



## Section 1 - Identification of The Material and Supplier

Adama Australia Pty Ltd, Suite 1, Level 4,  
Building B  
207 Pacific Highway St Leonards, NSW 2065  
ACN 050 328 973

Telephone (02)9431 7800 (24 hours)

Fax (02)9431 7700

**Chemical nature:** Diafenthiuron is a thiourea derivative.  
**Trade Name:** **Receptor Miticide/Insecticide**  
**Product Use:** Agricultural miticide/insecticide for use as described on the product label.  
**Creation Date:** **December, 2012**  
**This version issued:** **September 2013** and is valid for 5 years from this date.

## Section 2 - Hazards Identification

### Statement of Hazardous Nature

This product is classified as: Hazardous according to the criteria of SWA Australia.

Dangerous according to the Australian Dangerous Goods (ADG) Code.

**Risk Phrases:** R22, R50, R66. Harmful if swallowed. Very toxic to aquatic organisms. Repeated exposure may cause skin dryness or cracking.

**Safety Phrases:** S20, S23, S36, S60, S24/25. When using, do not eat or drink. Do not breathe vapours, spray or mists. Wear suitable protective clothing. This material and its container must be disposed of as hazardous waste. Avoid contact with skin and eyes.

**SUSMP Classification:** S6

**Dangerous Goods Code:** Class 6.1: Toxic Substances.

**UN Number:** 2902, PESTICIDE, LIQUID, TOXIC, N.O.S. (CONTAINS DIAFENTHIURON)



### GHS Signal word: WARNING

#### HAZARD STATEMENT:

AUH066: Repeated exposure may cause skin dryness or cracking.

H302: Harmful if swallowed.

H400: Very toxic to aquatic life.

#### PREVENTION

P264: Wash contacted areas thoroughly after handling.

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

#### RESPONSE

P330: Rinse mouth.

P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P391: Collect spillage.

P370+P378: Not combustible. Use extinguishing media suited to burning materials. Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal foam can be used.

#### DISPOSAL

P501: Dispose of contents and containers as specified on the registered label.

## Emergency Overview

**Physical Description & colour:** Light grey fluid paste.

**Odour:** Nonspecific odour.

**Major Health Hazards:** harmful if swallowed, repeated exposure may cause skin dryness or cracking.

## SAFETY DATA SHEET



## Potential Health Effects

### Inhalation:

**Short term exposure:** Available data indicates that this product is not harmful. In addition product is unlikely to cause any discomfort or irritation.

**Long Term exposure:** No data for health effects associated with long term inhalation.

### Skin Contact:

**Short term exposure:** Available data indicates that this product is not harmful. It should present no hazards in normal use. However product may be mildly irritating, but is unlikely to cause anything more than mild discomfort which should disappear once contact ceases.

**Long Term exposure:** Repeated exposure may cause skin dryness or cracking.

### Eye Contact:

**Short term exposure:** This product may be irritating to eyes, but is unlikely to cause anything more than mild transient discomfort.

**Long Term exposure:** No data for health effects associated with long term eye exposure.

### Ingestion:

**Short term exposure:** Significant oral exposure is considered to be unlikely. Available data shows that this product is harmful, but symptoms are not available. However, this product may be irritating to mucous membranes but is unlikely to cause anything more than transient discomfort.

**Long Term exposure:** No data for health effects associated with long term ingestion.

### Carcinogen Status:

**SWA:** No significant ingredient is classified as carcinogenic by SWA.

**NTP:** No significant ingredient is classified as carcinogenic by NTP.

**IARC:** No significant ingredient is classified as carcinogenic by IARC.

## Section 3 - Composition/Information on Ingredients

| Ingredients                     | CAS No     | Conc,% | TWA (mg/m <sup>3</sup> ) | STEL (mg/m <sup>3</sup> ) |
|---------------------------------|------------|--------|--------------------------|---------------------------|
| Diafenthiuron                   | 80060-09-9 | 500g/L | not set                  | not set                   |
| Other non hazardous ingredients | secret     | 5-15   | not set                  | not set                   |
| Water                           | 7732-18-5  | to 100 | not set                  | not set                   |

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

## Section 4 - First Aid Measures

### General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

**Inhalation:** First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

**Skin Contact:** Gently brush away excess particles. Irritation is unlikely. However, if irritation does occur, flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.

**Eye Contact:** Quickly and gently brush particles from eyes. No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

**Ingestion:** If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

## SAFETY DATA SHEET



## Section 5 - Fire Fighting Measures

**Fire and Explosion Hazards:** The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is little risk of an explosion from this product if commercial quantities are involved in a fire.

This product is likely to decompose only after heating to dryness, followed by further strong heating.

Fire decomposition products from this product are likely to be harmful if inhaled. Take suitable protective measures.

**Extinguishing Media:** Not combustible. Use extinguishing media suited to burning materials. Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal foam can be used. Try to contain spills, minimise spillage entering drains or water courses.

**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade. There is little danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is full fire kit and breathing apparatus.

**Flash point:** Does not burn.

**Upper Flammability Limit:** Does not burn.

**Lower Flammability Limit:** Does not burn.

**Autoignition temperature:** 490°C

**Flammability Class:** Does not burn.

## Section 6 - Accidental Release Measures

**Accidental release:** In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that dusts are likely to build up in cleanup area, we recommend that you use a suitable Dust Mask.

Stop leak if safe to do so, and contain spill. Because of the environmentally hazardous nature of this product, special care should be taken to restrict release to waterways or drains. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Consider vacuuming if appropriate. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this MSDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

## Section 7 - Handling and Storage

**Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS 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.

**Storage:** This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Check packaging - there may be further storage instructions on the label.

## Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

### SWA Exposure Limits

### TWA (mg/m<sup>3</sup>)

### STEL (mg/m<sup>3</sup>)

Exposure limits have not been established by SWA for any of the significant ingredients in this product.

The ADI for Diafenthiuron is set at 0.003mg/kg/day. The corresponding NOEL is set at 0.3mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, Sept 2011.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

**Ventilation:** This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

**Eye Protection:** Eye protection such as protective glasses or goggles is recommended when this product is being used.

## SAFETY DATA SHEET



**Skin Protection:** The information at hand indicates that this product is not harmful and that normally no special skin protection is necessary. However, we suggest that you routinely avoid contact with all chemical products and that you wear suitable gloves (preferably elbow-length) when skin contact is likely.

**Protective Material Types:** We suggest that protective clothing be made from the following materials: rubber, PVC.

**Respirator:** If there is a significant chance that dusts are likely to build up in the area where this product is being used, we recommend that you use a suitable Dust Mask.

Safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

## Section 9 - Physical and Chemical Properties:

|   |  |
|---|--|
| <b>Physical Description &amp; colour:</b> | Light grey fluid liquid.                           |
| <b>Odour:</b>                             | Nonspecific odour.                                 |
| <b>Boiling Point:</b>                     | >90°C at 100kPa.                                   |
| <b>Freezing/Melting Point:</b>            | No specific data. Liquid at normal temperatures.   |
| <b>Volatiles:</b>                         | Water component.                                   |
| <b>Vapour Pressure:</b>                   | 2.37 kPa at 20°C (water vapour pressure).          |
| <b>Vapour Density:</b>                    | Not applicable.                                    |
| <b>Specific Gravity:</b>                  | 1.03-1.07 at 20°C                                  |
| <b>Water Solubility:</b>                  | Miscible.  |
| <b>pH:</b>                                | 6-10 (1% in water)                                 |
| <b>Volatility:</b>                        | No data.   |
| <b>Odour Threshold:</b>                   | No data.   |
| <b>Evaporation Rate:</b>                  | Not applicable.                                    |
| <b>Coeff Oil/water distribution:</b>      | No data  |
| <b>Viscosity:</b>                         | 66.0 - 285 mPa.s at 40°C; 82.3 - 293 mPa.s at 20°C |
| <b>Autoignition temp:</b>                 | 490°C  |

## Section 10 - Stability and Reactivity

**Reactivity:** This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

**Conditions to Avoid:** Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

**Incompatibilities:** strong acids, strong bases, strong oxidising agents.

**Fire Decomposition:** This product is likely to decompose only after heating to dryness, followed by further strong heating. Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. May form oxides of sulfur (sulfur dioxide is a respiratory hazard) and other sulfur compounds. Most will have a foul odour. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Polymerisation:** This product will not undergo polymerisation reactions.

## Section 11 - Toxicological Information

### Local Effects:

**Target Organs:** There is no data to hand indicating any particular target organs.

### Acute:

**Oral toxicity: HARMFUL** Tests on rats indicate this product is harmful following single doses of a similar formulation. (LD<sub>50</sub> = 1,950 mg/kg)

**Dermal toxicity: LOW TOXICITY** Tests on rats indicate this product has a low toxicity following skin contact with a similar formulation.

**Inhalation: LOW TOXICITY** Generation of a respirable aerosol was not possible in laboratory tests. Therefore inhalation is not a likely route of exposure to this product. The product can be considered to have low toxicity by inhalation.

**Skin irritation: NON IRRITANT**

**Eye irritation: NON IRRITANT**

**Sensitisation: NOT A SENSITISER**

## SAFETY DATA SHEET



**Chronic: Diafenthiuron technical** has been extensively tested on laboratory mammals and in test-tube systems. No evidence was obtained of mutagenic, teratogenic neurotoxic or reproductive effects. In animal studies (rat, mouse, dog), prolonged exposure to Diafenthiuron has been shown to produce lung damage. In mice, chronic oral administration has produced lung tumours at high dose levels. No adverse effects in humans are expected at levels below the occupational exposure limit and when the product is handled and used according to the label.

### Classification of Hazardous Ingredients

#### Ingredient

#### Risk Phrases

No ingredient mentioned in the HSIS Database is present in this product at hazardous concentrations.

## Section 12 - Ecological Information

This product is very toxic to aquatic organisms. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems. This product is likely to accumulate in body tissues, especially fat. This product is unlikely to be mobile in soils.

#### Ecotoxicity:

Toxicity to fish: **Very highly toxic to fish:** *Lepomis macrochirus* (bluegill sunfish):  $LC_{50} = 0.46\mu\text{g/L}$ , 96hr (based on test results obtained with similar product)

**Toxicity to daphnia and other aquatic invertebrates:** Very highly toxic to aquatic invertebrates.

*Daphnia magna* (Water flea):  $EC_{50} = 0.62\mu\text{g/L}$ , 48hr (based on test results obtained with active ingredient)

**Persistence and Degradability:** Diafenthiuron is not persistent in soil or water.

**Mobility:** Diafenthiuron is immobile in soil.

**Bioaccumulative Potential:** Diafenthiuron bioaccumulates.

## Section 13 - Disposal Considerations

**Disposal:** Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

## Section 14 - Transport Information

**This product is classified as a Dangerous Good by IATA and IMDG when carried by Air or Sea and by transport under the Australian Code for the Transport of Dangerous Goods by Road and Rail and must be stored and transported according to local, State/Territory and Federal regulations (see details below).**

**Dangerous Goods Code:** 2902, PESTICIDE, LIQUID, TOXIC, N.O.S. (CONTAINS DIAFENTHIURON)

**Hazchem Code:** •2X

**Special Provisions:** 61, 223, 274

**Limited quantities:** ADG 7 specifies a Limited Quantity value of 5 L for this class of product.

**Dangerous Goods Class:** Class 6.1, Toxic Substances.

**Packaging Group:** III

**Packaging Method:** P001, IBC03, LP01

Class 6 Toxic Substances shall not be loaded in the same vehicle or packed in the same freight container with Classes 1 (Explosives), 3 (Flammable Liquids where the Flammable Liquid is nitromethane), 5.1 (Oxidising Agents where the Toxic Substances are Fire Risk Substances), 5.2 (Organic Peroxides where the Toxic Substances are Fire Risk Substances), 8 (Corrosive Substances where the Toxic Substances are cyanides and the Corrosives are acids), Foodstuffs and foodstuff empties. They may however be loaded in the same vehicle or packed in the same freight container with Classes, 2.1 (Flammable Gases), 2.2 (Non-Flammable, Non-Toxic Gases), 2.3 (Toxic Gases), 3 (Flammable liquids, except where the flammable liquid is nitromethane), 4.1 (Flammable Solids), 4.2 (Spontaneously Combustible Substances), 4.3 (Dangerous When Wet Substances), 5.1 (Oxidising Agents except where the Toxic Substances are Fire Risk Substances), 5.2 (Organic Peroxides except where the Toxic Substances are Fire Risk Substances), 7 (Radioactive Substances), 8 (Corrosive Substances except where the Toxic Substances are cyanides and the Corrosives are acids), 9 (Miscellaneous Dangerous Goods).

## SAFETY DATA SHEET



## Section 15 - Regulatory Information

**AICS:** All of the significant ingredients in this formulation are compliant with NICNAS regulations. The following ingredient: Diafenthiuron, is mentioned in the SUSMP.

## Section 16 - Other Information

**This MSDS contains only safety-related information. For other data see product literature.**

### Acronyms:

|                     |   |
|---------------------|---|
| <b>ADG Code</b>     | Australian Code for the Transport of Dangerous Goods by Road and Rail (7 <sup>th</sup> edition)                     |
| <b>AICS</b>         | Australian Inventory of Chemical Substances   |
| <b>SWA</b>          | Safe Work Australia, formerly ASCC and NOHSC  |
| <b>CAS number</b>   | Chemical Abstracts Service Registry Number  |
| <b>Hazchem Code</b> | Emergency action code of numbers and letters that provide information to emergency services especially firefighters |
| <b>IARC</b>         | International Agency for Research on Cancer   |
| <b>NOS</b>          | Not otherwise specified   |
| <b>NTP</b>          | National Toxicology Program (USA)   |
| <b>R-Phrase</b>     | Risk Phrase   |
| <b>SUSMP</b>        | Standard for the Uniform Scheduling of Medicines & Poisons  |
| <b>UN Number</b>    | United Nations Number   |

### Contact Points:

Call Adama on (02)9431 7800 and ask for the technical manager.

Fax: (02)9431 7700

**Police and Fire Brigade:**

**Dial 000**

**Emergency contact:**

**1800 024 973 (24 hours)**

**If ineffective:**

**Dial Poisons Information Centre  
(13 1126 from anywhere in Australia)**

The information contained in this Material Safety Data Sheet is provided in good faith and is believed to be correct at the date hereof. However, it is expected that individuals receiving the information will exercise their independent judgement in determining its appropriateness for a particular purpose. Adama Australia Pty Ltd makes no representation as to the accuracy or comprehensiveness of the information and to the full extent allowed by law excludes all liability whatsoever, whether with respect to negligence or otherwise, for any loss or damage arising from or connection with the supply or use of the information in this Material Safety Data Sheet.

Please read all labels carefully before using product.

## SAFETY DATA SHEET