



# SAFETY DATA SHEET

YaraVita MOLYBOR

## Section 1. Identification

**Product name** : YaraVita MOLYBOR  
**Product type** : liquid  
**Product code** : PYP86M

### Uses

**Area of application** : Professional applications  
**Material uses** : Fertilizers.

### Supplier

**Supplier's details** : Yara Fertilizers (New Zealand) Limited

### Address

**Street** : 43 Plassey Street  
**Postal code** : 4130  
**City** : Havelock North  
**Country** : New Zealand

### P.O. Box Address

**P.O. Box** : 8746  
**Postal code** : 4157  
**City** : Havelock North  
**Country** : New Zealand

**Telephone number** : +64 6 877 6600  
**Fax no.** : +64 6 877 6610  
**e-mail address of person responsible for this SDS** : info.yara@xtra.co.nz  
**Emergency telephone number (with hours of operation)** : +64 9929 1483 (7/24)

### National advisory body/Poison Center

**Name** : New Zealand National Poisons Centre  
**Telephone number** : 0800 POISON = 0800 764 766 (NZ only) / +64 3 479 7248 (outside NZ)  
**Hours of operation** : 24h

## Section 2. Hazards identification

**Classification and labelling have been performed following the guidelines and recommendation of GHS and the intended use.**

**Classification of the substance or mixture** : 9.1 - AQUATIC ECOTOXICITY - Category C

This material is classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 and has been classified according to the Hazardous Substances (Classifications) Regulations 2001.

This material is not classified as dangerous goods according to criteria in New Zealand Standard 5433:2012 Transport of Dangerous Goods on Land.

#### GHS label elements

- Signal word** : No signal word.  
**Hazard statements** : Harmful to aquatic life with long lasting effects.

#### Precautionary statements

- Prevention** : Avoid release to the environment.  
**Response** : Not applicable.  
**Response** : Not applicable.  
**Storage** : Not applicable.  
**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

- Other hazards which do not result in classification** : None.

### **Section 3. Composition/information on ingredients**

- Substance/mixture** : Mixture

Product / ingredient name	Identifiers	%
Boric acid, compd. with 2-aminoethanol	CAS: 68425-67-2	>=50 - <65
Molybdenum and compounds as Mo	CAS: 10102-40-6	>=3 - <5
orthophosphoric acid	CAS: 7664-38-2	>=2 - <3

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

### **Section 4. First aid measures**

#### Description of necessary first aid measures

- Eye contact** : Rinse with plenty of running water. Check for and remove any contact lenses. Get medical attention if irritation occurs.  
**Inhalation** : Avoid inhalation of vapor, spray or mist. If inhaled, remove to fresh air. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Get medical attention if you feel unwell.  
**Skin contact** : Get medical attention if irritation develops. Wash with soap and water.  
**Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Get medical attention if adverse health effects persist or are severe.

#### Most important symptoms/effects, acute and delayed

##### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

**Indication of immediate medical attention and special treatment needed, if necessary**

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : Not available.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (section 11)

**Section 5. Fire-fighting measures****Extinguishing media**

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None identified.
- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
phosphorus oxides  
metal oxide/oxides  
Avoid breathing dusts, vapors or fumes from burning materials.  
In case of inhalation of decomposition products in a fire, symptoms may be delayed.  
ammonia
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Remark** : None.

**Section 6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

- Personal precautions, protective equipment and emergency procedures** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not

touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

#### **Methods and materials for containment and cleaning up**

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## **Section 7. Handling and storage**

### **Precautions for safe handling**

- Precautions for safe handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## **Section 8. Exposure controls/personal protection**

**Control parameters****Occupational exposure limits**

<b>Ingredient name</b>	<b>Exposure limits</b>
Molybdenum and compounds as Mo	<b>NZ OSH (1994-01-01)</b> Time Weighted Average (TWA) 5 mg/m <sup>3</sup> (Calculated as Mo)
orthophosphoric acid	<b>NZ OSH (1994-01-01)</b> Time Weighted Average (TWA) 1 mg/m <sup>3</sup>

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Appropriate engineering controls** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing. A washing facility or water for eye and skin cleaning purposes should be present.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Personal protective equipment (Pictograms)** :

**Section 9. Physical and chemical properties**

**Appearance**

<b>Physical state</b>	: liquid
<b>Color</b>	: Yellow.
<b>Odor</b>	: Not determined.
<b>Odor threshold</b>	: Not determined.
<b>pH</b>	: 7.3
<b>Melting/freezing point</b>	: < -8 °C (17 °F)
<b>Boiling/condensation point</b>	: Not determined.
<b>Sublimation temperature</b>	: Not determined.
<b>Flash point</b>	: Not determined.
<b>Burning time</b>	: Not determined.
<b>Burning rate</b>	: Not determined.
<b>Evaporation rate</b>	: Not determined.
<b>Flammability</b>	: Non-flammable.
<b>Lower and upper explosive (flammable) limits</b>	: <b>Lower:</b> Not determined. <b>Upper:</b> Not determined.
<b>Vapor pressure</b>	: Not determined.
<b>Relative density</b>	: 1.34
<b>Solubility</b>	: Not determined.
<b>Partition coefficient: n-octanol/water</b>	: Not determined.
<b>Auto-ignition temperature</b>	: Not determined.
<b>Decomposition temperature</b>	: Not determined.
<b>Viscosity</b>	: <b>Dynamic:</b> < 100 mPa.s
	: <b>Kinematic:</b> Not determined.
<b>Explosive properties</b>	: None.
<b>Oxidizing properties</b>	: None.

**Section 10. Stability and reactivity**

<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Avoid contamination by any source including metals, dust and organic materials.
<b>Incompatible materials</b>	: Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Section 11. Toxicological information****Information on toxicological effects****Acute toxicity**

Product / ingredient name	Result	Species	Dose	Exposure	References
Boric acid, compd. with 2-aminoethanol					
orthophosphoric acid					
	LD50 Oral	Rat	2,600 mg/kg	-	IUCLID5

			423 Acute Oral toxicity - Acute Toxic Class Method		
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**Conclusion/Summary** : No known significant effects or critical hazards.

#### Irritation/Corrosion

##### **Conclusion/Summary**

- Skin** : No known significant effects or critical hazards.  
**Eyes** : No known significant effects or critical hazards.  
**Respiratory** : No known significant effects or critical hazards.

#### Sensitization

##### **Conclusion/Summary**

- Skin** : No known significant effects or critical hazards.  
**Respiratory** : No known significant effects or critical hazards.

#### Mutagenicity

Product / ingredient name	Test	Experiment	Result	References
Boric acid, compd. with 2-aminoethanol	OECD 476	In vitro; Mammalian-Animal	Negative	
Boric acid, compd. with 2-aminoethanol	OECD 471	In vitro; Bacteria	Negative	
Boric acid, compd. with 2-aminoethanol	OECD 473	In vitro; Mammalian-Human	Negative	

**Conclusion/Summary** : No known significant effects or critical hazards.

#### Carcinogenicity

**Conclusion/Summary** : No known significant effects or critical hazards.

#### Reproductive toxicity

Product / ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure	References
orthophosphoric acid	-	Negative	-	Rat	Oral: > 500 mg/kg bw/day OECD 422	54 days	IUCLID5
orthophosphoric acid	Negative	-	Negative	Rat	Oral: > 410 mg/kg bw/day OECD 414	10 days	IUCLID5
orthophosphoric acid	Negative	-	Negative	Mouse	Oral: > 370 mg/kg bw/day OECD 414	10 days	IUCLID5

**Conclusion/Summary** : No known significant effects or critical hazards.

#### Teratogenicity

**Conclusion/Summary** : No known significant effects or critical hazards.

#### Specific target organ toxicity (single exposure)

No known significant effects or critical hazards.

#### Specific target organ toxicity (repeated exposure)



**Aspiration hazard**

No known significant effects or critical hazards.

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure****Short term exposure**

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

**Potential chronic health effects**

Product / ingredient name	Result	Species	Dose	Exposure	References
Boric acid, compd. with 2-aminoethanol	NOAEL Oral	Rat	250 mg/kg OECD 407	28days	IUCLID5
orthophosphoric acid	NOAEL Oral	Rat	250 mg/kg OECD 422	54days	IUCLID5

**Conclusion/Summary** : No known significant effects or critical hazards.

**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.



**Numerical measures of toxicity****Acute toxicity estimates**

Not available.

**Section 12. Ecological information****Toxicity**

Product / ingredient name	Result	Species	Exposure	References
Boric acid, compd. with 2-aminoethanol				
	Acute LC50 > 100 mg/l Fresh water OECD 203	Fish - Labeo boga	96 h	IUCLID5
	Acute EC50 423 mg/l Fresh water OECD 202	Aquatic invertebrates. - Daphnia	48 h	IUCLID5
orthophosphoric acid				
	Acute EC50 > 100 mg/l Fresh water OECD 202	Aquatic invertebrates. - Daphnia	48 h	IUCLID5
	Acute EC50 > 100 mg/l Fresh water OECD 201	Aquatic plants - Heterosigma akashiwo	72 h	IUCLID5

**Conclusion/Summary** : Harmful to aquatic life with long lasting effects.

**Persistence/degradability**

Product / ingredient name	Test	Result	Dose	Inoculum	References
Boric acid, compd. with 2-aminoethanol	301B Ready Biodegradability - CO2 Evolution Test	72 % -		Activated sludge	IUCLID5

**Conclusion/Summary** : No known significant effects or critical hazards.

**Bioaccumulative potential**

**Conclusion/Summary** : No known significant effects or critical hazards.

**Mobility in soil**

**Soil/water partition coefficient (KOC)** : Not available.

**Mobility** : Not available.

**Other adverse effects** : Part of the components is poorly biodegradable.

**Section 13. Disposal considerations****Product**

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container

must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

### Packaging

**Methods of disposal** : Yara NZ is a member of the Agrecovery Rural Recycling programme for free recycling of plastic containers. Agrecovery services are available for every farmer, grower and agrichemical user throughout New Zealand. Refer to [www.agrecovery.co.nz](http://www.agrecovery.co.nz)

## Section 14. Transport information

Regulation: UN Class	
14.1 UN number	Not regulated.
14.2 UN proper shipping name	
14.3 Transport hazard class(es)	
14.4 Packing group	
14.5 Environmental hazards	No.
<b>Additional information</b>	: <b>UN Class</b>
<b><u>Environmental hazards</u></b>	: No.

Regulation: IMDG	
14.1 UN number	Not regulated.
14.2 UN proper shipping name	
14.3 Transport hazard class(es)	
14.4 Packing group	
14.5 Environmental hazards	No.
<b>14.6 Additional information</b>	: <b>IMDG</b>
<b><u>Marine pollutant</u></b>	: No.

Regulation: IATA	
14.1 UN number	Not regulated.
14.2 UN proper shipping name	
14.3 Transport hazard class(es)	
14.4 Packing group	
14.5 Environmental hazards	No.
<b>14.6 Additional information</b>	: <b>IATA</b>
<b><u>Marine pollutant</u></b>	: No.

**Special precautions for user** : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.'

**IMSBC** : Not applicable.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not available.

## Section 15. Regulatory information

- New Zealand Inventory of Chemicals (NZIoC)** : All components are listed or exempted.
- HSNO Approval Number** : HSR002571.
- HSNO Group Standard** : Fertilisers (Subsidiary Hazard)
- HSNO Classification** : 9.1 - AQUATIC ECOTOXICITY - Category C
- Country information** : **SCHEDULE 1 (CONDITIONS OF GROUP STANDARD) of the Fertilisers (Subsidiary Hazard) Group Standard 2006.** Any location at which a substance is manufactured or stored in quantities that exceed those set out in the Standards' Tables 3, 4, 5, 6 and 7 must comply with the corresponding conditions as set out in the Standards' clauses 6, 7 and 8.

## Section 16. Other information

- Key to abbreviations** :
- ADN/ADNR = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
  - ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
  - ATE = Acute Toxicity Estimate
  - BCF = Bioconcentration Factor
  - bw = Body weight
  - GHS = Globally Harmonized System of Classification and Labelling of Chemicals
  - IATA = International Air Transport Association
  - IBC = Intermediate Bulk Container
  - IMDG = International Maritime Dangerous Goods
  - LogPow = logarithm of the octanol/water partition coefficient
  - MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
  - NOHSC - National Occupational Health and Safety Commission
  - RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
  - SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons
  - UN = United Nations
- References** :
- EU REACH IUCLID5 CSR.
  - National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances.
  - IHS, 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.HSNO Chemical Classification and Information database (CCID), New Zealand Inventory of Chemicals (NZIoC),

### History

- Date of printing** : 27.02.2014
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- Version** : 1.2
- Prepared by** : Yara Product Classifications & Regulations.

|| Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present

**unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**