

SAFETY DATA SHEET

17/11/05

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Dow AgroSciences Limited

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Product Name: **INDAR 5EW FUNGICIDE (GF-1339) : MAPP 09518 & 09644**

LV70: 104168

Issue Date: Sep 05

Ref: PS014

2. COMPOSITION/INFORMATION ON INGREDIENTS

Dangerous components (see section 16 for complete R-phrases):

			CAS	EC No
Fenbuconazole	5%	N; R50/53	114369-43-6	406-140-2
Cyclohexanone	10-20%	Xn; R20, R10	108-94-1	203-631-1
Solvent naphtha (petro- leum), heavy aromatic	40-50%	Xn,N; R51/53- 65-66	64742-94-5	265-198-5
Naphthalene (Carc.Cat 3)	<1%	Xn,N; R22-40 50/53	91-20-3	202-049-5
Mesitylene	<1%	Xi,N; R10-37 -51/53	108-67-8	203-604-4
1,2,4-trimethylbenzene	<1%	Xn,N; R10-20- 36/37/38-51/53	95-63-6	202-436-9
Alkoxyated alcohol	<5%	Xi; R36/38	9038-95-3	
Alkyl aryl sulfonate	<5%	Xi,N; R38-41 -51/53	68953-96-8	273-234-6
plus				
Inert ingredients	Balance			
Composition Code	GF1339			

3. HAZARDS IDENTIFICATION

Irritating to eyes. Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

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4. FIRST-AID MEASURES

Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

Ingestion

Do not induce vomiting. Call a physician. The decision of whether to induce vomiting or not should be made by a physician.

Eye Contact

Flush eyes thoroughly with water for several minutes. Remove contact lenses after initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Skin Contact

Wash off in flowing water or shower, use soap if available.

Inhalation

Remove to fresh air. Consult a physician.

Note to Physician

Supportive care. Treatment based on judgement of physician in response to symptoms of patient. This material contains a mixture of solvents. Signs of toxicity are most likely to be due to the solvent. Signs and symptoms of excessive exposure may be central nervous system effects such as headache, dizziness or anaesthesia. If lavage is performed, suggest endotracheal and/or oesophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Water fog or fine spray. Carbon dioxide. Foam. Dry chemical powder.

Hazardous Combustion Products

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.

Combustion products include: Sulphur oxides. Hydrogen chloride. Nitrogen oxides.

Protection of Firefighters

Wear protective clothing and use self-contained breathing apparatus.

Additional Information

Keep containers cool by spraying with water. Contain runoff to prevent entry into water or drainage systems. Work upwind of any spill. Avoid breathing smoke.

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6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Wear appropriate safety clothing and eye/face protection (see Section 8). Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly.

Environmental Precautions

Do not wash into sewers or into any body of water. Advise water authority if spillage has entered water course or drainage system.

Methods of Cleaning Up

Soak up with sand or other non-combustible absorbent material and place into containers for disposal. For large spills, barricade area and consult manufacturer. If further assistance is required, telephone the emergency contact number.

Additional Information

Eliminate all ignition sources. Ventilate area of leak or spill. Do not breathe vapours.

7. HANDLING AND STORAGE

Handling

Avoid eye and skin contact. Containers should be grounded before product is transferred to reduce risk of spark by static electricity. Use good personal hygiene. Do not consume or store food in the work area. Wash hands and exposed skin before eating, drinking or smoking and after work.

Storage

Product should be stored in compliance with local regulations. Store in a cool, dry, well-ventilated place in the original container. The recommended storage temperature is 0<50 deg.C. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilisers. Keep out of reach of children.

Additional Information

Containers, even those that have been emptied, can contain vapours. Do not cut, drill, grind, weld or perform similar operations on or near empty containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Fenbuconazole: Dow AgroSciences recommendation is 1.0 mg/m³.
Cyclohexanone: ACGIH Threshold Limit Value (TLV) is 25 mg/m³ TWA-8 hours (skin).

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Engineering Controls

Good general ventilation should be sufficient for most conditions. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Respiratory Protection

For most conditions, no respiratory protection should be needed. However, when airborne exposure guidelines and/or comfort levels may be exceeded use an approved air-purifying respirator. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

Hand/Skin Protection

For brief contact, no precautions other than clean body-covering clothing and chemical resistant gloves should be needed. Use chemical resistant gloves classified under EN374. Examples of preferred glove barrier materials include: Nitrile. Examples of acceptable glove barrier materials include: Neoprene. Avoid gloves made of: Natural rubber ("latex").

When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher is recommended.

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all requisite workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), as well as the instructions/specifications provided by the glove supplier.

When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material. For emergency conditions: Use protective clothing impervious to this material. Selection of specific items will depend on operation.

Eye/Face Protection

Use safety glasses. Where contact with the liquid is likely, chemical goggles are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: off-white
Odour	: aromatic
Water solubility	: emulsifiable
Flash point	: 58 deg.C (SETA)
Density	: 1.01 g/cm ³ (20 deg.C)
pH	: 7.3 at 23 deg.C. (1% w/w aq.soln.)
Explosivity	: not explosive
Oxidisation	: not oxidising

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10. STABILITY AND REACTIVITY

Chemical Stability

Is stable under normal storage conditions.

Conditions to Avoid

Avoid ignition sources such as flames or spark producing equipment.

Materials to Avoid

Strong basic, acidic or oxidising materials.

Hazardous Decomposition Products

None under normal conditions of storage and use. Thermal decomposition products include: Hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

Based on data for similar formulation.

Ingestion

Low toxicity if swallowed. The oral LD50 for rats is >2000mg/kg.

Skin Contact

The dermal LD50 for rats is >2000mg/kg. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Short single exposure may cause skin irritation.

Sensitisation

Non-sensitising to guinea pig skin.

Eye Contact

May cause moderate eye irritation.

Inhalation

No adverse effects anticipated by this route of exposure incidental to proper handling. Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

Additional Information

Not carcinogenic. Not mutagenic. Not toxic for reproduction.

12. ECOLOGICAL INFORMATION

Assessment largely or completely based on data for active ingredient.

Persistence and Degradability

Half-life in soils is dependent on soil type and conditions and is approximately 10-84 days.

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Aquatic Toxicity

Material is expected to be toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in most sensitive species).

Avian Toxicity

Acute oral LD50 for birds is reported to be >2000 mg/kg.

Additional Information

LD50 for bees is >292 microgram/bee.

13. DISPOSAL CONSIDERATIONS

For aquatic organisms, material is expected to be Toxic. Do not contaminate ponds, waterways or ditches with chemical or used container. Wash out thoroughly. Container and washings must be disposed of safely and in accordance with applicable regulations. The preferred options are to send to licensed reclaimer or to permitted incinerators.

14. TRANSPORT INFORMATION**Road & Rail**

Proper shipping name: FLAMMABLE LIQUID,N.O.S.
(Aromatic hydrocarbon and Fenbuconazole)
Truck/Rail ADR/RID : 3 Label : 3
Classification Code : F1
Packing Group : III

Kemler Code : 30 UN Number : 1993
Tremcard Nr. CEFIC : 30GF1-III

Sea

Proper shipping name: FLAMMABLE LIQUID,N.O.S.
(Aromatic hydrocarbon and Fenbuconazole)
Sea - IMO/IMDG Class: 3 UN Nr : 1993 Label: 3
Packing Group : III EMS : F-E,S-E
Marine Pollutant : Y (Y/N)

Air

Proper shipping name: FLAMMABLE LIQUID,N.O.S.
(Aromatic hydrocarbon and Fenbuconazole)
Air-ICAO/IATA Class : 3 UN Nr : 1993 Label: 3
Sub Class :
Packing Group : III Pack Instr. Passenger : 309
Pack Instr. Cargo : 310

Remarks : Sample shipment not allowed by mail.

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15. REGULATORY INFORMATION

Hazard Symbol : Xi - Irritant
N - Dangerous for the Environment

Risk Phrases : Irritating to eyes (R36).
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment (R51/53).

Safety Phrases : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice (S26).
This material and its container must be disposed of in a safe way (S35).
Use appropriate containment to avoid environmental contamination (S57).

Refer to the Product Label for full local Regulatory Authority label precautions.

16. OTHER INFORMATION

Risk-phrases in Section 2

R10 - Flammable.
R20 - Harmful by inhalation.
R22 - Harmful if swallowed.
R36/37/38 - Irritating to eyes, respiratory system and skin.
R36/38 - Irritating to eyes and skin.
R37 - Irritating to respiratory system.
R38 - Irritating to skin.
R40 - Limited evidence of carcinogenic effect.
R41 - Risk of serious damage to eyes.
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 - Harmful: may cause lung damage if swallowed.
R66 - Repeated exposure may cause skin dryness or cracking.

The information herein is given in good faith and to the best of our knowledge but no warranty, express or implied is made