

Barrier

HAZARDOUS, NON-DANGEROUS GOODS

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name:	Barrier
Recommended use:	Fungicide for the control of European Canker on pipfruit, silver leaf on pipfruit and summerfruit, Eutypa dieback on grape vines and for the treatment of pruning wounds on grapes, kiwifruit, ornamentals, pipfruit and summerfruit.
Supplier:	Grochem (AgriNova New Zealand Limited)
Company No.:	9429036821501
Street Address:	15 Sunlight Grove Porirua New Zealand
Telephone:	+64 4 237 0905
Email:	grochem@grochem.com
Emergency telephone:	New Zealand 0800 CHEMCALL – 24 hours (0800 243 6225) Australia 1800 127 406 Other locations +64 4 917 9888 or The National Poisons Centre 0800 POISON (0800 764 766)

2. HAZARDS IDENTIFICATION

This material is hazardous according to the criteria of EPA New Zealand GHS 7.

HSNO Approval Code: HSR000519



Signal Word:	Warning
Hazard Classifications:	Toxic to Reproduction - Category 2 Long Term Hazards to the Aquatic Environment - Category 3
Hazard Statements:	H361 - Suspected of damaging fertility or the unborn child. H412 - Harmful to aquatic life with long lasting effects.
Prevention Precautionary Statements:	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. P273 - Avoid release to the environment. P281 - Use personal protective equipment as required.
Response Precautionary Statements:	P101 - If medical advice is needed, have product container or label at hand. P308+P313 - IF exposed or concerned: Get medical advice/attention.
Storage Precautionary Statement:	P405 - Store locked up.
Disposal Precautionary Statement:	P501 - Dispose of contents/container in accordance with local, regional, national and international regulations.

DANGEROUS GOOD CLASSIFICATION:

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO	PROPORTION
Tebuconazole	107534-96-3	< 1 % (w/w)
Cellulose, 2-hydroxyethyl ether	9004-62-0	0.8 - 1.0 % (w/w)
Oxirane, methyl-, polymer with oxirane, mono(nonylphenyl) ether, branched	68891-11-2	< 1 % (w/w)
Ethylene glycol mono butylether	111-76-2	< 1 % (w/w)
Acetic acid, ethenyl ester	108-05-4	< 0.10 % (w/w)
Ingredients determined to be Non-Hazardous		Balance
		100%

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation:	Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.
Skin Contact:	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.
Eye contact:	If in eyes wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.
Ingestion:	Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.
PPE for First Aiders:	Wear overalls, gloves, safety glasses. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.
Notes to physician:	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Hazchem Code:	Not applicable.
Suitable extinguishing media:	If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).
Specific hazards:	Non-combustible material.
Fire fighting further advice:	Not applicable.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILLS:	Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours or dust. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.
LARGE SPILLS:	Clear area of all unprotected personnel. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.

Dangerous Goods - Initial Emergency Response Guide No:

Not applicable

7. HANDLING AND STORAGE

Handling:	Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols.
Storage:	Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Store locked up. Keep container standing upright. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits:

	TWA		STEL		NOTICES
	ppm	mg/m ³	ppm	mg/m ³	
2-Butoxyethanol (Butyl glycol ether)	25	121			skin
Vinyl acetate	5	18	10	35	carc cat 2; †

As published by WorkSafe New Zealand.

WES-TWA (Workplace Exposure Standard - Time-weighted average). The average airborne concentration of a substance calculated over an eight-hour working day.

WES-Ceiling (Workplace Exposure Standard - Ceiling). A concentration that should not be exceeded at any time during any part of the working day.

WES-STEL (Workplace Exposure Standard - Short-term exposure limit). The 15-minute time weighted 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. Exposures at concentrations between the WES-TWA and the WES-STEL should be less than 15 minutes, should occur no more than four times per day, and there should be at least 60 minutes between successive exposures in this range.

ppm	Parts of vapour or gas per million of air by volume.
mg/m ³	Milligrams of substance per cubic metre of air.
r	The value for respirable dust.
carc cat 2	Suspected human carcinogen.
skin	Skin absorption.
†	This is an interim WES and WorkSafe considers it may not be protective for all workers. As such, caution should be applied in using the WES for health risk assessment. WorkSafe intends to lower the WES in the future.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

Biological Limit Values: As per the WorkSafe New Zealand the ingredients in this material do not have a Biological Limit Allocated.

Engineering Measures: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas. Use with local exhaust ventilation or while wearing appropriate respirator.

Personal Protection Equipment: OVERALLS, GLOVES, SAFETY GLASSES.

Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.

Wear overalls, gloves, safety glasses. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Hygiene measures: Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Viscous Liquid	SG:	1.06 - 1.08
Colour:	Blue	Viscosity:	6500 - 9000 cP (5/20 @ 20C)
Odour:	Slight		

(Typical values only - consult specification sheet)

10. STABILITY AND REACTIVITY

Chemical stability:	This material is thermally stable when stored and used as directed.
Conditions to avoid:	Elevated temperatures and sources of ignition.
Incompatible materials:	Oxidising agents.
Hazardous decomposition products:	Oxides of carbon and nitrogen, smoke and other toxic fumes.
Hazardous reactions:	No known hazardous reactions.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

ACUTE EFFECTS

Inhalation:	Material may be an irritant to mucous membranes and respiratory tract.
Skin contact:	Contact with skin may result in irritation.
Ingestion:	Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.
Eye contact:	May be an eye irritant.

ACUTE TOXICITY

Inhalation:	This material has been classified as not hazardous for acute inhalation exposure. Acute toxicity estimate (based on ingredients): LC50 > 20.0 mg/L for vapours or LC50 > 5.0 mg/L for dust and mist.
Skin contact:	This material has been classified as not hazardous for acute dermal exposure. Acute toxicity estimate (based on ingredients): LD50 > 2,000 mg/Kg bw
Ingestion:	This material has been classified as not hazardous for acute ingestion exposure. Acute toxicity estimate (based on ingredients): LD50 > 2,000 mg/Kg bw
Corrosion/Irritancy:	Eye: this material has been classified as not corrosive or irritating to eyes. Skin: this material has been classified as not corrosive or irritating to skin.
Sensitisation:	Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.
Aspiration hazard:	This material has been classified as not an aspiration hazard.
Specific target organ toxicity (single exposure):	This material has been classified as not a specific hazard to target organs by a single exposure.
Specific target organ toxicity (single exposure):	This material has been classified as a Category 2 Hazard.

CHRONIC TOXICITY

Mutagenicity:	This material has been classified as non-hazardous.
Carcinogenicity:	This material has been classified as non-hazardous.

Reproductive toxicity (including via lactation):

This material has been classified as a Category 2 - Substances that are suspected human reproductive or developmental toxicants.

Specific target organ toxicity (repeat exposure):

This material has been classified as non-hazardous.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Acute aquatic hazard:

This material has been classified as not hazardous for acute aquatic exposure. Acute toxicity estimate (based on ingredients): > 100 mg/L

Chronic aquatic hazard:

This material has been classified as a Category Chronic 3 Hazard. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): 10 - 100 mg/L, where the substance is not rapidly degradable and/or BCF $\geq$ 500 and/or log Kow $\geq$ 4.

Ecotoxicity in the soil environment:

This material has been classified as non-hazardous.

Ecotoxicity to terrestrial vertebrates:

This material has been classified as non-hazardous.

Ecotoxicity to terrestrial invertebrates:

This material has been classified as non-hazardous.

Ecotoxicity:

No information available.

Persistence and degradability:

No information available.

Bioaccumulative potential:

No information available.

Mobility:

No information available.

13. DISPOSAL CONSIDERATIONS

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

MARINE TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

AIR TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

15. REGULATORY INFORMATION

This material is not subject to the following international agreements:

Montreal Protocol (Ozone depleting substances)
The Stockholm Convention (Persistent Organic Pollutants)
The Rotterdam Convention (Prior Informed Consent)
Basel Convention (Hazardous Waste)
International Convention for the Prevention of Pollution from Ships (MARPOL)

This material/constituent(s) is covered by the following requirements:

NZ EPA Status: All components of this product are listed on or exempt from the New Zealand Inventory of Chemical (NZIoC).

HSNO Approval Code:

HSR000519

16. OTHER INFORMATION**Reason for issue:**

First Issue

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer, it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.

This SDS summarises our best knowledge of the health and safety hazard information available for this product and how to safely handle and use it. Since the use of this information and the conditions of the use of this product are not under the control of Grochem, it is the user's responsibility to determine conditions of safe use of the product.