



## PROSTAR 70 WP FUNGICIDE

MSDS Version 2.1

### SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

<b>Product Name</b>	PROSTAR 70 WP FUNGICIDE
<b>Chemical Name</b>	N-{3-(1-methylethoxy)phenyl}-2- (trifluoromethyl) benzamide (active ingredient)
<b>Synonym</b>	NA 304/01 (PROSTAR 70WP)
<b>MSDS Number</b>	140
<b>Chemical Family</b>	
<b>Chemical Formulation</b>	Mixture (active ingredient: C17H16F3NO2)
<b>EPA Registration No.</b>	432-1223
<b>Canadian Registrat. No.</b>	

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

For Product Use Information: (800)331-2867 Monday through Friday(CRLF) 8:00AM-4:30PM(CRLF) For Medical Emergency contact DART: (800) 334-7577 24 Hours/Day(CRLF) For Transportation Emergency CHEMTREC: (800) 424-9300 24 Hours/Day

**Product Use Description** ProStar 70WP in WSF is a fungicide for use on turf.

### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component Name</u>	<u>CAS No.</u>	<u>Concentration % by Weight</u>	
		<u>Minimum</u>	<u>Maximum</u>
Flutolanil	66332-96-5	70.0000	
Inert ingredients,including:		30.0000	
Hydrous Aluminum Silicate	1332-58-7		
Hydrated Amorphous Silica	7631-86-9		
QUARTZ	14808-60-7		

# Material Safety Data Sheet

## PROSTAR 70 WP FUNGICIDE

MSDS Number: 00000000140

MSDS Version 2.1

### SECTION 3. HAZARDS IDENTIFICATION

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

<b>Emergency Overview</b>	Causes moderate eye irritation. Toxic to aquatic invertebrate (e.g., shrimp).
<b>Physical State</b>	solid powder (packaged in water soluble bags)
<b>Odor</b>	Essentially odorless
<b>Appearance</b>	light tan
<b>Routes of Exposure</b>	Dust inhalation, skin contact.
<b>Immediate Effects</b>	
<b>Eye</b>	Causes moderate eye irritation.
<b>Skin</b>	Not known to be a skin irritant. Harmful if absorbed through skin. Does not cause skin sensitization in animal studies.
<b>Ingestion</b>	No specific health effects are known for ingestion of a small amount incidental to routine handling and use.
<b>Inhalation</b>	Excessive dust inhalation may irritate upper respiratory track. No specific health effects are known.
<b>Chronic or Delayed Long-Term</b>	Flutolanil technical is not listed as carcinogenic by NTP, IARC, or OSHA.  One inert ingredient contains a small amount of crystalline silica which is a naturally occurring component of sand, clay and inorganic soil. Chronic exposure to respirable crystalline silica is known to cause silicosis (formation of fibrous tissue in the lung) if inhaled. IARC has listed the crystalline silica as a probable human carcinogen (class 2A), based on human inhalation exposures under excessive and chronic conditions (e.g., long-term clay or mineral mining working conditions). However, under the normal handling and use of this product in accordance with the product label, such excessive and chronic inhalation exposure by the users is unlikely.
<b>Medical Conditions Aggravated by Exposure</b>	Excessive dust inhalation may aggravate pre-existing respiratory conditions.
<b>Signs and Symptoms</b>	Effects of overexposure are probably non-specific and slight.

### SECTION 4. FIRST AID MEASURES

<b>Eye</b>	Flush eyes with plenty of water. Call a physician if irritation persists.
<b>Skin</b>	Wash with plenty of soap and water. Seek medical attention.

# Material Safety Data Sheet

MSDS Number: 00000000140

## PROSTAR 70 WP FUNGICIDE

MSDS Version 2.1

### SECTION 5. FIRE FIGHTING MEASURES

<b>Flash Point</b>	Does not flash
<b>Fire and Explosion Hazards</b>	Dispersion of fine dust in the air can form an explosive mixture. Will burn to give off toxic oxides of carbon and nitrogen.
<b>Suitable Extinguishing Media</b>	water, foam, carbon dioxide (CO <sub>2</sub> ), dry powder
<b>Fire Fighting Instructions</b>	Wear positive pressure self-contained breathing apparatus. Spray containers with water to keep cool.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

<b>General and Disposal</b>	Use proper protective equipment to minimize personal exposure (see Section 8). Take all necessary action to prevent and to remedy the effects of the spill. Ensure that the disposal is in compliance with Federal or local disposal regulations. Notify the appropriate authorities immediately. See Section 13 for any applicable Reportable Quantity (RQ) and other federal regulatory information. Report immediately to authorities if liquid enters watercourse or sewer.
<b>Land Spill or Leaks</b>	Sweep up carefully while avoiding the formation of a dust cloud. Place in suitable container and seal. Area can be washed with water to remove last trace of the material but keep out of watercourse or sewers. Inform appropriate authorities immediately if contamination occurs.

### SECTION 7. HANDLING AND STORAGE

<b>Handling Procedures</b>	Avoid contact with skin, eyes and clothing.
<b>Storing Procedures</b>	Keep in a dry, cool place. Do not store near or contaminate food or feed products.
<b>Work/Hygienic Procedures</b>	Do not apply this product through any type of irrigation system.  User of this product MUST refer to the product label at the time of pesticide applications.

# Material Safety Data Sheet

MSDS Number: 00000000140  
MSDS Version 2.1

## PROSTAR 70 WP FUNGICIDE

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Engineering Controls</b>	Control airborne concentrations below the exposure guidelines. Local exhaust ventilation may be necessary, when used in a confined area.
<b>Eye/Face Protection</b>	safety glasses chemical goggles
<b>Body Protection</b>	PVC or rubber gloves
<b>Respiratory Protection</b>	Ensure good ventilation. If not adequate, use a suitable dusk mask or a dust respirator.
<b>General Protection</b>	Refer to the product label for applicable details concerning the "User Safety Recommendations" and the use of Personal Protective Equipment under the EPA Worker Protection Standards (40 CFR Part 170). However, please note that use of ProStar 70WP on golfcourses is not within the scope of WPS uses.

### Exposure Limits

Hydrous Aluminum Silicate	1332-58-7	NIOSH	REL	5 mg/m3	
			Form of Exposure	Respirable.	
		NIOSH	REL	10 mg/m3	
			Form of Exposure	Total	
		US CA OEL	TWA PEL	2 mg/m3	
			Form of Exposure	Respirable dust.	
		OSHA Z1	PEL	5 mg/m3	
			Form of Exposure	Respirable fraction.	
		OSHA Z1	PEL	15 mg/m3	
			Form of Exposure	Total dust.	
	OSHA Z1A	TWA	5 mg/m3		
		Form of Exposure	Respirable fraction.		
	OSHA Z1A	TWA	10 mg/m3		
		Form of Exposure	Total dust.		
	ACGIH	TWA	2 mg/m3		
		Remarks	The value is for particulate matter containing no asbestos and <1% crystalline silica.		
Hydrated Amorphous Silica	7631-86-9	NIOSH	REL	6 mg/m3	
			US CA OEL	TWA PEL	5 mg/m3
				Form of Exposure	Respirable fraction.
			US CA OEL	TWA PEL	5 mg/m3
				Form of Exposure	Respirable fraction.
			US CA OEL	TWA PEL	10 mg/m3
				Form of Exposure	Total dust.
			US CA OEL	TWA PEL	5 mg/m3
		Form of Exposure	Respirable fraction.		
	US CA OEL	TWA PEL	10 mg/m3		

# Material Safety Data Sheet

## PROSTAR 70 WP FUNGICIDE

MSDS Number: 00000000140  
MSDS Version 2.1

		Form of Exposure	Total dust.	
		US CA OEL TWA PEL		10 mg/m3
		Form of Exposure	Total dust.	
		ACGIH TWA		10 mg/m3
		Remarks	The value is for particulate matter containing no asbestos and <1% crystalline silica.	
		ACGIH TWA		3 mg/m3
		Remarks	The value is for particulate matter containing no asbestos and <1% crystalline silica.	
QUARTZ	14808-60-7	NIOSH REL		0.05 mg/m3
		Form of Exposure	Respirable dust.	
		OSHA Z1A TWA		0.1 mg/m3
		Form of Exposure	Respirable dust.	
		US CA OEL TWA PEL		0.1 mg/m3
		Form of Exposure	Respirable dust.	
		US CA OEL TWA PEL		0.3 mg/m3
		Form of Exposure	Total dust.	
		ACGIH TWA		0.05 mg/m3

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	light tan
<b>Physical State</b>	solid powder (packaged in water soluble bags)
<b>Odor</b>	Essentially odorless
<b>Vapor Pressure</b>	No data for the formulated product, this values is for the a.i. 1.33 x 10(-5) mm Hg at 20 °C
<b>Vapor Density (air = 1)</b>	Not volatile
<b>Bulk Density</b>	24 lb/cubic ft.
<b>Boiling Point</b>	Not applicable
<b>Melting/Freezing Point</b>	104 - 105 °C No data for the formulated product, this values is for the a.i.
<b>Solubility (in water)</b>	9.6 mg/l (9.6 ppm) at 68°F*

# Material Safety Data Sheet

## PROSTAR 70 WP FUNGICIDE

MSDS Number: 00000000140  
MSDS Version 2.1

Octanol/Water Partition Coefficient      Not available

### SECTION 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable at ambient conditions
<b>Conditions to Avoid</b>	extreme heat moisture
<b>Hazardous Polymerization (Conditions to avoid)</b>	None

### SECTION 11. TOXICOLOGICAL INFORMATION

<b>Acute Oral Toxicity</b>	ProStar 70WP Rat: LD50: > 5,000 mg/kg Practically non-toxic.
<b>Acute Dermal Toxicity</b>	ProStar 70WP Rat: LD50: > 5,000 mg/kg Practically non-toxic.
<b>Acute Inhalation Toxicity</b>	ProStar 70WP Rat: LC50: > 7.37 mg/l 4 h Practically non-toxic.
<b>Skin Irritation</b>	ProStar 70WP Rabbit: Non-irritating. Primary Irritation Index = 0.0/8.0
<b>Eye Irritation</b>	ProStar 70WP Rabbit: Slightly irritating. Irritation Index: 1.2/110
<b>Sensitization</b>	ProStar 70WP Guinea pig: Non-sensitizing (Guinea pig): Non-sensitizing

THE FOLLOWING DATA WERE DEVELOPED WITH: Flutolanil Technical, the active ingredient:

<b>Sub-Chronic Toxicity</b>	Results from 90-day animal studies suggest no target organ effects under the conditions of normal handling and use.
<b>Chronic Toxicity</b>	In two-year feeding studies with flutolanil in rats, no organotoxic effects were observed at dose levels up to 200 ppm. At very high experimental dose levels

# Material Safety Data Sheet

MSDS Number: 00000000140

## PROSTAR 70 WP FUNGICIDE

MSDS Version 2.1

(2,000-10,000 ppm), slight anemia, minor liver damage and some nephrosis were observed. However, flutolanil had no significant effect on mortality and was not carcinogenic at any of the doses tested. Similar results were observed in dogs administered up to 1250 mg/kg/day.

### Assessment Carcinogenicity

#### ACGIH

Hydrous Aluminum Silicate	1332-58-7	Group A4
QUARTZ	14808-60-7	Group A2

#### NTP

QUARTZ	14808-60-7	
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#### IARC

Hydrated Amorphous Silica	7631-86-9	3
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#### OSHA

None

**Reproductive & Developmental Toxicity** Flutolanil technical showed no adverse effects on reproduction in a three-generation rat reproduction study at dietary doses up to 10,000 ppm.

**Neurotoxicity** Data not available.

**Teratogenicity** Flutolanil Technical demonstrated no teratogenic effects in rabbits at oral dose levels up to 1000 mg/kg/day.

**Mutagenicity** Flutolanil technical was not mutagenic or genotoxic when tested in the Ames gene mutation assay, the mouse micronucleus test, or the chromosomal aberration assay.

## SECTION 12. ECOLOGICAL INFORMATION

**Environmental Precautions** This product is toxic to aquatic invertebrates. 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 water when disposing of equipment washwaters.

# Material Safety Data Sheet

MSDS Number: 00000000140

## PROSTAR 70 WP FUNGICIDE

MSDS Version 2.1

### SECTION 13. DISPOSAL CONSIDERATIONS

#### General Disposal Guidance

Any disposal practice must be in compliance with all Federal, State/provincial, and local laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

Do not contaminate water, food, or feed by storage or disposal. Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

#### Container Disposal

Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

#### RCRA Classification

Not Regulated under this Statute

### SECTION 14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: None

DOT SHIPPING LABEL: None

### SECTION 15. REGULATORY INFORMATION

#### US Federal

**EPA Registration No.** 432-1223

#### TSCA list

Hydrous Aluminum Silicate 1332-58-7

Hydrated Amorphous Silica 7631-86-9

QUARTZ 14808-60-7

#### TSCA 12b export notification

None

#### SARA Title III - section 302 - notification and information

None

#### SARA Title III - section 313 - toxic chemical release reporting

None

#### US States Regulatory

##### CA Prop65

This product contains a chemical known to the state of California to cause cancer. QUARTZ 14808-60-7



# Material Safety Data Sheet

## PROSTAR 70 WP FUNGICIDE

MSDS Number: 00000000140  
MSDS Version 2.1

### US State right-to-know ingredients

Hydrous Aluminum Silicate	1332-58-7	IL, MN, PA, RI
Hydrated Amorphous Silica	7631-86-9	CA, MN, PA
QUARTZ	14808-60-7	IL, MA, MN, PA

### Canadian Regulations

#### Canadian Registrat. No.

#### Canadian Domestic Substance List

Hydrous Aluminum Silicate	1332-58-7
Hydrated Amorphous Silica	7631-86-9
QUARTZ	14808-60-7

### Environmental

#### CERCLA

None

#### Clean Water Section 307 Priority Pollutants

None

#### Safe Drinking Water Act Maximum Contaminant Levels

None

### International Regulations

#### EU Classification

None

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

Hydrated Amorphous Silica	7631-86-9
QUARTZ	14808-60-7

## SECTION 16. OTHER INFORMATION

	Health	Flammability	Reactivity	Others
HMIS	1	1	0	E
NFPA	1	1	0	none

MSDS REVISION INDICATOR: Company name change.

Print Date: 12/09/2002

Supersedes MSDS, which is older than: 12/09/2002

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