



Material Safety Data Sheet
PROSTAR® 70 WDG FUNGICIDE

MSDS Number: 102000019487
 MSDS Version 1.0
 Revision Date: 03/11/2008

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name PROSTAR® 70 WDG FUNGICIDE
MSDS Number 102000019487
EPA Registration No. 432-1477

Bayer Environmental Science
 2 T.W. Alexander Drive
 Research Triangle PK, NC 27709
 USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
 For Product Information call: 1-800-331-2867

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Flutolanil	66332-96-5	70.00
Sodium dodecylbenzenesulfonate	25155-30-0	1.00
Synthetic amorphous silica	112926-00-8	1.00
Titanium dioxide	13463-67-7	0.43
Quartz (Silica, Crystalline)	14808-60-7	0.17

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview Caution! Moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes and clothing.

Physical State granular

Appearance tan

Routes of Exposure Eye contact, Skin Absorption, Inhalation

Immediate Effects

Eye Moderate eye irritation. Avoid contact with eyes.

Skin May be harmful if absorbed through skin. Avoid contact with skin and clothing.

Inhalation May be harmful if inhaled. Avoid breathing dust.



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Chronic or Delayed Long-Term

This product is not listed as a carcinogen by ACGIH, NTP, IARC or OSHA. However, it may contain crystalline silica (quartz), a substance which has been listed as a carcinogen by ACGIH, NTP and IARC. Crystalline silica is a naturally-occurring mineral component of many sands and clays. Although the carcinogenic potential of crystalline silica in humans is controversial, it must be considered if it is inhaled under excessive exposure conditions. The respirable portion of the silica that may be contained in this product, however, is small, such that inhalation exposure during anticipated conditions of use is minimal.

This product or its components may have target organ effects.

Medical Conditions Aggravated by Exposure

No specific medical conditions are known which may be aggravated by exposure to this product. As with all materials which can cause upper respiratory tract irritation, persons with a history of asthma, emphysema, or hyperreactive airways disease may be more susceptible to overexposure. Pulmonary and respiratory diseases may be aggravated by exposure to respirable crystalline silica.

Potential Environmental Effect

Toxic to aquatic invertebrates.

SECTION 4. FIRST AID MEASURES

General

When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Skin

Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Ingestion

Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Inhalation

Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Notes to Physician Treatment

There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.



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SECTION 5. FIRE FIGHTING MEASURES

Fire and Explosion Hazards	Accumulation of fine dust may entail the risk of a dust explosion in the presence of air. Dangerous gases are evolved in the event of a fire.
Suitable Extinguishing Media	Water, Foam, Carbon dioxide (CO ₂), Dry powder
Fire Fighting Instructions	Keep out of smoke. Fight fire from upwind position. Cool closed containers/ tanks exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.
Methods for Cleaning Up	Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional Advice	Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

SECTION 7. HANDLING AND STORAGE

Handling Procedures	Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation. Handle and open container in a manner as to prevent spillage. Dust may form explosive mixtures with air.
Storing Procedures	Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.
Work/Hygienic Procedures	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove



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soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection	Follow all label instructions. Train employees in safe use of the product. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.
Eye/Face Protection	Tightly fitting safety goggles
Hand Protection	Chemical resistant gloves made of waterproof material such as polyethylene or polyvinyl chloride
Body Protection	Wear long-sleeved shirt and long pants and shoes plus socks.
Respiratory Protection	When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Exposure Limits

Kaolin	1332-58-7	ACGIH	TWA	2 mg/m3
		NIOSH	REL	5 mg/m3
		NIOSH	REL	10 mg/m3
		US CA OEL	TWA PEL	2 mg/m3
		TX ESL	ST ESL	20 ug/m3
		TX ESL	AN ESL	2 ug/m3
Synthetic amorphous silica	112926-00-8	OSHA Z1A	TWA	6 mg/m3
		TX ESL	ST ESL	40 ug/m3
		TX ESL	AN ESL	4 ug/m3
Titanium dioxide	13463-67-7	ACGIH	TWA	10 mg/m3
		OSHA Z1	REL	15 mg/m3
		OSHA Z1A	TWA	10 mg/m3
		TX ESL	ST ESL	50 ug/m3
		TX ESL	AN ESL	5 ug/m3
		ACGIH	TWA	0.025 mg/m3
Quartz (Silica, Crystalline)	14808-60-7	NIOSH	REL	0.05 mg/m3
		OSHA Z1A	TWA	0.1 mg/m3
		Z3	TWA	2.4 millions of particles per cubic foot of air
		Z3	TWA	0.1 mg/m3
		Z3	TWA	0.3 mg/m3
		US CA OEL	TWA PEL	0.1 mg/m3
		US CA OEL	TWA PEL	0.3 mg/m3



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TX ESL	ST ESL	1 ug/m3
TX ESL	ST ESL	1 ug/m3
TX ESL	AN ESL	0.1 ug/m3
TX ESL	AN ESL	0.1 ug/m3

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	tan
Physical State	granular
Bulk Density	41 lb/ft ³

SECTION 10. STABILITY AND REACTIVITY

Hazardous Decomposition Products	Thermal decomposition can lead to release of: Carbon oxides Nitrogen oxides (NOx)
Hazardous Reactions	Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the technical-grade active ingredient, flutolanil.

Acute Oral Toxicity	rat: LD50: > 5,000 mg/kg
Acute Dermal Toxicity	rat: LD50: > 5,000 mg/kg
Acute Inhalation Toxicity	rat: LC50: > 7.4 mg/l Exposure time: 4 h Determined in the form of dust.
	rat: LC50: > 20 mg/l Exposure time: 1 h Determined in the form of dust. Extrapolated from the 4 hr LC50.
Skin Irritation	rabbit: No skin irritation.
Eye Irritation	rabbit: Slight irritation.
Sensitization	guinea pig: Non-sensitizing.
Chronic Toxicity	Flutolanil caused clinical signs of toxicity and/or liver effects in chronic studies in rats and dog.



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Assessment Carcinogenicity

Flutolanil was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

Titanium dioxide	13463-67-7	Group A4
Quartz (Silica, Crystalline)	14808-60-7	Group A2

NTP

None.

IARC

Titanium dioxide	13463-67-7	Overall evaluation: 2B
Quartz (Silica, Crystalline)	14808-60-7	Overall evaluation: 1

OSHA

None.

Reproductive & Developmental Toxicity

REPRODUCTION: Flutolanil was not a reproductive toxicant in a two-generation study in rats.

DEVELOPMENTAL TOXICITY: Flutolanil was not a developmental toxicant in developmental toxicity studies in rats and rabbits.

Neurotoxicity

Flutolanil did not demonstrate the potential to cause neurotoxicity in standard toxicity studies using laboratory animals.

Mutagenicity

Flutolanil was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance

Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Do not re-use empty containers. Triple rinse containers. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.



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SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION:
 Not regulated for Domestic Surface Shipment

FREIGHT CLASSIFICATION:
 Insecticides or Fungicides, N.O.I.; other than poison

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 432-1477

US Federal Regulations

TSCA list

Sodium dodecylbenzenesulfonate	25155-30-0
Titanium dioxide	13463-67-7
Quartz (Silica, Crystalline)	14808-60-7

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

Sodium dodecylbenzenesulfonate	25155-30-0	CA, CT, IL, PA
Synthetic amorphous silica	112926-00-8	MN
Titanium dioxide	13463-67-7	IL, MN, RI
Quartz (Silica, Crystalline)	14808-60-7	IL, MA, MN

Canadian Regulations

Canadian Domestic Substance List

Sodium dodecylbenzenesulfonate	25155-30-0
Synthetic amorphous silica	112926-00-8
Titanium dioxide	13463-67-7
Quartz (Silica, Crystalline)	14808-60-7

Environmental

CERCLA

Sodium dodecylbenzenesulfonate	25155-30-0	1,000 lbs
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Clean Water Section 307 Priority Pollutants



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None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 1 Reactivity - 0 Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: New Material Safety Data Sheet.

Revision Date: 03/11/2008

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