SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name	Baycor® 300 Fungicide Spray
Other names	none
Product code (UVP)	04242300
Chemical Group	triazole
Recommended use	Fungicide
Chemical Formulation	Emulsifiable concentrate (EC)
Company	Bayer Cropscience Pty Ltd –ABN 87 000 226 022 391-393 Tooronga Road, East Hawthorn Victoria 3123, Australia
Telephone	(03) 9248 6888
Technical Information Service	1800 804 479
Facsimile	(03) 9248 6800
Website	www.bayercropscience.com.au
Emergency telephone no.	1800 033 111 Orica SH&E Shared Services

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

HAZARDOUS SUBSTANCE DANGEROUS GOODS

Hazardous classification	Hazardous (National Occupational Health and Safety Commission - NOHSC)
R-phrase(s)	R23 - Toxic by inhalation. R38 - Irritating to skin. R41 - Risk of serious damage to eyes. R61 - May cause harm to the unborn child.
S-phrase(s)	See sections 4, 5, 6, 7, 8, 10, 12, 13.
ADG Classification	"Dangerous goods" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. - See Section 14.
SUSMP classification (Poison Schedule)	Schedule 6 (Standard for the Uniform Scheduling of Medicines and Poisons)

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature
Biteranol 300 g/l

Chemical Name	CAS-No.	Concentration [%]
Bitertanol	55179-31-2	27.70
N-Methyl-2-pyrrolidone	872-50-4	>= 50.00 - <= 55.00
Other ingredients (non-hazardous) to 100%		

SECTION 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 Safety Data Sheet to the doctor.

Inhalation
Call a physician or poison control center immediately. Move to fresh air. Keep patient warm and at rest.

Skin contact
Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.

Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Ingestion
Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth.

Notes to physician

Symptoms
Symptoms and hazards refer to the solvent., Gastrointestinal disturbance, Nausea, Vomiting

Treatment
Treat symptomatically.
There is no specific antidote.

SECTION 5. FIRE FIGHTING MEASURES

Suitable extinguishing media
Water spray
Carbon dioxide (CO2)
Foam
Dry powder
Sand

Hazards from combustion products
In the event of fire the following may be released:
Hydrogen cyanide (hydrocyanic acid)
Carbon monoxide (CO)
Nitrogen oxides (NOx)

Precautions for fire-fighting
Wear self-contained breathing apparatus and protective suit.
Contain the spread of the fire-fighting media.
Do not allow run-off from fire fighting to enter drains or water courses.

Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat.
Whenever possible, contain fire-fighting water by diking area with sand or earth.
Do not allow run-off from fire fighting to enter drains or water courses.

Hazchem Code •3Z

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid contact with spilled product or contaminated surfaces.
When dealing with a spillage do not eat, drink or smoke.
Keep unauthorized people away.
Remove all sources of ignition.
Use personal protective equipment.

Environmental precautions

Contain contaminated water and fire fighting water.
Do not allow to get into surface water, drains and ground water.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up

Clean contaminated floors and objects thoroughly, observing environmental regulations.
Keep in suitable, closed containers for disposal.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Reference to other sections

Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7. HANDLING AND STORAGE

Handling

Hygiene measures

Avoid contact with skin, eyes and clothing.
After each day's use, wash gloves, face shield or goggles and contaminated clothing.
Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.
Keep working clothes separately.
Remove soiled clothing immediately and clean thoroughly before using again.
Garments that cannot be cleaned must be destroyed (burnt).

Storage

Requirements for storage areas and containers

Keep out of the reach of children.
Store in a place accessible by authorized persons only.
Store in original container.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Keep away from direct sunlight.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

Flammability C1 Combustible Liquids Flash Point > 60 °C - <= 150 °C

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Control parameters	Update	Basis
N-Methyl-2-pyrrolidone	872-50-4	19 ppm (TWA)		OES BCS
N-Methyl-2-pyrrolidone	872-50-4	309 mg/m3 / 75 ppm (STEL)	08 2005	AU OEL

N-Methyl-2-pyrrolidone	872-50-4	103 mg/m3 / 25 ppm (TWA)	08 2005	AU OEL

N-Methyl-2-pyrrolidone 872-50-4 Skin designation: Can be absorbed through the skin.

For further details on the Occupational Exposure Standards, see Section 16.

Biological limit values
none

Personal protective equipment - End user

General advice	Eye wash facility and safety shower should be available.
Respiratory protection	AS/NZS 1715/1716 approved respirator Use respiratory protection for organic vapours.
Hand protection	Elbow-length PVC or nitrile gloves
Eye protection	Face-shield or goggles
Skin and body protection	Cotton overall buttoned to the neck and wrist Washable hat

Engineering Controls

Advice on safe handling
Use only in area provided with appropriate exhaust ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid, clear
Colour	brown
Odour	aromatic

Safety data

pH	3.0 - 8.0 at 1 % (23 °C)
Flash point	92 °C
Ignition temperature	290 °C
Upper explosion limit	9.5 %(V) The data refer to the solvent.
Lower explosion limit	1.3 %(V) The data refer to the solvent.
Vapour pressure	no data available
Relative vapour density	no data available
Density	ca. 1.08 g/cm³ at 20 °C

Water solubility	emulsifiable
Partition coefficient: n-octanol/water	no data available

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to avoid	Heat, flames and sparks. Elevated temperatures
Materials to avoid	Oxidizing agents Reducing agents Acids Bases
Hazardous Decomposition Products	Thermal decomposition can lead to release of: Hydrogen cyanide (hydrocyanic acid) Carbon monoxide Nitrogen oxides (NOx)
Hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions. Strong exothermic reaction with acids. Violent exothermic reaction with bases.

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Inhalation	Toxic by inhalation. Irritation of mucous membranes.
Skin	Irritating to skin.
Eye	Causes eye irritation.
Ingestion	Harmful if swallowed.
Acute oral toxicity	LD50 (rat) 5,000 mg/kg Test conducted with a similar formulation.
Acute inhalation toxicity	LC50 (rat) > 0.96 mg/l Exposure time: 4 h Determined in the form of a respirable aerosol. Highest attainable concentration. Test conducted with a similar formulation.
Acute dermal toxicity	LD50 (rat) > 5,000 mg/kg Test conducted with a similar formulation.
Skin irritation	Slight irritant effect - does not require labelling. (rabbit) Test conducted with a similar formulation.

Eye irritation	Severe eye irritation. (rabbit) Test conducted with a similar formulation.
Sensitisation	Non-sensitizing. OECD Test Guideline 406, Magnusson & Kligman test Test conducted with a similar formulation.
Chronic toxicity	Bitertanol did not cause specific target organ toxicity in experimental animal studies. N-methyl-2-pyrrolidone caused specific target organ toxicity in experimental animal studies in the following organ(s): testes.

Assessment Mutagenicity
Bitertanol was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
N-methyl-2-pyrrolidone was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity
Bitertanol was not carcinogenic in lifetime feeding studies in rats and mice.
N-methyl-2-pyrrolidone was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment Toxicity to Reproduction
Bitertanol caused reproduction toxicity in generation studies in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Bitertanol is related to parental toxicity.
N-methyl-2-pyrrolidone caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. N-methyl-2-pyrrolidone caused a reduced pup survival, a reduced litter size and a reduced pup weight.

Assessment developmental toxicity
Bitertanol caused developmental toxicity only at dose levels toxic to the dams. Bitertanol caused an increased incidence of non-specific malformations.
N-methyl-2-pyrrolidone caused developmental toxicity only at dose levels toxic to the dams.
N-methyl-2-pyrrolidone caused a reduced pup survival.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish	LC50 (Rainbow trout (Oncorhynchus mykiss)) 8.31 mg/l Exposure time: 96 h Test conducted with a similar formulation.
Toxicity to aquatic invertebrates	EC50 (Water flea (Daphnia magna)) 4.46 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient bitertanol.
Toxicity to aquatic plants	EC50 (Desmodesmus subspicatus) 5.75 mg/l Growth rate Exposure time: 72 h Test conducted with a similar formulation.

Toxicity to other organisms	LD50 (Colinus virginianus (Bobwhite quail)) 776 mg/kg The value mentioned relates to the active ingredient bitertanol.
Toxicity to other organisms	LD50 (Anas platyrhynchos (Mallard duck)) > 2,000 mg/kg The value mentioned relates to the active ingredient bitertanol.
Biodegradability	Inherently biodegradable. The value mentioned relates to the active ingredient bitertanol.
Biodegradability	Readily biodegradable. The value mentioned relates to N-methyl-2-pyrrolidone.
Stability in soil	In Soil : . Slightly mobile in soils The value mentioned relates to the active ingredient bitertanol.
Bioaccumulation	Bioconcentration factor (BCF): 160 The value mentioned relates to the active ingredient bitertanol.
Additional Environmental Information	no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Metal drums and plastic containers:
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 this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

SECTION 14. TRANSPORT INFORMATION

ADG

UN number	**3082**
Class	9
Subsidiary Risk	None
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BITERTANOL SOLUTION)
Hazchem Code	•3Z

According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code.

IMDG

UN number	**3082**
Class	9
Subsidiary Risk	None
Packaging group	III
EmS	F-A , S-F
Marine pollutant	YES

Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BITERTANOL SOLUTION)

IATA

UN number	**3082**
Class	9
Subsidiary Risk	None
Packaging group	III
Environm. Hazardous Mark	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BITERTANOL SOLUTION)

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994

Australian Pesticides and Veterinary Medicines Authority approval number: 30381

See also Section 2.

SECTION 16. OTHER INFORMATION

Trademark information Baycor® is a registered trademark of the Bayer Group.

This SDS 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 SDS 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.

Further details on the Occupational Exposure Standards mentioned in Section 8:

CEILING: Ceiling Limit Value
OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"
Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)
PEAK: Exposure Standard - Peak means a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.
STEL: Exposure standard - short term exposure limit (STEL): A 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.
SKIN_DES: Skin notation: Absorption through the skin may be a significant source of exposure.
TWA: Exposure standard - time-weighted average (TWA): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

END OF SDS