

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

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| Product name: | Methograin® Fenitrothion 1000 Insecticide |
| Other means of identification: | Fenitrothion 1000 g/L Liquid |
| Recommended use of the chemical and restrictions on use: | For control of grain pests (except Lesser Grain Borer) in stored cereal grain and storage facilities and equipment as per the Directions for Use table. |
| Supplier: | Barmac, a Division of Amgrow Pty Ltd |
| Street address: | 3/29 Birnie Ave, Lidcombe NSW 2141 Australia |
| Telephone no.: | +61 (0)2 9395 1200 (office hours) |
| Fax: | +61 (0)2 4729 3037 |
| Website: | www.amgrow.com.au |
| Emergency telephone: | Poisons Information Centre 13 11 26 (24 hours) |

2. HAZARDS IDENTIFICATION

Classification of the substance mixture: Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition).

This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.

Classification of the substance or mixture:

Acute oral toxicity – Category 4

Acute dermal toxicity – Category 4

Acute inhalation toxicity – Category 4

Eye damage/irritation – Category 2

Specific target organ toxicity (STOT) (repeated) – Category 1

SIGNAL WORD: DANGER



Hazard Statement(s):

H302 – Harmful if swallowed.

H312 – Harmful in contact with skin.

H332 – Harmful if inhaled.

H319 – Causes serious eye irritation.

H372 – Causes damage to organs through prolonged or repeated exposure.

Precautionary Statement(s):

Prevention:

P261 Avoid breathing fumes, mists, vapours or spray.

P264 Wash contacted areas thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves or protective clothing.

Response:

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P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P314 Get medical advice/attention if you feel unwell.
P322 Specific measures (see medical advice on this label).
P330 Rinse mouth.
P363 Wash contaminated clothing before reuse.

Disposal:

P501 - Dispose of contents/container as per container label, in accordance with local/state/territory government regulations.

The following health hazard categories fall outside the scope of the Workplace Health and Safety Regulations :

Acute hazard to the aquatic environment – Category 1

Chronic hazard to the aquatic environment – Category 1

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS Number | Proportion (w/w) |
|--|------------|------------------|
| Fenitrothion | 122-14-5 | 80 % |
| Solvent naphtha (petroleum), heavy arom. | 64742-94-5 | < 10 % |
| 2-methylpropan-1-ol | 78-83-1 | < 10 % |
| Other components are not considered hazardous in this formulation and therefore are not required to be disclosed according to the WHS Regulations. | | |

4. FIRST AID MEASURES

Speed in treatment is essential. If poisoning occurs, contact a Poisons Information Centre. Phone Australia 131126; New Zealand 0800 764 766 or a doctor. Have this SDS or the label with you.

Inhalation: If inhaled, bring affected person to fresh air. If symptoms develop, contact a Poisons Information Centre or a doctor at once.

Skin contact: Remove contaminated clothing and wash with plenty of water and soap. If symptoms develop, seek medical attention.

Eye contact: If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes. Seek medical advice.

Ingestion: If swallowed, wash mouth with water and contact a Poisons Information Centre, or call a doctor. Do not induce vomiting unless told to by the Poisons Information Centre or doctor.

First aid facilities: Eyewash and normal washroom facilities.

Medical attention and special treatment needed:

Atropine sulfate is recommended for acute poisoning as a treatment strategy.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Not combustible. Use extinguishing media suited to burning materials.

Hazchem code: 2X

Specific hazards arising from Thermal decomposition or combustion products may include the following

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the substance or mixture: substances: Toxic gases or vapours. Take appropriate protective measures.
Special protective equipment and precautions for fire-fighters: In case of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and chemical-protective clothing. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately. Do not allow contaminated water to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/ Environmental precautions: In the event of a spill, prevent spillage from entering drains or water courses with absorbent material and call emergency services.
Personal precautions/ Protective equipment: It is good practice to wear impermeable gloves when handling chemical products. Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet.
Methods and materials for containment and cleaning up: Contain - prevent run off into drains and waterways. For minor spills, clean up, rinsing to sewer and put empty container in garbage. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Keep containers closed at all times - check regularly for leaks or spills. Transport and store upright. Refer to Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under 'Storage' should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.
Conditions for safe storage, including any incompatibilities: Store packages of this product in a cool place. Make sure that containers of this product are kept tightly closed. Keep containers dry and away from water. Make sure that the product does not come into contact with substances listed under 'Incompatibilities' in Section 10. Check packaging - there may be further storage instructions on the label.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters: The exposure standard for the constituent, 2-methylpropan-1-ol (Isobutyl alcohol):
TWA = 152 mg/m³
STEL = Not set.
As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.
Appropriate engineering controls: Use in well ventilated areas. Keep containers closed when not in use.
Individual protection measures, such as Personal Protective Equipment (PPE): See container label safety directions. The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.
Observe good standards of hygiene and cleanliness. Always wash hands, arms and face thoroughly with soap and water before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment with detergent and warm water before storage or re-use.
Respiratory protection: Respiratory protective equipment is not needed under normal and intended conditions of product use. However if protection is required, consult AS/NZS 1715 and AS/NZS 1716 for further information.
Eye and face protection: Avoid contact with eyes. Wear a face shield when opening the container,

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preparing and using the prepared spray. When using in enclosed areas, wear goggles and half facepiece respirator combined with dust and gas cartridge. Consult AS/NZS 1336 and AS/NZS 1337 for further information.

Skin protection:

Elbow-length rubber or chemical resistant gloves must be worn when opening the container and using the product. Always check with the glove manufacturer or your personal protective equipment supplier regarding the correct type of glove to use. Consult AS/NZS 2161 for further information.

Trousers, long sleeved shirt /cotton overalls buttoned to the neck and wrist, and closed in shoes or safety footwear should also be worn as a general precaution. Consult AS/NZS 2210 and AS/NZS 2919 for further information.

9. PHYSICAL AND CHEMICAL PROPERTIES

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| Physical state: | Oily liquid. |
| Colour: | Red-brown. |
| Odour: | Sulfurous odour. |
| pH: | 3-7 |
| Specific gravity: | 1.25-1.30 at 20°C |
| Melting point/Freezing point: | No information available. Liquid at normal temperatures. |
| Boiling point/range: | Solvent 138°C. NB Fenitrothion decomposes above about 140°C. |
| Flash point: | No information available. |
| Evaporation point: | No information available. |
| Vapour pressure: | No information available. |
| Vapour density: | No information available. |
| Solubility: | No information available. |
| Partition coefficient: n- octanol/water | No information available. |
| Auto-ignition temperature: | Not relevant. |
| Decomposition temperature: | Above 140°C. |
| Viscosity: | No information available. |

10. STABILITY AND REACTIVITY

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| Reactivity: | No known reactivity hazards associated with this product. |
| Chemical stability: | Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. |
| Possibility of hazardous reactions: | No information available. |
| Conditions to avoid: | No information available. |
| Incompatible materials: | No particular incompatibilities. Store and use as directed. |
| Hazardous decomposition products: | Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: toxic gases or vapours. |

11. TOXICOLOGICAL INFORMATION

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| Acute toxicity: | Harmful via oral, dermal and inhalation routes, according to available information. Acute oral toxicity, Rat LD ₅₀ = 800 mg/kg Acute dermal toxicity, Rat LD ₅₀ = 1110 mg/kg Acute inhalation toxicity, Rat LC ₅₀ > 2.21 mg/l |
| Skin irritation: | Not a skin irritant according to available information. |
| Eye irritation: | Serious eye irritant according to available information. |
| Respiratory or skin sensitisation: | Not a skin sensitiser and not expected to be a respiratory sensitiser according to available information. |
| Germ cell mutagenicity: | Not suspected to cause genetic defects according to available information. |
| Carcinogenicity: | Not considered to be carcinogenic according to available information. |
| Reproductive toxicity: | Not considered to be toxic to reproduction according to available information. |
| STOT-single exposure: | Not expected to cause toxicity to a specific target organ according to available information. |

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| STOT-repeated exposure: | Causes damage to organs through prolonged or repeated exposure according to available information. |
| Aspiration hazard: | Not expected to be an aspiration hazard according to available information. |
| Chronic health effects: | Not expected to cause chronic health effects according to available information. |

12. ECOLOGICAL INFORMATION

Ecotoxicity: Available information on this product indicates that this product is classified as an acute and chronic aquatic toxicant.

Toxicity data for the active constituent, fenitrothion:

The below information is obtained from International Union of Pure and Applied Chemistry (IUPAC).

Birds LD₅₀ = 2.3 mg/L (acute)

Honeybees LD₅₀ = 0.16 µg/L at 48h

Earthworms LC₅₀ = 231 mg/kg at 14D

Aquatic invertebrate *Daphnia magna* EC₅₀ = 0.0086 mg/L at 48h (acute)

Aquatic invertebrate *Daphnia magna* EC₅₀ = 0.000087 mg/L at 21D (chronic)

Persistence/Degradability: The degradability of the product is not known.

Fenitrothion is not expected to persist in the environment. The insecticide is moderately strongly adsorbed to soils and degrades through microbial metabolism with typical half-lives of a few weeks under aerobic conditions.

Details of fenitrothion is available at:

<http://apvma.gov.au/sites/default/files/publication/15271-fenitrothion-interim-report-env.pdf>

Bioaccumulative potential: No specific studies have been conducted, but accumulation in soils from season to season is not expected from infrequent applications given the metabolism demonstrated in laboratory studies and the rapid dissipation observed in the field.

Details of fenitrothion is available at:

<http://apvma.gov.au/sites/default/files/publication/15271-fenitrothion-interim-report-env.pdf>

Mobility in soil: Fenitrothion and metabolites adsorb moderately strongly to soils and do not leach significantly.

Details of fenitrothion is available at:

<http://apvma.gov.au/sites/default/files/publication/15271-fenitrothion-interim-report-env.pdf>

13. DISPOSAL CONSIDERATIONS

Disposal methods: Refer to Waste Management Authority. Dispose of contents/container in accordance with local/regional/national/international regulations. Break, crush or puncture and dispose of empty containers in a local authority landfill. Triple rinse and bury rinsate and empty capsules in a local authority landfill. If no landfill is available, bury the containers below 0.5m in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product must not be burnt. Do NOT re-use containers for any other purpose.

14. TRANSPORT INFORMATION

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| Road and rail transport: | Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; DANGEROUS GOODS UN Number: 3018 Proper Shipping Name or Technical Name: ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC Transport Hazard Class: 6.1 Packaging Group: III Hazchem Code: 2X |
| Marine transport: | Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; DANGEROUS GOODS UN Number: 3018 Proper Shipping Name or Technical Name: ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC Transport Hazard Class: 6.1 Packaging Group: III IMDG EMS Fire: F - A IMDG EMS Spill: S - A |
| Air transport: | Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; DANGEROUS GOODS UN Number: 3018 Proper Shipping Name or Technical Name: ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC Transport Hazard Class: 6.1 Packaging Group: III |

15. REGULATORY INFORMATION

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| Poison schedule (SUSMP): | 6 |
| APVMA approval no.: | 46127 |
| AICS: | All the constituents of this material are either listed on the Australian Inventory of Chemical Substances (AICS), not required due to the nature of the chemical, or have been assessed under the National Industrial Chemicals (Notification and Assessment) Act 1989 as amended. |

16. OTHER INFORMATION

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| General information: | None. |
| Issue number: | 002 |
| Issue date: | 22 January 2017 |
| | In any event, the review and, if necessary, the re-issue of an SDS shall be no longer than 5 years after the last date of issue. |
| Reason(s) for issue: | Second issue. Revised Primary SDS and updated to GHS requirements. |
| Literary reference: | ADG Code - Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition) AICS - Australian Inventory of Chemical Substances APVMA – Agricultural Pesticides and Veterinary Medicines Australia GHS - Globally Harmonised System of Classification and Labelling of Chemicals (3 rd revised edition) 2009 IARC - International Agency for Research on Cancer Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (December 2011) STEL - Short term exposure limit means the average airborne concentration of a substance calculated over a 15 minute period. The STEL should not be exceeded at any time during a normal eight hour working day. |

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SUSMP - Standard for the Uniform Scheduling of Medicines & Poisons

SWA - Safe Work Australia, formerly ASCC and NOHSC

TGA – Therapeutic Goods Australia

TWA - Time-weighted average means the average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

WHS – Workplace Health and Safety

The physical values and properties described in this SDS are typical values based on scientific literature and material produced to date, and are believed to be reliable. The supplier provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. The information is supplied upon the condition that the persons receiving information will make their own determination as to the suitability for their purposes prior to use of this product. Due care should be taken to ensure that the use of this product and its disposal is in compliance with all relevant Federal, State and Local Government regulations.

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End of SDS