

MATERIAL SAFETY DATA SHEET



Emergency Phone: 1800-033-882 (24 hrs)
Dow AgroSciences Australia Ltd.
Frenchs Forest NSW 2086

MYCLOSS* XTRA FUNGICIDE

Effective Date: 14 August 2006
Product Code: 105919

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Mycloss Xtra Fungicide

PURPOSE: Fungicide

COMPANY IDENTIFICATION:

Dow AgroSciences Australia Ltd.
ABN 24 003 771 659
Level 5, 20 Rodborough Road,
Frenchs Forest NSW 2086

Customer Service Toll Free Number:
1800 700 096
(Mon-Fri, 8am-5pm EST)
Emergency Telephone Number:
1800 033 882
(24 hours) (EMERGENCIES ONLY)

Transport Emergency Only Dial 000

2. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

Classified as hazardous according to the criteria of
NOHSC
Not classified as Dangerous Goods for Land
Transport

Potential Health Effects: Irritating to eyes, skin and
respiratory system.

RISK PHRASES:

R36/R63/R65: Irritating to eyes. Possible risk of harm to
the unborn child. Harmful: May cause
lung damage if swallowed.

R50/53: Very toxic to aquatic organisms, may cause
long-term adverse effects in the aquatic
environment.

SAFETY PHRASES:

S2: Keep out of the reach of children.
S23: Do not breathe vapour or spray.
S62: If swallowed, do not induce vomiting: seek medical
advice immediately and show the container or label.
S61: Avoid release to the environment. Refer to special
instructions (see sections 6, 7, 13).

3. COMPOSITION/INFORMATION ON INGREDIENTS:

Ingredient	CAS #	Content % w/w
Myclobutanil	88671-89-0	20.0
Propylene Glycol	57-55-6	6.0
Liquid hydrocarbons	64742-94-5	26.7
Balance not contributing to hazard		47.3

4. FIRST AID:

Consult the Poisons Information Centre (Australia 131126) or a doctor in every case of suspected chemical poisoning. Never give fluids or induce vomiting if a patient is unconscious or convulsing regardless of cause of injury. If breathing difficulties occur seek medical attention immediately.

EYE: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing eyes. Call the Poisons Information Centre or doctor for treatment advice.

SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call the Poisons Information Centre or doctor for treatment advice.

INGESTION: Immediately call the Poisons Information Centre or doctor. Do not induce vomiting unless told to do so by the Poisons Information Centre or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

INHALATION: Move person to fresh air. If person is not breathing, call 000 (ambulance) and then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call the Poisons Information Centre or doctor for treatment advice. If breathing is difficult, oxygen should be administered by qualified personnel.

MATERIAL SAFETY DATA SHEET



Emergency Phone: 1800-033-882 (24 hrs)
Dow AgroSciences Australia Ltd.
Frenchs Forest NSW 2086

MYCLOSS* XTRA FUNGICIDE

Effective Date: 14 August 2006
Product Code: 105919

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. If lavage is performed, suggest endotracheal and/or oesophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. The decision of whether to induce vomiting or not should be made by a physician. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower GI tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/oesophageal control if lavage is done. Respiratory symptoms, including pulmonary oedema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES:

FLASH POINT: > 100°C
COMBUSTIBLE: C1

AUTO-IGNITION TEMPERATURE: 420°C (solvent)

FLAMMABLE LIMITS

LFL: 1.1% (solvent)
UFL: 12.6% (solvent)

EXTINGUISHING MEDIA: Use the following extinguishing media when fighting fires involving this material: carbon dioxide, dry chemical, or water spray.

FIRE AND EXPLOSION HAZARDS: Pesticide particulates can become airborne. Combustion generates toxic fumes of the following: hydrogen chloride and/or hydrogen cyanide.

FIRE-FIGHTING EQUIPMENT: Use positive-pressure, self-contained breathing apparatus and full protective equipment.

SPECIAL PROCEDURES: Use water spray to cool containers exposed to fire. Contain run-off. Remain upwind. Avoid breathing smoke.

HAZCHEM: 2X

6. ACCIDENTAL RELEASE MEASURES:

ACTION TO TAKE FOR SPILLS/LEAKS: DO NOT touch or walk through spilled material. Wear a face shield or goggles, overalls buttoned to neck and wrist, chemical resistant gloves and boots. Stop leak when safe to do so. Dike area and prevent entry into waterways, and drains.
Small spills/leaks: Absorb with material such as sand, soil or sawdust. Collect spilled product and place in sealable container for disposal. Spill residues may be cleaned using water and detergent. Contain and absorb wash water for disposal. Absorb and collect washings and place in the same sealable container for disposal. Dike the area of large spills and report them to Dow AgroSciences at 1800-033-882.

7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

HANDLING: Keep out of reach of children. Harmful if swallowed, inhaled, or absorbed through skin. Causes eye and skin irritation. Avoid contact with eyes, skin and clothing. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

STORAGE: Store in tightly closed original container in a cool, dry well-ventilated area out of direct sunlight when not in use. Do not store with food, feedstuffs, fertilizers and seeds. See product label for further handling/storage precautions relative to the end use of this product. Reduce stacking height where local conditions can affect packaging strength.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions

EXPOSURE GUIDELINES:

Myclobutanil: Dow AgroSciences Industrial Hygiene Guide is 1 mg/M³ TWA and 3 mg/M³ STEL.
Propylene glycol: TWA 150 ppm, 474 mg/M³ (particulates & vapour); 10 mg/M³ (particulates) (NOHSC)
Hydrocarbon liquid ACGIH TWA = 100 ppm vapour or 5 mg/M³ aerosol.

*Trademark of Dow AgroSciences LLC

MATERIAL SAFETY DATA SHEET



Emergency Phone: 1800-033-882 (24 hrs)
Dow AgroSciences Australia Ltd.
Frenchs Forest NSW 2086

MYCLOSS* XTRA FUNGICIDE

Effective Date: 14 August 2006
Product Code: 105919

Note: Product contains solvents. Solvents may be absorbed through the skin or assist in transporting other ingredients through the skin, including mucous membranes and the eyes either by contact with vapours or by direct skin contact. Precautions against dermal absorption are recommended.

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

EYE/FACE PROTECTION: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

SKIN PROTECTION: Use gloves chemically resistant to this material. Laminated film, nitrile and supported PVA gloves are suitable.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator.

APPLICATORS AND ALL OTHER HANDLERS: Refer to the product label for personal protective clothing and equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES:

COLOUR: Yellow
APPEARANCE: Clear liquid
ODOUR: Aromatic
pH: 4.8 (5% solution)
SPECIFIC GRAVITY (WATER = 1): 0.928
VAPOUR DENSITY (AIR = 1): 4.1 (solvent)
VAPOUR PRESSURE: 4.4 mmHg @ 20 °C (solvent)
BOILING POINT: 156 - 173 °C (solvent)
SOLUBILITY IN WATER: Emulsifies
PERCENT VOLATILITY: 75%
CORROSIVENESS: Not corrosive

10. STABILITY AND REACTIVITY:

STABILITY: Stable under normal storage conditions. Avoid contact with ignition sources (e.g. sparks, open flame, and heated surfaces).

INCOMPATIBILITY: (specific materials to avoid) Avoid contact with strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may yield hydrogen chloride gas.

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION:

POTENTIAL HEALTH EFFECTS: This section includes possible adverse effects, which could occur if this material is not handled in the recommended manner.

EYE: May cause moderate irritation with corneal injury. Vapour may cause severe eye irritation and corneal injury. Vapour may cause lacrimation (tears).

SKIN: Contact may cause moderate skin irritation with local redness. The LD₅₀ for skin absorption in rats is >2000 mg/kg. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Did not cause allergic skin reactions when tested in guinea pigs.

INGESTION: Low toxicity if swallowed. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Swallowing may result in gastrointestinal irritation or ulceration. Aspiration into the lungs may occur during ingestion or vomiting. The oral LD₅₀ for rats is 3749 mg/kg (females) and >5000 mg/kg (males)

INHALATION: Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause central nervous system effects. Symptoms of excessive exposure may include anaesthetic or narcotic effects; dizziness and drowsiness may be observed.

*Trademark of Dow AgroSciences LLC

MATERIAL SAFETY DATA SHEET



Emergency Phone: 1800-033-882 (24 hrs)
Dow AgroSciences Australia Ltd.
Frenchs Forest NSW 2086

MYCLOSS* XTRA FUNGICIDE

Effective Date: 14 August 2006
Product Code: 105919

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: For myclobutanil, in animals, effects have been reported on the following organs: liver, testes, adrenal gland, kidney, and thyroid. For the solvent, in animals, effects have been reported on the following organs: central nervous system, kidney, liver, lungs, thyroid and urinary tract. Symptoms of excessive exposure may include anaesthetic or narcotic effects; dizziness and drowsiness may be observed. Hypothermia has occurred in animals following skin or inhalation exposures to solvents. Cataracts and other eye effects have been reported in humans repeatedly exposed to naphthalene vapour, a potential impurity in the solvent.

CANCER INFORMATION: Myclobutanil did not cause cancer in laboratory animals. Solvent may contain naphthalene, which has caused cancer in some laboratory animals.

TERATOLOGY (BIRTH DEFECTS): Myclobutanil did not cause birth defects in laboratory animals. Myclobutanil has been toxic to the foetus in laboratory animals at doses less than those toxic to the mother.

REPRODUCTIVE EFFECTS: For myclobutanil, in laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

MUTAGENICITY: For myclobutanil, in-vitro and animal genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL DATA:

DEGRADATION & PERSISTENCE:

Based largely or completely on information for this formulation.

Inhibitory concentration (IC₅₀) in OECD Activated Sludge Respiration Inhibition Test (OECD Test No. 209) is 71 mg ai/L.

ECOTOXICOLOGY:

Based largely or completely on information for myclobutanil. Material is highly toxic to aquatic organisms on an acute basis (LC₅₀ or EC₅₀ is between 0.1 and 1 mg/L in the most sensitive species tested).

Material is practically non-toxic to birds on a dietary basis (LC₅₀ is >5000 ppm).

Material is slightly toxic to birds on an acute basis (LD₅₀ is between 501 and 2000 mg/kg).

Based largely or completely on information for this formulation.

Acute LC₅₀ in rainbow trout (*Oncorhynchus mykiss*) is 10.3 mg/L.

Acute immobilization EC₅₀ in water flea (*Daphnia magna*) is 7.1 mg/L.

Growth inhibition EC₅₀ in green alga (*Selenastrum capricornutum*) is 8.6 mg/L.

Acute contact LD₅₀ in honeybee (*Apis mellifera*) is >200 µg/bee.

Acute oral LD₅₀ in honeybee (*Apis mellifera*) is >171 µg/bee.

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulations. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws and regulations.

MATERIAL SAFETY DATA SHEET



Emergency Phone: 1800-033-882 (24 hrs)
Dow AgroSciences Australia Ltd.
Frenchs Forest NSW 2086

MYCLOSS* XTRA FUNGICIDE

Effective Date: 14 August 2006
Product Code: 105919

14. TRANSPORT INFORMATION:

ROAD AND RAIL TRANSPORT: Not classified as dangerous goods for transport by road and rail by the criteria of the Australian Dangerous Goods Code (ADG 6),

MARINE and AIR: Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG) and by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulation.

UN No: 3082

Class: 9

Packing group: III

SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (MYCLOBUTANIL)

15. REGULATORY INFORMATION:

APVMA APPROVAL NUMBER: 60013

POISON SCHEDULE: 5

16. OTHER INFORMATION:

Glossary

ACGIH: American Conference of Governmental Industrial Hygienists.

AIHA WEEL: American Industrial Hygiene Association's Workplace Environmental Exposure Level.

BCF: Bioconcentration Factor - a measure for the characterization of the accumulation of a chemical in an organism. It is defined as the concentration of a chemical in an organism (plants, microorganisms and animals) divided by the concentration in a reference compartment (e.g. food, surrounding water).

Dow AgroSciences Industrial Hygiene Guideline: An internal company standard based on an 8 hour TWA.

EC₅₀: median effective concentration. Statistically derived concentration of a substance in an environmental medium expected to produce a certain effect in 50% of test organisms in a given population under a defined set of conditions.

Explosive Limits - The range of concentrations (% by volume in air) of a flammable gas or vapour that can result in an explosion for ignition in a confined space.

K_{oc} - the organic carbon partition coefficient (mL soil water /g organic carbon).

LC₅₀ - Lethal Concentration 50%. A concentration of chemical in air or water that will kill 50% of the test organisms.

LD₅₀ - Lethal Dose-50%. The dose of a chemical that will kill 50% of the test animals receiving it.

NOHSC: National Occupational Health and Safety Commission of Australia now the Office of the Australian Safety and Compensation Council.

OSHA: American Occupational Safety and Health Administration.

PEL: Permissible Exposure Level, a maximum allowable exposure level by law.

pH - Measure of how acidic or alkaline a material is using a 1 - 14 scale. pH 1 is strongly acidic and pH 14 strongly alkaline.

Polymerisation - a chemical reaction in which small molecules (monomers) combine to form much larger molecules (polymers). A hazardous polymerisation reaction is one that occurs at a fast rate and releases large amounts of energy.

P_{ow} - The octanol-water partition coefficient is the ratio of the concentration of a chemical in octanol and in water at equilibrium and at a specified temperature. Octanol is an organic solvent that is used as a surrogate for natural organic matter. This parameter is used in many environmental studies to help determine the fate of chemicals in the environment.

STEL: Short-Term Exposure Limit. A term used to indicate the maximum average concentration allowed for a continuous 15 minute exposure period.

TVL: Threshold Limit Value, an exposure limit set by a competent authority

TWA - Time Weighted Average. The average concentration of a chemical in air over the total exposure time - usually an 8 hour work day.

References

AS/NZS 1715-1994 Selection Use and Maintenance of Respiratory Protective Devices.

ASNZS 1716 - 1994 Respiratory protective devices.

Australian Dangerous Goods Code

NOHSC Hazardous Substances Information System.

FOR FURTHER PRODUCT INFORMATION CALL DOW AGROSCIENCES CUSTOMER SERVICE REPRESENTATIVES TOLL FREE 1800 700 096 DURING BUSINESS HOURS.

*Trademark of Dow AgroSciences LLC

MATERIAL SAFETY DATA SHEET



Emergency Phone: 1800-033-882 (24 hrs)
Dow AgroSciences Australia Ltd.
Frenchs Forest NSW 2086

MYCLOSS* XTRA FUNGICIDE

Effective Date: 14 August 2006
Product Code: 105919

This MSDS has been compiled using publicly available information, information provided by suppliers of ingredients used in the product and internal studies on the product and/or its ingredients.

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 BASED ON PUBLICLY AVAILABLE AND INTERNALLY AVAILABLE INFORMATION. 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 FUTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY. THE 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.

© Dow Agrosiences Australia Ltd 2006