



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **Bolide**
Item Code: Epoxiconazole Prochloraz 50 225 EC (Mixture)
Product Use: Fungicide
Restriction of Use: Refer to Section 15

New Zealand Supplier: ADAMA New Zealand Ltd
Address: Level 1/93 Bolt Road
Tahunanui, Nelson 7011
Telephone: +64 3 543 8275
Fax Number: +64 3 543 8274

Emergency Telephone: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 30 August 2016

Section 2. Hazards Identification

This substance is hazardous according to the Hazardous Substances (Classification) Notice 2017

EPA Approval No: HSR101152

Pictograms



Irritant



Chronic



Ecotoxic

Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.4A	H319	Causes serious eye irritation.	Category 2A
6.7B	H351	Suspected of causing cancer.	Category 2
6.8B	H361	Suspected of damaging fertility or the unborn child.	Category 2
6.9B	H373	May cause damage to organs through prolonged or repeated exposure.	Category 2
9.1A	H400	Very toxic to aquatic life.	Category 1

Prevention Code	Prevention Statement
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 fumes, mist, vapours or spray.
P273	Avoid release to the environment.
P280	Wear protective gloves, clothing and eye protection.
P281	Use personal protective equipment as required.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P314	Get medical advice/attention if you feel unwell.
P391	Collect spillage.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage Code	
P405	Store locked up.

Disposal Code	Disposal Statement
P501	Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers and add rinsate to spray tank before puncturing and offering for recycling or landfill. Do not allow product to enter waterways. Do not burn product or container.

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Prochloraz	21-23	67747-09-5
2-ethylhexyl lactate	>10	186817-80-1
Epoxiconazole	<5	133855-98-8
Sodium dioctyl sulfosuccinate/ethanol	>1	Proprietary

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If needed: Get medical advice.
If on Skin	Wash with plenty of soap and water. Wash off with plenty of water and soap If needed: get medical advice/attention.
If Swallowed	Do not induce vomiting. Wash out mouth with plenty of water. Never give anything by mouth to an unconscious person. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediately get medical attention.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion: Not applicable.

Skin: Not applicable.

Inhalation: Not applicable.

Eyes: Causes serious eye irritation.
Chronic: May cause damage to organs through prolonged or repeated exposure. Suspected of causing cancer. Suspected of damaging fertility or the unborn child.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable.
Hazards from combustion products	Carbon dioxide, Carbon monoxide, Nitrogen oxides, Chlorides .
Suitable Extinguishing media	Water spray, water fog, foam.
Precautions for firefighters and special protective clothing	Wear suitable protective clothing. Self-contained breathing apparatus. Fight fires from a protected location. Dike fire control water for later disposal.
HAZCHEM CODE	3Z

Section 6. Accidental Release Measures

Wear full protective clothing including eye/face protection. Evacuate area from unnecessary personnel.

In the event of minor spillage: Absorb in sand or other inert material. Use appropriate container to avoid environmental contamination.

In the event of major spillage: Collect and contain as much free liquid as possible. Dike spills using absorbent or impervious materials such as sand or clay for later disposal.

Dispose of according to Local Regulations.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe fumes, mist, vapours or spray.
- Avoid release to the environment.
- Wear protective gloves, clothing and eye protection.
- Use personal protective equipment as required.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep away from children.
- Store locked up.
- Keep container tightly closed in its original container in a cool and well-ventilated place.
- Avoid temperatures above : 50 °C
- Keep in properly labeled containers.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3

No ingredients have exposure limits.

Workplace Exposure Standard – Time Weighted Average (WES-TWA). *The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure.* Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). *The 15-minute 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.

Engineering Controls

Ensure adequate ventilation, especially in confined areas.

Personal Protection Equipment



Eyes	Tightly sealing safety goggles with side shields. Avoid wearing contact lenses.
Hands and Skin	Wear suitable gloves, protective clothing and chemical resistant boots.
Respiratory	During spraying wear suitable respiratory equipment.
General	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. Wash hands thoroughly after handling. Wash clothing before re-using.

Section 9 Physical and Chemical Properties

Appearance	Translucent orange liquid
Odour	Faint odour - Chemical
Odour Threshold	Not applicable
pH	6.8-7.8 (1%)
Boiling Point	Not applicable
Melting Point	Prochloraz : 46-49 Epoxiconazole : 136.2
Crystallization temperature	Not applicable
Flash Point	=/> 79 °C
Flammability	Not flammable
Upper and Lower Exposure Limits	Not applicable
Vapour Pressure	Not applicable
Density	Not applicable
Relative Density	1.0513 g/ml
Solubilities	Not applicable
Partition Coefficient: n-otanol/water	Prochloraz: 3.52, Epoxiconazole : 3.3
Auto-ignition Temperature	276°C
Surface tension @ 25°C	30.6, 24.7°C 29.8, 40°C
Kinematic Viscosity	Kinematic viscosity 94.5561 mm ² /sec (20°C) Kinematic viscosity 31.0062 mm ² /sec (40°C)
Molecular Weight	Prochloraz : 376.7 Epoxiconazole : 329.8

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	Decomposes upon heating. Protect from sunlight , open flame , sources of heat .
Incompatible Materials	Not available.

Hazardous Decomposition Products	nitrogen oxides , carbon monoxide , carbon dioxide , chlorides
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Section 11 Toxicological Information

Acute Effects:

Swallowed	Non Hazardous - Oral, Rat LD50 (mg/kg) = > 2000
Dermal	Non Hazardous - Dermal, Rat LD50 [mg/kg] = > 2000
Inhalation	Non Hazardous - Inhalation, Rat LC50 [mg/l/4h] = > 7.45
Eye	Causes serious eye irritation.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Suspected of causing cancer.
Reproductive Toxicity	Suspected of damaging fertility or the unborn child.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	May cause damage to organs through prolonged or repeated exposure.

Section 12. Ecotoxicological Information

HSNO Classes: 9.1A = Very toxic to aquatic life.

Do not allow to enter waterways

96 H-LC50 - Rainbow trout [mg/l] : 7.05
 EC50 - Daphnia [mg/l] : 16.3 (Daphnia magna)
 72 H-EC50 - Algae [mg/l] : 0.0158 (Desmodesmus subspicatus)

Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available

Section 13. Disposal Considerations

Disposal Method: Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers and add rinsate to spray tank before puncturing and offering for recycling or landfill.

Precautions: Do not allow product to enter waterways.

Disposal methods to avoid: Do not burn product or container. Contaminated packaging Improper disposal or reuse of this container may be dangerous and illegal.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012



Road and Rail Transport

UN No: 3082
 Class-primary 9
 Packing Group III
 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (225 g/l Prochloraz, 50 g/l Epoxiconazole)

Air Transport

UN No: 3082
 Class-primary 9
 Packing Group III
 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (225 g/l Prochloraz, 50 g/l Epoxiconazole)

Marine Transport

UN No: 3082
 Class-primary 9
 Packing Group III
 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (225 g/l Prochloraz, 50 g/l Epoxiconazole)
 Marine Pollutant Yes

Special Provisions:

If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15 Regulatory Information

EPA Approval Code: HSR101152

HSNO Classification: 6.4A, 6.7B, 6.8B, 6.9B, 9.1A

HSW (HS) Regulations 2017 and EPA Notices		Trigger Quantity
Certified Handlers	Not Required	
Location Certificate	Not required	
Tracking Trigger Quantities	Not required	
Signage Trigger Quantities	100L(9.1A)	
Emergency Response Plan	100L(9.1A)	
Secondary Containment	100L(9.1A)	
HSNO Additional Controls (Restrictions of use)		
77A	a) This substance must not be applied onto or into water b) The application of this substance is limited to ground-based application methods only. c) The maximum application rate of this substance is 2 L BOLIDE/ha (0.45 kg prochloraz and 0.10 kg epoxiconazole/ha) with a maximum application frequency of two applications per calendar year.	
Hazardous Property Controls Notice 2017		
HPC Notice Part 4 Clause 47	Equipment for class 9 substances must be appropriate	
HPC Notice Part 4 Clause 48	Records of application of class 9 pesticides and plant growth regulators	
HPC Notice Part 4 Subpart A	Site and storage controls for class 9 substances	
HPC Notice Part 4 Subpart C	Qualifications required for application of class 9 pesticides	
ACVM Act and Regulations		

Product Name: Bolide
 Date of SDS: 18 July 2018

Issued by: Technical Compliance Consultants (NZ) Ltd
 Tel: 64 9 475 5240 www.techcomp.co.nz

Registered pursuant to the ACVM Act 1997, See www.foodsafety.govt.nz for registration conditions	No. P009339
For all further controls	Refer to EPA website (www.epa.govt.nz) for controls document - HSR101152

Section 16 Other Information

Glossary

EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact the New Zealand distributor, if further information is required.

Issue Date: 18 July 2018 Review Date: 18 July 2023