

MATERIAL SAFETY DATA SHEET



Emergency Phone: 800-992-5994
Dow AgroSciences LLC
Indianapolis, IN 46268

INDAR* 75 WSP FUNGICIDE

Date: 6/1/01
Product Code: 88797

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: Indar* 75 WSP Fungicide

COMPANY IDENTIFICATION:

Dow AgroSciences
9330 Zionsville Road
Indianapolis, IN 46268

EMERGENCY TELEPHONE NUMBER:

800-992-5994

2. COMPOSITION/INFORMATION ON INGREDIENTS

No		CAS REG NO	WEIGHT (%)
1	Fenbuconazole	119611-00-6	72-76
2	Aluminum silicate dihydrate	1332-58-7	34-38
3	Silica Gel	63231-67-4	
4	Sodium lignosulfonate	8061-51-6	
5	Related reaction products	None	
6	Anionic surfactant blend	Undisclosed	
7	Silica, crystalline - Quartz	14808-60-7	

NOTE: The "!", or "Bar", in the WEIGHT (%) column is used to denote two or more components whose weight percents sum to the total shown by the figure either to the right of or immediately above the "Bar".

See Section 8, Exposure Controls / Personal Protection

3. HAZARDS IDENTIFICATION

Primary Routes of Exposure

Inhalation
Eye Contact
Skin Contact

Inhalation

Inhalation of dust can cause the following: irritation of nose, throat, and lungs

Eye Contact

Direct contact with material can cause the following: slight irritation

Skin Contact

Prolonged or repeated skin contact can cause the following: slight skin irritation

Ingestion

Material is possibly harmful if swallowed.

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Delayed Effects

Repeated overexposure to the active ingredient in this material can cause the following: adverse reproductive effects - embryofetotoxic effects. Crystalline silica is listed by the National Toxicology Program (NTP) as a reasonably anticipated cancer causing agent and by the International Agency for Research on Cancer (IARC) as a known cancer causing agent. Prolonged or repeated overexposure to component 7 can cause the following: silicosis, a pneumoconiosis, which causes scar tissue

4. FIRST AID MEASURES

Inhalation

Move subject to fresh air.

Eye Contact

Flush eyes with water. Consult a physician if irritation persists.

Skin Contact

Remove contaminated clothing. Wash affected skin areas thoroughly with soap and water. Consult a physician if irritation persists. Wash contaminated clothing thoroughly before reuse. Do not take clothing home to be laundered.

Ingestion

If swallowed, give 2 glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.

Note to Physician

If swallowed, careful evacuation of the stomach is advisable.

5. FIRE FIGHTING MEASURES

Flash Point	Not Applicable
Auto-ignition Temperature	No Data
Lower Explosive Limit	No Data
Upper Explosive Limit	No Data

Unusual Hazards

Pesticide particulates can become airborne.
Dusts at sufficient concentrations can form explosive mixtures with air.
Combustion generates toxic fumes of the following: nitrogen oxides - sulfur oxides - hydrogen chloride

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Extinguishing Agents

Use the following extinguishing media when fighting fires involving this material: carbon dioxide - dry chemical - water spray - foam

Personal Protective Equipment

Wear self-contained breathing apparatus (pressure-demand NIOSH approved or equivalent) and full protective gear.

Special Procedures

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

6. ACCIDENTAL RELEASE MEASURES

Personal Protection

Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure Controls/Personal Protection, for recommendations. If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, for actions to follow. Remove all contaminated clothing promptly. Wash all exposed skin areas with soap and water immediately after exposure. Thoroughly launder clothing before reuse. Do not take clothing home to be laundered.

Procedures

Keep spectators away. Avoid breathing dust. Transfer spilled material to suitable containers for recovery or disposal. Keep dust to a minimum.
CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

Storage Conditions

Do not store this material near food, feed or drinking water. Store in a well-ventilated area. Store in a dry area. Store out of direct sunlight in a cool place. The maximum recommended storage temperature for this material is 55C/131F. Keep container tightly closed when not in use.

Handling Procedures

Do not handle material near food, feed or drinking water. Avoid high concentrations of dust in air and accumulation of dust on equipment. An airborne dust of this material can create a dust explosion. When handling and processing this material local exhaust ventilation may be required to control dust and reduce exposure to vapors. To prevent dust explosions employ bonding and grounding for operations capable of generating static electricity. Protect all equipment from explosions by following the guidelines in NFPA-68 and NFPA-69. For electrical equipment follow local codes and electrical classification NFPA-70 (the National Electrical Code), class II, division 2, group G.

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Other

Completely empty bag into application equipment. Dispose empty bag in a sanitary landfill or by incineration as allowed by state and local authorities. Avoid inhalation of smoke if incinerated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limit Information

No		CAS REG NO	WEIGHT (%)
1	Fenbuconazole	119611-00-6	72-76
2	Aluminum silicate dihydrate	1332-58-7	34-38
3	Silica Gel	63231-67-4	
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5	Related reaction products	None	
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Comp. No.	Units	Dow AgroSciences		OSHA		ACGIH	
		TWA	STEL	TWA	STEL	TWA	STEL
1	mg/m3	1	3	None	None	None	None
2	mg/m3	None	None	None	None	2 a	None
3	mg/m3	None	None	6 PEL	None	10	None
4		None	None	None	None	None	None
5		None	None	None	None	None	None
6		None	None	None	None	None	None
7	mg/m3	0.05 a	None	0.1 a	None	0.05 a	None

a Respirable Fraction

End users must follow label instructions when using this product.

Respiratory Protection

A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in 'Exposure Limit Information'.

Up to 10 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator.

Up to 50 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) full-face piece, air-purifying respirator, OR full-face piece, airline respirator in the pressure demand mode.

Above 50 times the exposure limit or Unknown: Wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode, OR full-face piece, airline respirator in the pressure demand mode with emergency escape provision.

Air-purifying respirators should be equipped with NIOSH approved (or equivalent) organic vapor cartridges and N100 filters. If oil mist is present, use R100 or P100 filters.

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Eye Protection

Use chemical splash goggles ([ANSI Z87.1](#) or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

Hand Protection

Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation: Polyvinyl chloride-coated glove or other chemical-resistant rubber-coated glove. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water.

Other Protection

Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact. Work clothing should be removed at the end of the shift and laundered by the employer.

Engineering Controls (Ventilation)

Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75 m/sec.) at the point of dust or mist evolution. Refer to the current edition of [Industrial Ventilation: A Manual of Recommended Practice](#) published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Other Protective Equipment

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color	Off-white
State	Powdered solid
Odor Characteristic	Pungent, musty odor
pH	7.6 Aqueous suspension
Viscosity	Not Applicable
Specific Gravity (Water = 1)	0.24 g./cc. Bulk Density
Vapor Density (Air = 1)	Not Applicable
Vapor Pressure	Not Applicable
Melting Point	No Data
Boiling Point	Not Applicable
Solubility in Water	Dispersible
Percent Volatility	0%
Evaporation Rate (BAc = 1)	Not Applicable

The physical and chemical data given in Section 9 are typical values for this product and are not intended to be product specifications.

See Section 5, Fire Fighting Measures

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10. STABILITY AND REACTIVITY

Instability

This material is considered stable. However, avoid contact with ignition sources (e.g. sparks, open flame, or heated surfaces).

Hazardous Decomposition Products

Thermal decomposition may yield the following: hydrogen chloride

Hazardous Polymerization

Product will not undergo polymerization.

Incompatibility

Avoid contact with the following: oxidizing agents - acids

11. TOXICOLOGICAL INFORMATION

Acute Data

Oral LD50 - rat: 4000 mg/kg (female); >4000 mg/kg (male)
Dermal LD50 - rat: >2000 mg/kg
Skin Irritation - rabbit: slight irritation
Eye Irritation - rabbit: slight irritation

Carcinogenicity Data

The following data pertains to studies conducted with the technical material, 97.5% active ingredient:
Data from a two-year rat dietary feeding study indicated liver and thyroid enlargement at a dose of 800 ppm. The thyroid tumor incidence increased marginally, but statistically, in males at 800 ppm; the incidence occurred within historical range.
Data from a 78-week dietary feeding study in mice indicated that females exhibited a slight, but statistically significant increased incidence of combined liver adenomas and carcinomas at the high dose (1300 ppm); the tumor incidence was essentially within the historical control range. No significant difference in the incidence of either liver adenomas or carcinomas was observed.

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Mutagenicity Data

The following data pertains to studies conducted with the technical material, 97.5% active ingredient:
Ames mutagenicity: Negative
In vitro rat hepatocyte Unscheduled DNA Synthesis: Negative
Mammalian cell gene-mutation assay in Chinese hamster ovary cells (CHO): Negative
In vivo cytogenetic assay (mouse): Negative

Reproductive/Teratology Data

The following data pertains to studies conducted with the technical material, 97.5% active ingredient:
No evidence of teratogenicity was observed in studies with rats and rabbits. Data from a two-generation reproduction study in rats suggested adverse reproductive and fetal effects at a maternally toxic dose of 800 ppm (approx. 40 mg/kg/day); no such effects were seen at lower dose levels of 8 and 80 ppm.

Sensitization Data

The following data pertains to studies conducted with the technical material, 97.5% active ingredient:
Delayed Contact Hypersensitivity - guinea pig: No adverse effects observed.

12. ECOLOGICAL INFORMATION

Environmental Toxicity

Honeybee, 96 Hour LC50: > 292.18 g/l (Non-toxic)
Bobwhite quail, 21 Day LD50: > 2150 mg/kg
Rainbow trout (Salmo gairdneri), 96 Hour LC50: 1.5 mg/l
Daphnia magna, 48 Hour EC50, acute flow through: 2.2 mg/l
Bobwhite quail, 8 Day Dietary LC50: 4050 ppm
Mallard duck, 8 Day Dietary LC50: 2110 ppm
Algae (Scenedesmus subspicatus), 96 Hour LC50: 0.29 mg/l
Bluegill sunfish (Lepomis macrochirus), 96 Hour LD50: 0.68 mg/l
Bluegill sunfish (Lepomis macrochirus), 96 Hour LC50: 0.68 mg/l
Algae (Selenastrum capricornutum), 120 Hour EC50: 0.47 mg/l

The above Environmental Toxicity data are from studies conducted on the technical material, 97.5% active ingredient.

13. DISPOSAL CONSIDERATIONS

Procedure

For disposal, incinerate this material at a facility that complies with local, state, and federal regulations.

14. TRANSPORT INFORMATION

US DOT Hazard Class NON-REGULATED

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15. REGULATORY INFORMATION

Workplace Classification

This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200).

This product is subject to regulation under the Canadian Pest Control Products Act (P.C.P. Act). Therefore, this product is excluded from the supplier labeling and material safety data sheet requirements as specified in Section 12 of the Hazardous Products Act.

SARA TITLE 3: Section 311/312 Categorizations (40 CFR 370)

This product is a hazardous chemical under 29 CFR 1910.1200, and is categorized as a delayed health hazard.

SARA TITLE 3: Section 313 Information (40 CFR 372)

This product does not contain a chemical, which is listed in Section 313 at or above de minimis concentrations.

CERCLA Information (40 CFR 302.4)

Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

Waste Classification

When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrosivity, or reactivity, and is not listed in 40 CFR 261.33. The toxicity characteristic (TC), however, has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).

United States

This product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is therefore exempt from U.S. Toxic Substances Control Act (TSCA) Inventory listing requirements.

16. OTHER INFORMATION

MSDS STATUS: New
Document Code: D03-845-001

The Information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made. Consult Dow AgroSciences for Further Information