



**Material Safety Data Sheet**

**PROSTAR® 70 WG FUNGICIDE**

MSDS Number: 102000024689

MSDS Version 1.0

Revision Date: 05/23/2011

Print Date: 05/23/2011

**SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

**Product name** PROSTAR® 70 WG FUNGICIDE  
**MSDS Number** 102000024689  
**EPA Registration No.** 432-1223  
**Product Use** Fungicide

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. 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** water-dispersible granules

**Odor** odourless

**Appearance** light brown

**Exposure routes** Skin contact, Eye contact, Dust inhalation, Ingestion

**Immediate Effects**

**Eye** Moderate eye irritation. Avoid contact with eyes.

**Skin** Harmful if absorbed through skin. Avoid contact with skin and clothing.

**Ingestion** Do not take internally.

**Inhalation** May cause respiratory tract irritation. Avoid breathing dust.



**Material Safety Data Sheet**

MSDS Number: 102000024689  
MSDS Version 1.0

**PROSTAR® 70 WG FUNGICIDE**

**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**

Excessive dust inhalation may aggravate pre-existing respiratory conditions. 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 3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Flutolanil	66332-96-5	70.00
Fatty acid methyl tauride sodium salt	137-20-2	1.52
Synthetic amorphous silica	112926-00-8	1.74
Dibutyl naphthalenesulfonic acid, sodium salt	25417-20-3	2.76
Sodium sulphate	7757-82-6	1.16
Quartz (Silica, Crystalline)	14808-60-7	0.14
Crystalline quartz (respirable)		

**SECTION 4. FIRST AID MEASURES**

<b>General</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Eye</b>	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.
<b>Skin</b>	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.
<b>Ingestion</b>	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



**Material Safety Data Sheet**

MSDS Number: 102000024689  
MSDS Version 1.0

**PROSTAR® 70 WG FUNGICIDE**

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**

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

**SECTION 5. FIRE FIGHTING MEASURES**

<b>Flash point</b>	does not flash
<b>Fire and Explosion Hazards</b>	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.
<b>Suitable extinguishing media</b>	Water, Foam, Carbon dioxide (CO2), Dry powder
<b>Fire Fighting Instructions</b>	Keep out of smoke. Fight fire from upwind position. Cool closed containers 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**

<b>Personal precautions</b>	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.
<b>Methods for cleaning up</b>	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.
<b>Additional advice</b>	Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

**SECTION 7. HANDLING AND STORAGE**

<b>Handling procedures</b>	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.
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**Material Safety Data Sheet**

**PROSTAR® 70 WG FUNGICIDE**

MSDS Number: 102000024689  
MSDS Version 1.0

**Storing Procedures** Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, 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 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 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.

Follow all label instructions. Train employees in safe use of the product.

**Eye/Face Protection** Tightly fitting safety goggles

**Hand protection** Chemical resistant nitrile rubber gloves

**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**

Synthetic amorphous silica	112926-00-8	OSHA Z1A	TWA	6 mg/m3
		TX ESL	ST ESL	40 ug/m3
Sodium sulphate	7757-82-6	TX ESL	AN ESL	4 ug/m3
			TWA	6 mg/m3
		TX ESL	ST ESL	50 ug/m3
		TX ESL	AN ESL	5 ug/m3
Quartz (Silica, Crystalline)	14808-60-7	OES BCS*	TWA	10 mg/m3
		ACGIH	TWA	0.025 mg/m3
		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



**Material Safety Data Sheet**

**PROSTAR® 70 WG FUNGICIDE**

MSDS Number: 102000024689

MSDS Version 1.0

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
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
TX ESL	ST ESL	10 ug/m3
TX ESL	AN ESL	1 ug/m3
	TWA	0.1 mg/m3

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	light brown
<b>Physical State</b>	water-dispersible granules
<b>Odor</b>	odourless
<b>pH</b>	7.5 - 8.5 (10 %)
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Bulk density</b>	32 - 38 lb/ft <sup>3</sup>
<b>Evaporation rate</b>	no data available
<b>Boiling Point</b>	not applicable
<b>Melting / Freezing Point</b>	not applicable
<b>Minimum Ignition Energy</b>	no data available
<b>Partition coefficient: n-octanol/water</b>	no data available

**SECTION 10. STABILITY AND REACTIVITY**

<b>Conditions to avoid</b>	Exposure to moisture. Heat, flames and sparks.
<b>Hazardous</b>	Thermal decomposition can lead to release of:



**Material Safety Data Sheet**

**PROSTAR® 70 WG FUNGICIDE**

MSDS Number: 102000024689  
MSDS Version 1.0

**Decomposition Products** oxides of carbon  
nitrogen oxides (NOx)

**Hazardous reactions** No hazardous reactions known.

**Chemical Stability** 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

**Sensitisation** guinea pig: Non-sensitizing.

**Chronic toxicity** Flutolanil caused clinical signs of toxicity and/or liver effects in chronic studies in rats and dog.

**Assessment Carcinogenicity**

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

**ACGIH**

Quartz (Silica, Crystalline)	14808-60-7	Group A2
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**NTP**

Crystalline quartz (respirable)

**IARC**

Quartz (Silica, Crystalline)	14808-60-7	Overall evaluation: 1
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**OSHA**

None.

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



**Material Safety Data Sheet**

MSDS Number: 102000024689  
MSDS Version 1.0

**PROSTAR® 70 WG FUNGICIDE**

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

**Assessment 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** Do not contaminate water, food, or feed by disposal. 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** Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke. Follow advice on product label and/or leaflet.

**RCRA Information** Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

**SECTION 14. TRANSPORT INFORMATION**

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

**SECTION 15. REGULATORY INFORMATION**

**EPA Registration No.** 432-1223



**Material Safety Data Sheet**

**PROSTAR® 70 WG FUNGICIDE**

MSDS Number: 102000024689  
MSDS Version 1.0

**US Federal Regulations**

**TSCA list**

Fatty acid methyl tauride sodium salt	137-20-2
Dibutyl naphthalenesulfonic acid, sodium salt	25417-20-3
Sodium sulphate	7757-82-6
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 contains a chemical known to the State of California to cause cancer.  
Crystalline quartz (respirable)

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

**US State Right-To-Know Ingredients**

Quartz (Silica, Crystalline)	14808-60-7	IL, MA
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**Canadian Regulations**

**Canadian Domestic Substance List**

Fatty acid methyl tauride sodium salt	137-20-2
Synthetic amorphous silica	112926-00-8
Dibutyl naphthalenesulfonic acid, sodium salt	25417-20-3
Sodium sulphate	7757-82-6
Quartz (Silica, Crystalline)	14808-60-7

**Environmental**

**CERCLA**

None.

**Clean Water Section 307 Priority Pollutants**

None.

**Safe Drinking Water Act Maximum Contaminant Levels**

None.

**International Regulations**

**European Inventory of Existing Commercial Substances (EINECS)**

Sodium sulphate	7757-82-6
Quartz (Silica, Crystalline)	14808-60-7





**Material Safety Data Sheet**  
**PROSTAR® 70 WG FUNGICIDE**

MSDS Number: 102000024689  
MSDS Version 1.0

**SECTION 16. OTHER INFORMATION**

NFPA 704 (National Fire Protection Association):

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

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1\*      Flammability - 1      Physical Hazard - 0      PPE -

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

Reason for Revision: New Material Safety Data Sheet.

Revision Date: 05/23/2011

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