

# MATERIAL SAFETY DATA SHEET



Date of Issue: November 26<sup>th</sup>, 2009

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name **Antracol® Fungicide Spray**  
Other names None  
Product codes and pack sizes 4953427 (1 kg), 4953451 (25 kg)  
Chemical group Dithiocarbamate  
Recommended use Fungicide for agricultural use  
Formulation Wettable powder (WP)  
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](http://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 (road/rail)  
Toxic to aquatic organisms

Hazard classification Hazardous (National Occupational Health and Safety Commission - NOHSC)  
Risk phrases R20 – Harmful by inhalation.  
R43 – May cause sensitisation by skin contact.  
R48/22 – Harmful: dangerous of serious damage to health by prolonged exposure if swallowed.  
Safety phrases See Sections 4, 5, 6, 7, 8, 10, 12, 13  
ADG classification See Section 14.  
SUSDP classification 6 (Standard for the Uniform Scheduling of Drugs and Poisons)  
(Poisons schedule)

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration (g/kg)
Propineb	[9016-72-2]	700
Kaolin	[1332-58-7]	≈ 150
Silica, quartz (in kaolin)	[14808-60-7]	(variable)
Other ingredients, including stabilisers and emulsifiers	(non hazardous)	≈ 150

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## 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.**

Inhalation	If inhaled remove to fresh air and keep at rest. Obtain medical advice.
Skin contact	Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical aid if at all worried.
Eye contact	Rinse eyes immediately with clean water for at least 15 minutes and obtain medical aid.
Ingestion	Wash out mouth with water. Do NOT induce vomiting. Keep patient at rest and seek medical advice as above. Avoid giving alcohol.
First Aid Facilities	Ensure eyewash and shower facilities are available.
Medical attention	<i>Local contamination:</i> In case of skin or eye contamination, treat as above under First Aid Measures. <i>Systemic poisoning:</i> There is no specific antidote. Treat symptoms.

## 5. FIRE FIGHTING MEASURES

Extinguishing media	Water spray, foam, dry agent, carbon dioxide, sand
Hazards from combustion products	In a fire, hydrogen cyanide, oxides of carbon, sulphur and nitrogen can be expected.
Precautions for fire fighters	This product is sensitive to dust explosion. Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of extinguishing agent and spillage safely later.
Hazchem code	Not applicable

## 6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled material or contaminated surfaces. Extinguish possible sources of ignition. Do not smoke, eat or drink during the clean up process. Wear personal protective clothing and equipment as detailed in Section 8 PERSONAL PROTECTION. Keep people and animals away. Prevent spilled material from entering drains or watercourses. Avoid creation of dust, damping down if necessary. Sweep up and collect and store in properly labelled drums for safe disposal. Clean floor with a damp cloth and place it in the drum. Seal drums and label ready for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses etc. is unavoidable, warn the local water authority.

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## 7. HANDLING AND STORAGE

<b>Handling</b>	Keep out of reach of children. Repeated exposure may cause allergic disorders. Interacts with alcohol - avoid alcohol on days of use. Avoid contact with eyes, skin and clothing. Do not inhale dust. If clothing becomes contaminated with product or wet with spray, remove clothing immediately. If product or spray on skin immediately wash area with soap and water. If product in eyes, wash it out immediately with water. 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, respirator and contaminated clothing.
<b>Storage</b>	Store product in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.
<b>Flammability</b>	This product may cause dust explosion. Fine dust particles can form explosive mixtures with air.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Exposure standards</b>	The National Occupational Health and Safety Commission (NOHSC) exposure standards: TWA for kaolin is 10 mg/m <sup>3</sup> (as inspirable dust) TWA for silica, quartz is 0.1 mg/m <sup>3</sup> .
	<u>Definitions:</u> <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.
<b>Biological limit values</b>	Production workers and agricultural workers handling this product regularly should be monitored for the effects of crystalline silica. A baseline level should be established prior to any potential exposure. See Guidelines for Health Surveillance [NOHSC:7039(1995)].
<b>Engineering controls</b>	Control process conditions to avoid contact. Use in a well-ventilated area only.
<b>Personal Protective Equipment</b>	Eyes: Safety goggles. Clothing: Cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat. Gloves: Elbow-length PVC gloves. Respiratory: AS/NZS 1715/1716 approved respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Beige powder
<b>Odour:</b>	Slight characteristic
<b>pH:</b>	4.0 to 8.0 (1% in water)
<b>Vapour pressure:</b>	< 1.6 x 10 <sup>-7</sup> mPa at 20° C ( <i>propineb</i> )
<b>Vapour density:</b>	Not available
<b>Boiling point:</b>	Not applicable
<b>Freezing/melting point:</b>	Decomposes above 150° C
<b>Solubility:</b>	Disperses in water.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES – continued

Bulk density:	360 / 280 mL/100 g (loose / packed)
Flash Point:	Not applicable
Flammability	
(explosive) limits:	Not available. May cause dust explosion.
Auto-ignition temperature:	Not self ignitable.
Partition coefficient (octanol/water):	<i>Main metabolite of propineb</i> : Log P <sub>ow</sub> = - 0.26

## 10. STABILITY AND REACTIVITY

Chemical stability	Stable under normal conditions of use.
Conditions to avoid	Moisture, heat
Incompatible materials	Strong acids and alkalis, strong oxidising agents
Hazardous decomposition products	In a fire, hydrogen cyanide, oxides of carbon, sulphur and nitrogen can be expected.
Hazardous reactions	If this product comes into contact with acids, carbon disulphide and hydrogen sulphide may be evolved.

## 11. TOXICOLOGICAL INFORMATION

### POTENTIAL HEALTH EFFECTS

Inhalation	Harmful if inhaled.
Skin contact	May irritate the skin. Repeated exposure may cause allergic disorders.
Eye contact	May irritate the eyes.
Ingestion	Harmful if swallowed. This product interacts with alcohol. Alcohol increases its toxicity.

### ANIMAL TOXICITY DATA - *SIMILAR PRODUCT*

<u>Acute:</u>	
Oral toxicity	LD <sub>50</sub> rat: 3708 mg/kg
Dermal toxicity	LD <sub>50</sub> rat: > 5000 mg/kg
Inhalation toxicity	LC <sub>50</sub> rat (4 hour): approximately 5.04 mg/L - <i>tested in the form of a respirable fine dust</i>
Skin irritation	Non irritating (rabbit)
Eye irritation	Non irritating (rabbit)
Sensitisation	Sensitising (guinea pig) – <i>Magnusson &amp; Kligman test</i>

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## 11. TOXICOLOGICAL INFORMATION - continued

### Chronic:

Propineb is not mutagenic, and was not carcinogenic, teratogenic or embryotoxic in animal studies. Propineb is not listed by The National Toxicology Program or the International Agency for Research on Cancer as a carcinogen.

This product contains a small amount of crystalline silica, which is a naturally occurring mineral component of many sands and clays. Excessive long-term exposure to respirable crystalline silica may cause lung damage. Crystalline silica is classified as a carcinogen.

## 12. ECOLOGICAL INFORMATION

Propineb is toxic to aquatic organisms. It is not toxic to birds or bees. DO NOT contaminate streams, rivers, or waterways with the chemical or used containers.

### Ecotoxicity

#### Propineb:

<i>Fish toxicity:</i>	LC <sub>50</sub> (96 h) golden orfe ( <i>Leuciscus melanotus</i> ) 133 mg/L
	LC <sub>50</sub> (96 h) rainbow trout ( <i>Onchorhynchus mykiss</i> ) 0.4 mg/L
<i>Daphnia toxicity:</i>	EC <sub>50</sub> (48 h) water flea ( <i>Daphnia magna</i> ) 4.7 mg/L
<i>Algal toxicity:</i>	EC <sub>50</sub> (96 h) green algae ( <i>Desmodesmus subspicatus</i> ) 2.68 mg/L
<i>Bird toxicity:</i>	LD <sub>50</sub> Japanese quail > 5000 mg/kg

#### Antracol:

<i>Fish toxicity:</i>	LC <sub>50</sub> (96 h) rainbow trout ( <i>Onchorhynchus mykiss</i> ) 6.7 mg/L
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### Environmental fate, persistence and degradability, mobility

Propineb degrades rapidly in soil and is not mobile in soil. Propineb is rapidly degraded in water.

## 13. DISPOSAL CONSIDERATIONS

Single rinse before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. Puncture and bury empty container in a local authority landfill. If no landfill is available, bury the container 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

UN number	UN 3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (contains propineb)
Class and Subsidiary Risk	Class 9
Packing Group	Packing Group III
Hazchem code	2Z
Marine Pollutant	Yes
Note for Road and Rail Transport	According to AU01, Environmentally Hazardous Substances in packagings, IBCs or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code

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## 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994

Australian Pesticides and Veterinary Medicines Authority approval number: 30613  
See also Section 2.

## 16. OTHER INFORMATION

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

**Preparation information**                      Replaces November 19, 2007 edition.  
Reasons for revision: Transport information

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