

# MATERIAL SAFETY DATA SHEET

## Crackdown® Residual Insecticide

Date of Issue: September 28<sup>th</sup>, 2006

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

**Product name:** Crackdown® Residual Insecticide  
**Other names:** None  
**Product code:** 4209094 (2.5 L)  
**Chemical group:** Pyrethroid  
**Recommended use:** An insecticide for use as a general-purpose pest control residual surface spray.  
**Formulation:** Suspension concentrate (SC)  
**Supplier:** Bayer Environmental Science - A Business Group of 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](http://www.bayercropscience.com.au)  
**Contact:** Technical Manager (03) 9248 6854  
**Emergency Telephone Number:** 1800 033 111 – Orica SH&E Shared Services

### 2. HAZARDS IDENTIFICATION

#### HAZARDOUS SUBSTANCE - NON-DANGEROUS GOOD

May cause sensitisation by skin contact. Not flammable.

**Hazard designation:** Hazardous (National Occupational Health and Safety Commission - NOHSC)  
**Risk phrases:** R43 – May cause sensitisation by skin contact  
**Safety phrases:** See Sections 4, 5, 6, 7, 8, 9, 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. For transport by sea, Crackdown Residual Insecticide is a MARINE POLLUTANT. See Section 14.  
**SUSDP classification:** Schedule 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (g/L):
Deltamethrin	[52918-63-5]	10
$\alpha$ -Tetramethrin 20:80	[7696-12-0]	10
Piperonyl butoxide	[51-03-6]	80
Propylene glycol	[57-55-6]	57
Mixed isothiazolones, sodium or magnesium salts	[55965-84-9]	2.5
Other ingredients	(non hazardous)	847.5

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## Crackdown® Residual Insecticide

Date of Issue: September 28<sup>th</sup>, 2006

---

### 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 a doctor.

- Inhalation:** Remove to fresh air, allow to rest and keep warm. Loosen clothes.
- Skin contact:** Remove all contaminated clothing and shoes. Wash off skin immediately with soap and plenty of water. Seek medical advice if irritation persists. Launder contaminated clothing before re-use.
- Eye contact:** Rinse immediately with plenty of water for at least 15 minutes, holding eye open. Seek advice from an ophthalmologist.
- Ingestion:** Wash out mouth with water. Do not induce vomiting. Keep patient at rest and seek medical advice as above. Do not apply mouth to mouth resuscitation if the material has been ingested.
- First Aid Facilities:** Ensure eye wash and safety shower are available when handling this product.
- Symptoms:** Burning sensations on the skin, irritation of the mucous membranes, coughing and sneezing may be experienced. Following severe intoxication, respiratory effects can include chest tightness, airway hyperreaction, and pulmonary oedema. Possible circulatory effects include tachycardia, hypotension, and palpitations. Gastrointestinal symptoms may include nausea, vomiting, diarrhoea, abdominal pain, and salivation. Potential Central Nervous System effects are dizziness, blurred vision, headache, listlessness, anorexia, somnolence/coma, seizures/convulsions, tremor, ataxia, and muscle fasciculations.
- Medical attention:** Treatment  
Basic aid, decontamination, symptomatic treatment and if necessary administration of antidote.
- Note for physicians  
Treat large intakes with gastric lavage, and charcoal administration. Use endotracheal intubation, and artificial respiration (if necessary). Monitor respiratory and cardiac functions. Observe electrocardiograph, and check for pulmonary oedema in event of inhalation. Anti-convulsant therapy with diazepam i.v. No antidote known. Treat symptoms. Recovery should be spontaneous. Elimination by: dialysis, haemo-perfusion. Contraindication – adrenergic compounds, atropine. DO NOT confuse with anticholinesterase compounds. Skin contacted by deltamethrin must be carefully cleaned with cleansing milk. Symptoms can be partially alleviated by the application of a vitamin E or moisturising cream or anaesthetic ointment. For eyes, instil local anaesthetic drops e.g. 1% amethocaine hydrochloride eye drops. Give analgesics as necessary.

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## Crackdown® Residual Insecticide

Date of Issue: September 28<sup>th</sup>, 2006

---

### 5. FIRE FIGHTING MEASURES

<b>Extinguishing media:</b>	Water spray, carbon dioxide, foam, dry chemical. Do not use a water jet from a fire hose.
<b>Hazards from combustion products:</b>	Heating/combustion will generate oxides of carbon and nitrogen, hydrogen chloride, hydrogen cyanide, and other irritant and toxic fumes.
<b>Precautions for fire fighters:</b>	Firefighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). If possible and without risk, remove intact containers from exposure to fire. Otherwise, spray unopened containers with water to keep cool. Contain fire-fighting water by bunding area with sand or earth to prevent it entering any bodies of water. Dispose of extinguishing agent and spillage safely later. Contamination of water bodies should be avoided.

### 6. ACCIDENTAL RELEASE MEASURES

Dealing with spills and disposals may result in the potential for increased personal exposure. Protective clothing and equipment as described in the PERSONAL PROTECTION section should be worn. Avoid contact with spilled material or contaminated surfaces. Keep people and animals away. Prevent spillage from entering drains, sewers or watercourses. Contain/absorb spillage in sand/earth or other suitable inert material. Transfer collected material to sealable containers. Seal and label containers ready for disposal. 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>	Use only in a well-ventilated area. Avoid contact with skin and eyes. Do not spray facing the wind.
<b>Storage:</b>	Store product in the closed, original container in a safe, cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Protect from frost.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Exposure standards:</b>	No exposure standard has been assigned by the National Occupational Health and Safety Commission (Worksafe Australia). Bayer CropScience recommends an Occupational Exposure Standard for deltamethrin of 0.28 mg/m <sup>3</sup> . The manufacturer of propylene glycol recommends a TWA exposure limit of 10 mg/m <sup>3</sup> mist (400 ppm vapour).	
<b>Engineering controls:</b>	No special ventilation is required, as this product is not volatile. Control process conditions to avoid contact. Use local exhaust ventilation while spraying, if possible.	
<b>Personal Protective Equipment:</b>	<b>Eyes:</b>	Wear face shield.
	<b>Clothing:</b>	When preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat.
	<b>Gloves:</b>	Elbow-length PVC gloves
	<b>Respiratory:</b>	Avoid inhaling spray mist.
	<b>Other:</b>	Do not eat, drink or smoke until after washing. Wash thoroughly after handling. After each day's use wash gloves, face shield and contaminated clothing.

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## Crackdown® Residual Insecticide

Date of Issue: September 28<sup>th</sup>, 2006

---

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White liquid, mild aromatic odour
Odour:	Mild aromatic odour
Vapour pressure:	As for water
Vapour density:	Not available
Boiling point:	100° C (boiling point)
Solubility:	Forms a suspension
Density:	1.01 at 20° C
pH:	Not available
Flash Point:	Not available – not flammable
Flammability (explosive) limits:	Not applicable
Auto-ignition temperature:	Not applicable
Octanol/water partition coefficient:	Not available
Formulation:	Suspension concentrate

### 10. STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions. No hazards are expected if the material is handled, stored and used according to instructions and government regulations. Not known to produce hazardous reactions. Avoid oxidising agents, strong acids and alkalis.
Hazardous polymerisation:	Not known to produce hazardous reactions.
Conditions to avoid:	Avoid oxidising agents, strong acids and alkalis.
Incompatible materials:	Avoid iron and alloys.
Hazardous decomposition products:	Heating/combustion will generate oxides of carbon and nitrogen, hydrogen chloride, hydrogen cyanide, and other irritant and toxic fumes.

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## Crackdown® Residual Insecticide

Date of Issue: September 28<sup>th</sup>, 2006

---

### 11. TOXICOLOGICAL INFORMATION

#### POTENTIAL HEALTH EFFECTS

<b>Inhalation:</b>	Avoid breathing spray. Inhalation of spray may cause transient irritation of mucous membranes (nose, throat and respiratory tract) for up to 24 hours.
<b>Skin contact:</b>	Irritating. Contact with the skin, especially the face, may result in initial stinging or burning sensations followed by numbing which may persist for a few hours.
<b>Eye contact:</b>	Irritant.
<b>Ingestion:</b>	Product is harmful if swallowed. Symptoms include headache, dizziness, drowsiness, diarrhoea, nausea, vomiting.
<b>Other:</b>	None

ANIMAL TOXICITY DATA – PRODUCT: No data available for the product.

ANIMAL TOXICITY DATA – INDIVIDUAL INGREDIENTS:

#### Acute:

<b>Oral toxicity:</b>	LD <sub>50</sub> rat: > 10,000 mg/kg (similar product) LD <sub>50</sub> rat: 135 to >5000 mg/kg (deltamethrin) LD <sub>50</sub> rat: > 5,000 mg/kg ( <i>d</i> -tetramethrin) LD <sub>50</sub> rat: 7500 mg/kg (piperonyl butoxide)
<b>Dermal toxicity:</b>	LD <sub>50</sub> rat: > 10,000 mg/kg (similar product) LD <sub>50</sub> rabbit: > 2,000 mg/kg (deltamethrin) LD <sub>50</sub> rat: > 5,000 mg/kg ( <i>d</i> -tetramethrin) LD <sub>50</sub> rat: > 7950 mg/kg (piperonyl butoxide)
<b>Inhalation toxicity:</b>	LC <sub>50</sub> rat: 2.2 mg/L (4 hours) (deltamethrin) LC <sub>50</sub> rat: > 1,180 mg/m <sup>3</sup> (3-hour) ( <i>d</i> -tetramethrin) LC <sub>50</sub> rat: > 5.9 mg/L (4-hour) (piperonyl butoxide)
<b>Skin irritation:</b>	Not irritating – rabbit (deltamethrin) Not irritating – rabbit ( <i>d</i> -tetramethrin)
<b>Eye irritation:</b>	Slightly irritating – rabbit (deltamethrin)
<b>Sensitisation:</b>	Not sensitising – Guinea pig (deltamethrin)

#### Chronic:

Deltamethrin is not mutagenic, carcinogenic or teratogenic. Piperonyl butoxide is not classified as a carcinogen. One reference indicates that exposure to large amounts of piperonyl butoxide may cause blood disorders or liver damage. Piperonyl butoxide is not mutagenic. No birth defects or adverse effects on reproductive parameters were found in studies with rats and rabbits. Piperonyl butoxide is not considered to be teratogenic.

# MATERIAL SAFETY DATA SHEET

## Crackdown® Residual Insecticide

Date of Issue: September 28<sup>th</sup>, 2006

---

### 12. ECOLOGICAL INFORMATION

Do not contaminate streams, rivers or waterways with the product or used containers.

**Fish toxicity:** LC<sub>50</sub> fish: 0.001 – 0.01 mg/L (96-h) Deltamethrin  
LC<sub>50</sub> bluegill sunfish: 16 µg/L Tetramethrin  
LC<sub>50</sub> carp: 5.3 mg/L (24 hour) Piperonyl butoxide

**Daphnia toxicity:** LC<sub>50</sub> (48h) 3.5 µg/L (deltamethrin)  
EC<sub>50</sub> (48h) 0.11 mg/L (tetramethrin)  
LC<sub>50</sub> (24h) 2.95 mg/L (piperonyl butoxide)

**Toxicity to algae:** EC<sub>50</sub> (96h) > 9.1 mg/L (deltamethrin)  
EC<sub>50</sub> 44 µmol/L (piperonyl butoxide)

**Bird toxicity:** LD<sub>50</sub> duck: > 5,000 mg/kg Deltamethrin  
LD<sub>50</sub> quail: > 10,000 mg/kg Deltamethrin  
LD<sub>50</sub> bobwhite quail: > 2250 mg/kg Tetramethrin  
LD<sub>50</sub> bobwhite quail: >2250 mg/kg Piperonyl butoxide

**Bee toxicity:** Deltamethrin is toxic to bees; LD<sub>50</sub> (oral) 79 ng/bee; (contact) 51 ng/bee  
Tetramethrin is toxic to bees.  
Piperonyl butoxide is not toxic to bees; LD<sub>50</sub> > 25 µg/bee

**Other:** None

**Environmental fate, persistence and degradation:** Deltamethrin is highly toxic to fish and aquatic organisms. Deltamethrin is not persistent in the environment. It is destroyed by soil microorganisms and does not leave residues in the environment or build up in the food chain.

### 13. DISPOSAL CONSIDERATIONS

Triple or preferably pressure rinse containers 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 the purpose, clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Dispose of waste product safely.

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## Crackdown® Residual Insecticide

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### 14. TRANSPORT INFORMATION

UN number:	Not applicable (road/rail)
Proper shipping name:	Not applicable (road/rail)
Class and Subsidiary Risk:	Not applicable (road/rail)
Packing Group:	Not applicable (road/rail)
EPG:	Not applicable (road/rail)
Hazchem code:	Not applicable (road/rail)
Marine pollutant:	Yes – If this product is shipped by sea it is a Class 9 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (contains deltamethrin, tetramethrin, piperonyl butoxide), UN 3082, Packing Group III.

### 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988

Australian Pesticides and Veterinary Medicines Authority Approval Number: 45907

### 16. OTHER INFORMATION

Trademark information:	Crackdown® is a Registered Trademark of Bayer
Preparation information:	Replaces October 10, 2002 edition. Reason for update: Hazard classification, Risk phrases, Formulation composition, ADG classification, First aid measures, Firefighting measures, Combustion products, Toxicological information, Ecological information, Marine pollutant status, Transport information.

Data sources: Bayer CropScience Pty Ltd. – Product Safety Data and published data.

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.

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