

SAFETY DATA SHEET



Page Page 1 of Total 5
Date of Issue: May 2014
MSDS No. FMC/ASTRO/2

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: ASTRO AEROSOL RESIDUAL INSECTICIDE

Other Names: Permethrin.
Use: Aerosol insecticide for use against ants, cockroaches, fleas, spiders and silverfish.
Company: FMC Australasia Pty Ltd.
Address: 5 Palmer Place, Murarrie, Qld 4172
Telephone Number: 07 3908 9208 **Fax Number:** 07 3908 9221
Emergency Telephone Number: 1800 033 111 (All hours - Australia wide).

SECTION 2 HAZARDS IDENTIFICATION

**Classified as hazardous according to criteria of Safe Work Australia.
Classified as a Dangerous Good according to the ADG Code.**

GHS Classification:

Aspiration Hazard- Category 1.
Sensitization – Skin: Category 1, 1A, 1B.
Flammable aerosol: Category 2.

Signal Word: DANGER.

Hazard Statements:

H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.
H223 Flammable aerosol.

Precautionary statements:

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces: — No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use.
P261 Avoid breathing mist/vapours or spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective equipment (see section 7).

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
P331 Do NOT induce vomiting.
P321 Specific treatment (see Safety directions on product label).
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.

Storage and Disposal:

P405 Store locked up.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C.
P501 Dispose of contents/container in accordance with national regulations.

SECTION 2 HAZARDS IDENTIFICATION (Continued)

Pictograms:



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

| CHEMICAL | CAS NUMBER | PROPORTION |
|---|-------------------|-------------------|
| Permethrin | 52645-53-1 | 1% w/w |
| Paraffinic Hydrocarbon | 64742-88-7 | 10-30% w/w |
| Butylated hydroxytolulene | 128-37-0 | < 1% |
| Other ingredients determined not to be hazardous including LPG propellant | | 10 - 30 % w/w |

SECTION 4 FIRST AID MEASURES

FIRST AID

- Swallowed:** If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26. If any discomfort persists seek medical advice.
- Eye:** If in eyes, hold eyes open and flush with water until chemical is removed. If irritation occurs and persists, obtain medical attention.
- Skin:** If on skin wash with plenty of soap and water. Remove contaminated clothing. If irritation occurs and persists see a doctor. Launder contaminated clothing before re-use.
- Inhaled:** Remove patient to fresh air. If breathing discomfort occurs, obtain medical attention.

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: Product is highly flammable. Contents are under pressure. Propellant is liquefied petroleum gas (LPG). Containers may 'rocket' or explode in heat of fire.

Extinguishing media: Foam, CO₂ or dry chemical. Soft stream water fog if no alternatives. Contain all runoff.

Hazards from combustion products: On burning will emit toxic fumes of carbon monoxide, carbon dioxide, hydrogen chloride, chlorine, etc.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe or contact smoke, gases or vapours generated. Fight fire from maximum distance or protected area. Cool cans using water spray, and use caution when approaching containers. Contain all runoff.

SECTION 6 ACCIDENTIAL RELEASE MEASURES

Emergency procedures: Isolate and post spill area. Keep out unprotected persons and animals. Eliminate all sources of ignition. Ventilate area. As contents are in an aerosol can it is unlikely that there will be any material to clean up. In the case where there is material to clean up, contain and absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste according to the Australian Standard 2507 - Storage and Handling of Pesticides. Any pierced cans should be isolated and left until contents have discharged. Retrieve empty can and dispose as per section 13. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. Use non-sparking tools. Label for contents. Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of Local or State Waste Management Authorities.

Material and methods for containment and cleanup procedures: To clean spill area, wash with a solution of soap, water and acetic acid/vinegar. Follow this with a neutralisation step of washing the area with a bleach or caustic soda ash solution. Finally, wash with a strong soap and water solution. Absorb, as above, any excess liquid and add both solutions to the drums of waste already collected.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling: Ensure containers are kept closed until using product. Avoid skin and eye contact and breathing vapour.

Conditions for Safe Storage: Do not store near naked flames or other sources of ignition. Flammable gas. DO NOT store near (or allow to contact) fertilizers, fungicides or pesticides. Store in the closed original container, in a cool well ventilated area, out of direct sunlight.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards:

No exposure standard for permethrin has been established by Safe Work Australia, however the following guideline has been established for one of the ingredients in the formulation.

| Atmospheric Contaminant | Exposure Standard (TWA) | Proportion in Astro |
|--------------------------|--------------------------------|---------------------|
| Butylated hydroxytoluene | 10 mg/m ³ (Aerosol) | < 1% |

TWA = Time-Weight Average

Biological Limit Values:

No biological limit allocated.

Engineering controls:

Natural ventilation should be adequate. Ventilate all transport vehicles prior to unloading.

Personal Protective equipment (PPE):

General: For general use personal protective equipment should not be necessary. Do not spray in eyes or on skin.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------------------|------------------------------------|
| Appearance: | Clear pale yellow liquid. |
| Odour: | Mild aromatic hydrocarbon odour. |
| Boiling point: | Not available. |
| Freezing point: | Not available. |
| Specific Gravity: | Approximately 0.7 g/mL. |
| pH: | Not available. |
| Solubility in Water: | Product suspends in water. |
| Flammability: | Flammable gas. |
| Corrosive hazard: | Not known to be corrosive. |
| Flashpoint (°C): | -104 to -60°C (LPG). |
| Flammability Limits (%): | Not established. |
| Poisons Schedule: | Product is not a scheduled poison. |

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.

Conditions to avoid: Keep in a cool place. Do not expose to sources of ignition. This product is highly flammable. DO NOT use in confined spaces. DO NOT use close to ignition sources.

Incompatible materials: Do not store near corrosive substances.

Hazardous decomposition products: On burning will emit toxic fumes.

Hazardous reactions: Will not polymerise.

SECTION 11 TOXICOLOGICAL INFORMATION

Potential Health Effects:

Studies with laboratory animals have shown permethrin (the active ingredient in this product) to have low oral, dermal and inhalation toxicity. It is minimally irritating to the eyes and practically non-irritating to the skin. Permethrin is a skin sensitiser.

SECTION 11 TOXICOLOGICAL INFORMATION (Continued)

Experience to date indicates that contact with permethrin may produce skin sensations such as numbing, burning or tingling. These sensations are reversible and usually subside within 12 hours. Large doses of permethrin ingested by laboratory animals produced signs symptoms such as diarrhoea, salivation, tremors and intermittent convulsions. Overexposure of animals to permethrin via inhalation has also produced hyperactivity and hypersensitivity.

Acute

Swallowed: Due to the high volatility of this product, this is unlikely to occur.

Eye: Severely irritating to the eyes

Skin: Mildly irritating. Avoid contact with skin. Liquid contact can cause freezing of tissue, resulting in an injury similar to a thermal burn.

Inhaled: Inhalation of spray or vapour may produce respiratory irritation and can result in headaches, dizziness and possibly nausea. Excessive exposure may cause unconsciousness, or even death, due to asphyxiation.

Chronic: No data available on this formulation. In studies with laboratory animals, Permethrin Technical did not cause teratogenicity or reproductive toxicity. The overall results from a battery of genotoxicity studies indicate that permethrin is not considered to be genotoxic. Ames test results were negative. The potential for induction of oncogenicity is extremely low. Long term feeding studies in animals resulted in increased liver and kidney weights, induction of liver microsomal drug metabolising enzyme system, and histopathological changes to the lungs and liver.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: No data is available on Astro Aerosol Insecticide. The active ingredient, Permethrin is highly toxic to aquatic organisms. Marine species are often more sensitive than freshwater species. Permethrin is only slightly toxic to birds with acute oral LD₅₀ > 3600 mg/kg.

Environmental Properties: No data is available on Astro Insecticide. The active ingredient, Permethrin, degrades at a moderate rate in soils. Permethrin is tightly bound in most soils (Koc = 86,000), with little potential for movement into soil or groundwater. Permethrin has a Log Pow of 6.1, but because of the ease with which biological systems degrade the molecule, the potential for bioaccumulation and accumulation in the environment is low.

SECTION 13 DISPOSAL CONSIDERATIONS

Spills & Disposal: In the case of spillage, contain and absorb spilled material with absorbent material such as sand, clay or cat litter. Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of Local or State Waste Management Authorities. Do not puncture, cut or weld containers. Vapours inside can may create an explosion hazard.

Dangerous to Fish: Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

Disposal of empty containers: Do not puncture or incinerate empty can. Recycle empty cans if a facility is available, or place used can in household rubbish.

SECTION 14 TRANSPORT INFORMATION

Road & Rail Transport: Astro Aerosol is classified as a Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail. UN 1950, Proper shipping name: AEROSOLS, class 2.1, no packaging group allocated, Hazchem 2YE.

Marine and Air Transport: Astro Aerosol is classified as a Dangerous Good. UN 1950, Proper shipping name: AEROSOLS, class 2.1, no packaging group allocated, Hazchem 2YE.

SECTION 15 REGULATORY INFORMATION

Classified as a hazardous substance according to criteria of Safe Work Australia. (Xi, Xn).
Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is not a scheduled poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 54090.

Product is classified as a Dangerous Good according to the ADG Code (7th Ed).

Product is classified as a Dangerous Good according to the International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).

SECTION 16 OTHER INFORMATION

Issue Date: 21 May 2014. Valid for 5 years. (Revised to GHS classification).

Key to abbreviations and acronyms used in this MSDS:

ADG Code: Australian Dangerous Goods Code (for the transport of dangerous goods by Road and Rail).

Carcinogen: An agent which is responsible for the formation of a cancer.

Clonic: An abnormality in neuromuscular activity characterized by rapidly alternating muscular contraction and relaxation.

Genotoxic: Capable of causing damage to genetic material, such as DNA.

Haematopoietic: Pertaining to the formation of blood or blood cells.

Lavage: The irrigation or washing out of an organ, as of the stomach or bowel.

Mutagen: An agent capable of producing a mutation.

Oedema: Accumulation of fluid in tissues.

NOHSC: National Occupational Health and Safety Commission.

Teratogen: An agent capable of causing abnormalities in a developing foetus.

Safe Work Australia: Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

1. "Search Hazardous Substances". Safe Work Australia website. (2014).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)], October 2004.
3. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). United nations, 2009.

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

End MSDS