
<b>UN Number</b>	United Nations Number



### **16.3 REFERENCES**

EPA CCID and Approved Substance databases  
PPDB- Pesticides Properties DataBase

### **16.4 OTHER**

QuadBeet <sup>TM</sup> is a trademark of Grosafe Chemicals Ltd

Information contained in this Safety Data Sheet is provided in good faith and is believed to be correct at the date hereof. However, it's expected that individuals receiving the information will exercise independent judgement in determining its appropriateness for a particular purpose. Grosafe Chemicals Ltd makes no representation whatsoever as to the accuracy or comprehensiveness of the information and to the full extent allowed by law excludes all liability whatsoever, whether with respect to negligence or otherwise, and no responsibility as permitted by law for any loss or damage arising from or connection with the supply or use of the information in this Safety Data Sheet.

End of Safety Data Sheet