

# MATERIAL SAFETY DATA SHEET



Date of Issue: January 24, 2003

## 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

**Product name** Ovasyn® Options Insecticide  
**Other names** None  
**Product codes** AE B049974 00 EC21 A1  
22470 (20L), 22471 (100 L), 22472 (200 L), 22473 (1000 L)  
**Chemical group** Amidine  
**Recommended use** Agricultural insecticide  
**Formulation** Emulsifiable concentrate  
**Supplier** Bayer CropScience Pty Ltd ABN 87 000 226 022  
**Address** 391 – 393 Tooronga Road, East Hawthorn  
Victoria 3123, Australia  
**Telephone** (03) 9248 6888  
**Facsimile** (03) 9248 6800  
**Website** www.bayercropscience.com.au  
**Contact** Development Manager (03) 9248 6888  
**Emergency**  
**Telephone Number** 1800 033 111 – Orica SH&E Shared Services

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

**HAZARDOUS SUBSTANCE** (see Risk phrases below) – **NON DANGEROUS GOOD**  
**Combustible liquid**

**Hazard designation** Hazardous (National Occupational Health and Safety Commission – NOHSC)  
**Risk phrases** R20/21/22 – Harmful by inhalation, in contact with skin and if swallowed.  
R36/38 – Irritating to eyes and skin.  
R65 – Harmful: May cause lung damage if swallowed.  
**Safety phrases** See Sections 4, 5, 6, 7, 8, 10, 12, 13  
**ADG classification** Not a “Dangerous good” for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.  
**SUSDP classification** Schedule 6 (Standard for the Uniform Scheduling of Drugs and Poisons)

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration (g/L)
Amitraz	[33089-61-1]	200
Hydrocarbon solvent	[64742-94-5]	590
Naphthalene (in hydrocarbon solvent)	[91-20-3]	(17 to 36)
N-methyl-2-pyrrolidone	[872-50-4]	50
Other ingredients (including emulsifiers)	(non hazardous)	105

# MATERIAL SAFETY DATA SHEET



Date of Issue: January 24, 2003

## 4. FIRST AID MEASURES

**If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to the doctor.**

<b>Inhalation</b>	If inhaled, remove to fresh air and keep at rest. Obtain medical advice if at all worried.
<b>Skin contact</b>	Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical aid if at all worried.
<b>Eye contact</b>	Rinse eyes immediately with clean water for at least 15 minutes and obtain medical aid.
<b>Ingestion</b>	Wash out mouth with water. Do NOT induce vomiting. Give a glass of water. Keep patient at rest and seek medical advice as above. DO NOT attempt to give anything by mouth to a semi-conscious or unconscious person.
<b>First Aid Facilities</b>	Provide eyewash and safety shower facilities in the workplace.
<b>Medical attention</b>	<p>Please note that amitraz is NOT an organophosphorus compound. It is an alpha 2 adrenoreceptor agonist. It also contains a hydrocarbon solvent. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema.</p> <p><i>Symptoms of local overexposure:</i> Transient skin flushing and skin rashes due to sensitisation.</p> <p><i>Symptoms of systemic poisoning:</i> Central nervous system depression ranging from sleepiness to coma, hypotension, bradycardia and hypothermia.</p> <p><i>Treatment:</i> For local contamination treatment should be symptomatic after decontamination. In case of skin or eye contamination, treat as documented under "FIRST AID MEASURES". For systemic poisoning initial treatment should be symptomatic and supportive. If a large amount has been ingested, the following measures should be considered: Monitor respiratory, cardiac and CNS functions, blood pressure and heart rate. Gastric lavage and charcoal administration Endotracheal intubation and artificial respiration, as necessary Anticonvulsant therapy is not appropriate. <i>Antidote:</i> Phentolamine or yohimbine. Use of atropine is contraindicated. Recovery is normally spontaneous.</p>

## 5. FIRE FIGHTING MEASURES

<b>Extinguishing media</b>	Water fog, fine water spray, foam, dry agent, carbon dioxide, sand.
<b>Hazards from combustion products</b>	Toxic decomposition products may be produced in a fire. These include sulphur dioxide, nitrogen oxides, ammonia and carbon monoxide.
<b>Precautions for fire fighters</b>	This product is a combustible liquid with a flash point of 63° C and a fire point of 82° C. In case of fire, the material can be violently or even explosively reactive. Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Bund area to prevent contamination of water sources. Dispose of fire control extinguishing agent and spillage later in a safe manner.

# MATERIAL SAFETY DATA SHEET



Date of Issue: January 24, 2003

## 6. ACCIDENTAL RELEASE MEASURES

Avoid contact with the spilled material or contaminated surfaces. Extinguish or remove all possible sources of ignition. When dealing with spills do not eat, drink or smoke and wear protective clothing and equipment as described in Section 8 – PERSONAL PROTECTION. Keep people and animals away. Prevent spilled material from entering drains or watercourses. Contain spill and absorb with earth, sand, clay, or other absorbent material. Collect and store in properly labelled, loosely sealed drums for safe disposal. Thoroughly ventilate the area after cleanup. Deal with all spillages immediately. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Keep out of reach of children. Avoid contact with eyes and skin. Do not inhale spray mist. If product on skin, immediately wash area with soap and water. Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Immediately and thoroughly close part-used containers to avoid deterioration of product. Do not store near heat, open flame or hot surfaces. Protect the product from frost. Do not smoke while handling. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, goggles or face shield and contaminated clothing.
<b>Storage</b>	Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Immediately and thoroughly close part-used containers to avoid deterioration of product. Keep in a dry, low-fire risk area, away from sources of heat or ignition and electrostatic charges.
<b>Flammability</b>	Combustible liquid, Class C1 – flashpoint between 61° C and 150° C. Fire point 82° C.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Exposure standards</b>	The manufacturer of the solvent recommends an Occupational Exposure Limit for solvent naphtha (petroleum), heavy aromatic: TWA: 100 mg/m <sup>3</sup> (17 ppm). For the naphthalene present in the solvent the NOHSC Occupational Exposure Limits are: TWA: 10 ppm (52 mg/m <sup>3</sup> , STEL: 15 ppm (79 mg/m <sup>3</sup> ). Skin notation. <i>Exposure standard – Time Weighted Average (TWA)</i> means the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week. <i>Exposure standard – Short term exposure limit (STEL)</i> means a 15 minute TWA exposure which should not be exceeded at any time during the working day. <i>Skin notation</i> – Absorption through the skin may be a significant source of exposure.
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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION - continued

<b>Engineering controls</b>	Control process conditions to avoid contact. Handle in a well-ventilated area only.
<b>Personal Protective Equipment</b>	<ul style="list-style-type: none"><li>• Wear safety goggles or face shield.</li><li>• Wear cotton overalls buttoned to the neck and wrist and a washable hat.</li><li>• Wear elbow-length PVC or nitrile gloves.</li><li>• If working in a poorly ventilated area or if occupational exposure levels are likely to be exceeded, wear respirator suitable for organic vapours (AS/NZS 1715/1716).</li></ul>

# MATERIAL SAFETY DATA SHEET



Date of Issue: January 24, 2003

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Clear amber liquid
<b>Odour:</b>	Characteristic aromatic hydrocarbon
<b>pH:</b>	Not available
<b>Vapour pressure:</b>	0.3 kPa (at 38° C) – (hydrocarbon solvent)
<b>Vapour density:</b>	> 1.00 (hydrocarbon solvent)
<b>Boiling point:</b>	179 to 213° C (hydrocarbon solvent)
<b>Freezing/melting point:</b>	Not available
<b>Solubility:</b>	Emulsifies in water
<b>Specific Gravity:</b>	0.945 at 20° C
<b>Flash Point:</b>	63° C (Pensky-Martens Closed Cup)
<b>Flammability (explosive) limits:</b>	LEL: 0.6; UEL: 7.0 Vol. % in air (hydrocarbon solvent)
<b>Auto-ignition temperature:</b>	> 400° C (hydrocarbon solvent)
<b>Fire point:</b>	82° C
<b>Partition coefficient (octanol/water):</b>	<i>Amitraz</i> : $K_{ow} \log P = 5.5$ (25° C, pH 5.8)

## 10. STABILITY AND REACTIVITY

<b>Chemical stability</b>	Stable under normal conditions of use.
<b>Hazardous polymerisation</b>	Will not polymerise.
<b>Conditions to avoid</b>	Avoid sources of ignition and extreme heat. Product is hygroscopic, and degrades in the presence of water.
<b>Incompatible materials</b>	Avoid strong oxidising agents. Incompatible with alkaline materials.
<b>Hazardous decomposition products</b>	If burnt, oxides of carbon, nitrogen and sulphur, ammonia and various organic substances may be produced.

## 11. TOXICOLOGICAL INFORMATION

### POTENTIAL HEALTH EFFECTS

<b>Inhalation</b>	Harmful by inhalation. May be irritating to respiratory tract and may cause headaches, dizziness, drowsiness and narcosis.
<b>Skin contact</b>	Harmful when in contact with the skin. Irritating to skin. May cause transient flushing and skin rashes due to sensitisation. (Not required to be classified as a skin sensitiser.) Repeated exposure may cause skin dryness or cracking.
<b>Eye contact</b>	Irritating to eyes.

# MATERIAL SAFETY DATA SHEET



Date of Issue: January 24, 2003

## 11. TOXICOLOGICAL INFORMATION - continued

**Ingestion** Harmful if swallowed. May cause lung damage if swallowed.

### ANIMAL TOXICITY DATA – PRODUCT

#### Acute:

**Oral toxicity** LD<sub>50</sub> rat: 1250 mg/kg (*similar product*)

**Dermal toxicity** LD<sub>50</sub> rat: mg/kg ~ 2000 (*similar product*)

**Inhalation toxicity** LC<sub>50</sub> rat (4 h): 4.01 mg/L (*similar product*)

**Skin irritation** Irritating (rabbit) (*similar product*)

**Eye irritation** Irritating (rabbit) (*similar product*)

**Sensitisation** No data

#### Chronic:

No evidence of carcinogenic, mutagenic, teratogenic or reproductive effects. Frequent or prolonged contact with the solvent in this product may defat and dry the skin, leading to discomfort and dermatitis. This product contains naphthalene. A National Toxicology Program (NTP) report states that lifetime inhalation exposure to naphthalene resulted in increases in tumours of the nose in rats. In a previous NTP study, lifetime inhalation exposure to naphthalene increased lung tumours in female mice. The relevance of the rodent findings to humans is questionable.

## 12. ECOLOGICAL INFORMATION

Harmful to horses. Low toxicity to bees, predatory insects and earthworms. Toxic to fish and aquatic organisms. However, due to rapid hydrolysis in water, it is unlikely that toxicity will be expressed in natural aquatic systems. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

### **Ecotoxicity**

#### Amitraz:

##### *Fish toxicity:*

LC<sub>50</sub>, (96 h) Rainbow trout – 0.74 mg/L

LC<sub>50</sub> (96 h) Bluegill sunfish – 0.45 mg/L

EC<sub>50</sub> (48 h) *Daphnia magna* – 0.035 mg/L

##### *Bird toxicity:*

LC<sub>50</sub> Mallard duck – 7000 mg/kg

LC<sub>50</sub> Japanese quail – 1800 mg/kg

LC<sub>50</sub> Bobwhite quail – 788 mg/kg

### **Environmental fate, persistence and degradability**

Amitraz is rapidly broken down in soil under aerobic conditions. Very strongly adsorbed to soil. The solvent does not biodegrade rapidly but is “inherently” biodegradable.

# MATERIAL SAFETY DATA SHEET



Date of Issue: January 24, 2003

## 13. DISPOSAL CONSIDERATIONS

When returnable container is empty or contents no longer required return it to the point of purchase. Do not rinse. For non-returnable containers, triple or (preferably) pressure rinse them before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Dispose of waste product through a reputable waste contractor.

## 14. TRANSPORT INFORMATION

<b>UN number</b>	Not applicable
<b>Proper shipping name</b>	Not applicable
<b>Class and Subsidiary Risk</b>	Not applicable
<b>Packing Group</b>	Not applicable
<b>EPG</b>	Not applicable
<b>Hazchem code</b>	Not applicable
<b>Marine Pollutant</b>	No

## 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988  
National Registration Authority approval number: 53262 See also Section 2.

## 16. OTHER INFORMATION

**Trademark information** Ovasyn® is a Registered Trademark of Bayer.

**Preparation information** Replaces August 1, 2002 MSDS  
Reasons for revision: New formulation - change in solvent content, updated MSDS for solvent, 16 heading format

This MSDS summarizes 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.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

END OF MSDS