

MATERIAL SAFETY DATA SHEET



Date of Issue: December 21, 2007

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name Jockey® Stayer™ Seed Treatment Fungicide

Other names None

Product codes and pack sizes 79266839 (10 L); 79439326 (100 L); 79434782 (200 L); 79422679 (1000L).

Chemical group Triazole

Recommended use Fungicide for agricultural use – seed treatment

Formulation Flowable concentrate for seed treatment (FS)

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2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
HAZARDOUS SUBSTANCE (See risk phrases below) – DANGEROUS GOOD
TOXIC TO AQUATIC ORGANISMS

Hazard classification Hazardous (National Occupational Health and Safety Commission - NOHSC)

Risk phrases R20/22 - Harmful by inhalation and if swallowed.
R48/25 – Toxic: danger of serious damage to health by prolonged exposure if swallowed.

Safety phrases 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, PESTICIDE, LIQUID, TOXIC, N.O.S (contains fluquinconazole), UN 2902, Division 6.1, Packing Group III, Marine Pollutant. See Section 14.

SUSDP classification (Poison Schedule) Schedule 6 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration (g/L)
Fluquinconazole	[136426-54-5]	167
Propane-1,2-diol	[57-55-6]	> 100 to < 125
Other ingredients, including water	(non hazardous)	Remainder

MATERIAL SAFETY DATA SHEET



Date of Issue: December 21, 2007

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 move to fresh air and keep at rest. Obtain medical advice if symptoms persist.
Skin contact	Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical aid if symptoms persist.
Eye contact	Rinse eyes immediately with clean water for at least 15 minutes, holding eye open. Seek medical attention.
Ingestion	Wash out mouth with water. Do NOT induce vomiting. Keep patient at rest and seek URGENT medical advice as above.
First Aid Facilities	Ensure eyewash and shower facilities are available.
Medical attention	<i>Local contamination:</i> Symptoms: None known Treatment: Initial treatment should be symptomatic and supportive after decontamination. <i>Systemic poisoning:</i> Symptoms: Lethargy, weakness, ataxia, muscle twitching, incontinence. Treatment: Monitoring of respiratory, cardiac and central nervous system. Carefully monitor liver function. Gastric lavage, followed by administration of an aqueous suspension of activated charcoal to absorb remaining toxicant. There is no specific antidote.

5. FIRE FIGHTING MEASURES

Extinguishing media	Water spray, alcohol-resistant foam, dry chemical, carbon dioxide Product itself is non combustible; choose fire extinguishing media to suit surroundings.
Hazards from combustion products	Dangerous gases may be evolved in a fire.
Precautions for fire fighters	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. Otherwise, spray unopened containers with water to keep cool. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of extinguishing agent and spillage safely later.
Hazchem code	2X

MATERIAL SAFETY DATA SHEET



Date of Issue: December 21, 2007

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled material or contaminated surfaces. 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. Contain spill and absorb with earth, sand, clay, or other absorbent material. Prevent spilled material from entering drains or watercourses. 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.

7. HANDLING AND STORAGE

Handling Keep out of reach of children. May irritate eyes. Avoid contact with eyes and avoid inhalation of dust from grain or treated seed. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

Do not allow seed treated with this product to contaminate seed intended for human or animal consumption. Bags which have held treated seed are not to be used for any other purpose.

Storage Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Do not store near foodstuffs or animal feed. When treated seed is stored it should be kept apart from other grain, animal feed or foodstuffs in a cool, dry storage area. The bags or other containers should be clearly marked to indicate the contents have been treated with this product.

Flammability Product is not combustible.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards The NOHSC exposure standards for propane-1,2-diol are:
Vapour and particulates - TWA 150 ppm, 474 mg/m³
Particulates only - TWA 10 mg/m³

Definition

Exposure standard – Time Weighted Average (TWA) means the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.

Biological limit values None allocated

Engineering controls Control process conditions to avoid contact. Use local exhaust ventilation during manufacture. Use in a well-ventilated area only.

Personal Protective Equipment

Eyes:	Safety goggles if exposure is possible
Clothing:	Cotton overalls buttoned to the neck and wrist or equivalent clothing and a washable hat.
Gloves:	Elbow-length PVC gloves
Respiratory:	If inhalation of product or dust from grain or treated seed is likely, an AS/NZS 1715/1716 approved respirator suitable for fine dust should be worn.

MATERIAL SAFETY DATA SHEET



Date of Issue: December 21, 2007

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Viscous red suspension
Odour:	Negligible
pH:	5.5 to 7.5
Vapour pressure:	Not available
Vapour density:	Not available
Boiling point:	Not available
Freezing/melting point:	Not available
Solubility:	Miscible with water
Density:	Approximately 1.065 g/mL at 20° C
Flash Point:	Not combustible
Flammability (explosive) limits:	Not available
Auto-ignition temperature:	Not available
Partition coefficient (octanol/water):	<i>Fluquinconazole</i> : Log P_{ow} = 3.24 (pH 5.6)

10. STABILITY AND REACTIVITY

Chemical stability	Stable under normal conditions of use.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	None
Hazardous decomposition products	Dangerous gases may be evolved in a fire.
Hazardous reactions	None

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Inhalation	Harmful if inhaled.
Skin contact	Not irritating or sensitising to skin in animal tests.
Eye contact	May irritate the eyes.
Ingestion	Harmful if swallowed.

MATERIAL SAFETY DATA SHEET



Date of Issue: December 21, 2007

11. TOXICOLOGICAL INFORMATION - continued

ANIMAL TOXICITY DATA - SIMILAR PRODUCT

Acute:

Oral toxicity LD₅₀ rat: 300 - 2000 mg/kg

Dermal toxicity LD₅₀ rat: > 4000 mg/kg

Inhalation toxicity Not available

Skin irritation Non irritating (rabbit)

Eye irritation Non irritating (rabbit)

Sensitisation Non sensitising (guinea pig)

Chronic:

Fluquinconazole was not mutagenic in a battery of genotoxicity tests. It did not show carcinogenic or teratogenic effects in animal experiments.

12. ECOLOGICAL INFORMATION

Toxic to fish and other aquatic organisms. Fluquinconazole has a low hazard to birds and earthworms. DO NOT feed treated seed or otherwise expose to wildlife or domestic birds. DO NOT contaminate streams, rivers, or waterways with the chemical, used containers, treated seed or bags which have held treated seed.

Ecotoxicity

Fluquinconazole:

Fish toxicity: LC₅₀ (96 h) rainbow trout (*Onchorhynchus mykiss*) 1.9 mg/L

LC₅₀ (96 h) bluegill sunfish 1.34 mg/L

Daphnia toxicity: EC₅₀ (48 h) water flea (*Daphnia magna*) > 5 mg/L

Algal toxicity: Growth rate: E_bC₅₀ (96 h) algae (*Selenastrum capricornutum*) 0.014 mg/L

Bird toxicity: Acute oral LD₅₀ bobwhite quail and mallard duck > 2000 mg/kg

Environmental fate, persistence and degradability, mobility

Fluquinconazole is degraded in soil under aerobic and anaerobic conditions. Dissipation is mainly a hydrolytic process, but further degradation and mineralisation involves microbial action. The metabolites are finally transformed to soil-bound residues and CO₂. Degradation rates depend on temperature, soil moisture, soil pH and organic matter content. Typical field DT₅₀ is 50-300 days. Fluquinconazole is strongly adsorbed to soils – K_{oc} > 738. Soil column leaching models demonstrated that fluquinconazole will not leach to deeper soil layers and contaminate groundwater.

Bioconcentration factor (BCF): 87

13. DISPOSAL CONSIDERATIONS

10, 200 L: Triple or (preferably) pressure rinse containers before disposal. Dispose of rinsings in disposal pit, or use for diluting product to required volume. 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.

MATERIAL SAFETY DATA SHEET



Date of Issue: December 21, 2007

13. DISPOSAL CONSIDERATIONS - continued

100 L; 1000 L Schutz and conventional containers with dry break connection: Empty container by pumping through the dry-break connection system. Do not attempt to unscrew the valve or breach the locked filling point. Do not contaminate the container with water or other foreign material. Ensure that the coupler, pump, meter and hoses are disconnected, triple rinsed with clean water and drained after each use. When empty, or contents no longer required, return the container to the point of purchase. This container remains the property of Bayer CropScience Pty Ltd.

Schutz container with camlock valve connection: If tamper evident seals are broken prior to initial use then the integrity of the contents cannot be assured. The container must be vented before discharging contents. To empty connect a camlock fitted hose to the bottom valve. Remove top cap when discharging for venting purposes. When the container is empty, close all caps and valves and return the container to the point of purchase.

14. TRANSPORT INFORMATION

UN number	2902
Proper shipping name	PESTICIDE, LIQUID, TOXIC, N.O.S. (contains fluquinconazole)
Class and Subsidiary Risk	Division 6.1 No subsidiary risk
Packing Group	III
EPG	Guide 34 - Dangerous Goods - Initial Emergency Response Guide
Hazchem code	2X
Marine Pollutant	Yes

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988.

Australian Pesticides and Veterinary Medicines Authority approval number: 62522.

See also Section 2.

16. OTHER INFORMATION

Trademark information Jockey® is a Registered Trademark of Bayer.
Stayer™ is a Trademark of Bayer.

Preparation information New MSDS.

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