MATERIAL SAFETY DATA SHEET

SECTION 1  IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Apparent Epoxiconazole 125 SC Fungicide

Other Names: Epoxiconazole. Group 3 Fungicide. Triazole fungicide.

Use: Agricultural fungicide for control of certain fungal diseases in wheat, barley and canola when mixed with fertilizer.

Company: Apparent Pty Ltd.

Address: Suite G.08, 762 Toorak Road, Glen Iris VIC 3146
PO Box 3092, Cotham PO, Kew, Vic 3101

ACN/ABN: 143 724 136

Telephone Number: 03 9817 5536  Fax Number: 03 9817 7845

Emergency Contact: 0411 227 338

Email: wwardell@bigpond.net.au

SECTION 2  HAZARDS IDENTIFICATION

Classified as hazardous according to criteria of Safe Work Australia.
Not classified as a Dangerous Good according to the ADG Code.

Risk Phrases: R36/38 Irritating to eyes and skin.
R40 Limited evidence of a carcinogenic effect.
R43 May cause sensitisation by skin contact.
R62 Possible risk of impaired fertility.
R63 Possible risk of harm to the unborn child.
R65 Harmful: may cause lung damage if swallowed.

Safety Phrases: S2 Keep out of reach of children.
S13 Keep away from food, drink and other animal foodstuffs.
S20/21 When using do not eat or drink/smoke.
S24/25 Avoid contact with skin/eyes.
S37/37/39 Wear suitable protective clothing, gloves and eye/face protection.

SECTION 3  COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>CAS NUMBER</th>
<th>PROPORTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epoxiconazole</td>
<td>133855-98-8</td>
<td>125 g/L</td>
</tr>
<tr>
<td>Liquid hydrocarbon</td>
<td>64742-94-5</td>
<td>10-30%</td>
</tr>
<tr>
<td>Preservative Mixture</td>
<td>Mixture</td>
<td>&lt; 5%</td>
</tr>
</tbody>
</table>

Other ingredients (including water) determined not to be hazardous

Balance

SECTION 4  FIRST AID MEASURES

FIRST AID


Eye contact: Flush eyes with clean running water until product is removed. Seek medical advice if irritation persists.

Skin contact: Remove contaminated clothing. Wash thoroughly under running water using a mild soap. Seek medical advice if irritation, reddening and/or other damage occurs. Launder contaminated clothing before re-use.
Inhalation: Remove victim from exposure. Keep at rest until fully recovered. Seek medical advice if effects persist.

Advice to Doctor: Treat symptomatically. If vomiting occurs, solvent and surfactants present may cause pulmonary pneumonitis.

SECTION 5  
FIRE FIGHTING MEASURES

Extinguishing media: Product is non-flammable. Extinguish fire using media suited to burning material. If containers are ruptured contain all runoff. If the water in the formulation is evaporated by prolonged heating, the residue will burn.

Hazards from combustion products: Product is likely to decompose after heating to dryness and continued strong heating and will emit toxic fumes. Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or smoke.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind residents. Wear full protective clothing and self contained breathing apparatus. Do not breathe smoke or vapours generated.

SECTION 6  
ACCIDENTAL RELEASE MEASURES

Emergence procedures / Material and methods for containment and cleanup procedures:
Accidental release: Wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves and halfpiece respirator. Evacuate unprotected and unnecessary personnel from area of spill. If material is leaking from a container, stop the leak only if this can be done safely. Prevent spillage entering drains or watercourse.

In the case of spillage, stop leak if safe to do so, and contain spill and absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste as indicated in section 13 or according to the Australian Standard 2507 - Storage and Handling of Pesticides. Soil is a suitable absorbent, especially soils high in clay. Soil can be used to form bunds to contain spillage. Contaminated soil should be collected for disposal at a suitable landfill. Personal protective equipment and clothing should be washed with soapy water. Keep out animals and unprotected persons.

SECTION 7  
HANDLING AND STORAGE

Precautions for Safe Handling: Harmful if inhaled or swallowed. Will irritate the eyes, nose and throat and skin. Avoid contact with eyes and skin. Do not inhale vapours. If product on skin, immediately wash area with soap and water. Wash hands after use. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves and halfpiece respirator. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat. After each day’s use, wash gloves, respirator and if rubber, wash with warm water. Wash contaminated clothing.

Conditions for Safe Storage: Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. This product is a Schedule 5 Poison (S5) and must be stored and sold in accordance with the relevant Health Department regulations.

SECTION 8  
EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines: Exposure guidelines have not been established for this product by Safe Work Australia, however the manufacturer of a solvent recommends the following guideline:

<table>
<thead>
<tr>
<th>Atmospheric Contaminant</th>
<th>Exposure Standard (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid Hydrocarbon</td>
<td>100 mg/m³ (15 ppm)</td>
</tr>
</tbody>
</table>

*TWA = Time-Weight Average*

Biological Limit Values: No biological limit allocated.
SECTION 8  EXPOSURE CONTROLS / PERSONAL PROTECTION (Continued)

**Engineering controls:**
Use in ventilated areas. Supplement natural ventilation if necessary.
Keep containers closed when not in use. No special engineering controls are required.

**Personal Protective equipment (PPE):**
**General:** When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves and halfpiece respirator. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat. After each day's use, wash gloves, respirator and if rubber, wash with warm water. Wash contaminated clothing.

SECTION 9  PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Clear beige liquid suspension.
**Odour:** Faint aromatic odour.
**Boiling point:** No data available.
**Freezing point:** No data available.
**Solubility in Water:** Product will be suspended in water, not dissolved.
**pH:** 4 - 7.
**Specific Gravity:** Approximately 1.1
**Flammability:** Non-Combustible liquid, unless dried.
**Poisons Schedule:** S5.

SECTION 10  STABILITY AND REACTIVITY

**Chemical Stability:** Product should be stable in storage for at least 2 years after manufacture. Some settling might occur, and containers should be agitated at least once every 12 months to resuspend any sediment.

**Conditions to avoid:** Do not store for prolonged periods in direct sunlight.

**Incompatible materials:** Strong acids, bases or oxidizing agents.

**Hazardous decomposition products:** Product is likely to decompose after heating to dryness and continued strong heating and will emit toxic and noxious fumes.

**Hazardous reactions:** Not likely to polymerise.

SECTION 11  TOXICOLOGICAL INFORMATION

No specific data is available for this product as no toxicity tests have been conducted on this product. Information presented is our best judgement based on similar products and/or individual components. As with all products for which limited data is available, caution must be exercised through the use of protective equipment and handling procedures to minimise exposure.

**Potential Health Effects:**

**ACUTE EFFECTS**

**Swallowed:** Acute Oral LD\(_{50}\) (rat) > 2200 mg/kg. Accidental swallowing of small amounts of this product is not expected to cause injury – low acute oral toxicity.

**Eye:** Eye contact may cause irritation.

**Skin:** Acute dermal LD\(_{50}\) (rat) > 2,000 mg/kg. May cause irritating with prolonged contact, not a sensitisiser.

**Inhaled:** Breathing in high concentrations of vapours or aerosols of this material may cause headache, nausea, dizziness and weakness.

**Acute toxicity:**
Safe Work Australia has classified epoxiconazole in the occupational environment as a Carcinogen Category 3 substance. This means that the substance is not classifiable as to carcinogenicity to humans. Regarded as causing developmental toxicity in humans based on strong presumption from studies on rats and rabbits. Possible risk of impaired fertility based on small but significant effects on reproduction in a 2nd generation study of rats.
SECTION 12  ECOLOGICAL INFORMATION

Environmental Toxicology: Toxic to aquatic organisms. The product is moderately toxic to fish. Fish: Rainbow trout 96 hr \( LC_{50} = 3.14 \) mg/L; Bluegill sunfish 96 hr \( LC_{50} = 4.6 \) mg/L. Invertebrates \( Daphnia magna \) 48 hr \( EC_{50} = 8.7 \) mg/L; algae 72 hr \( EC_{50} = 2.3 \) mg/L. Highly toxic to sediment dwelling organisms: \( Chironomus riparius \) 96 hr \( LC_{50} = 0.0625 \) mg/L. It is not considered as harmful to birds or bees \( LD_{50} \) quail: > 2000 mg/kg; Bees: \( LD_{50} > 100 \) \( \mu g/\)bee. Highly toxic to earthworms: \( Eisenia fetida \) \( LC_{50} = 0.084 \) mg/kg.

Environmental Fate: This product is biodegradable and has a low bio-concentration factor of 70. However, likely to degrade slowly in the soil – \( DT_{50} = 354 \) days. Water \( DT_{50} = 66 \) days and in water sediment \( DT_{50} = 120 \) days.

SECTION 13  DISPOSAL CONSIDERATIONS

Spills and Disposal: Persons involved in cleanup require adequate skin protection - see section 8. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with detergent and water and add the solution to the drums of wastes already collected and label contents. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities.

Disposal of empty containers: Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. 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 deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

SECTION 14  TRANSPORT INFORMATION

Road & Rail Transport: This product is exempt from classification as a Dangerous Good in packs less than 3,000 kg or litres under the Australian Code for the Transport of Dangerous Goods by Road and Rail. For bulk shipments this product is a class 9, UN 3082.

Marine and Air Transport: Apparent Epoxiconazole 125 SC Herbicide is classified as a Marine Pollutant according to International Maritime Dangerous Goods (IMDG) Code and the International Air transport Association (IATA). If transporting by sea or air the following Dangerous Goods Classification applies:- UN 3082, Class 9 (Miscellaneous Dangerous Goods), Packing Group III, Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains 50% Epoxiconazole). Hazchem code ●3Z. Hazard Identification Number (HIN) 90. Emergency Guide 47 (Australian Standards).

This product is a Schedule 5 Poison (S5) and must be stored, transported and sold in accordance with the relevant Health Department regulations.

SECTION 15  REGULATORY INFORMATION

Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a schedule 5 poison. This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 67738. This product is classified as a Hazardous Substance under the criteria of Safe Work Australia. Xn: Harmful. This product is exempt from classification as a Dangerous Good in packs less than 3,000 kg or litres under the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th Ed).
SECTION 15 REGULATORY INFORMATION (Continued)

Requirements concerning special training:
Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

SECTION 16 OTHER INFORMATION

Issue Date: 21 January 2013. Valid for 5 years. (First issue).

Key to abbreviations and acronyms used in this MSDS:
Carcinogen: An agent which is responsible for the formation of a cancer.
Genotoxic: Capable of causing damage to genetic material, such as DNA.
HSIS: Hazardous Substances information System.
Lacrimation: The production, secretion, and shedding of tears.
Lavage: A general term referring to cleaning or rinsing.
Mutagen: An agent capable of producing a mutation.
Pneumonitis: A general term that refers to inflammation of lung tissue.
PPE: Personal protective equipment.
Teratogen: An agent capable of causing abnormalities in a developing foetus.
TWA: The Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life.
Safe Work Australia: Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

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.

End MSDS