



Material Safety Data Sheet

Stellar™ Fungicide

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products is regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling. All necessary and appropriate precautionary, use, and storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Stellar™ Fungicide
VC NUMBER(S): 1589
ITEM: 61900
EPA REGISTRATION NUMBER: 59639-143

MANUFACTURER/DISTRIBUTOR

VALENT U.S.A. CORPORATION
P.O. Box 8025
1600 Riviera Avenue, Suite 200
Walnut Creek, CA 94596-8025

EMERGENCY TELEPHONE NUMBERS

HEALTH EMERGENCY OR SPILL (24 hr.):
(800) 892-0099
TRANSPORTATION (24 hr.): CHEMTREC
(800) 424-9300 or (202) 483-7616

PRODUCT INFORMATION

PROFESSIONAL PRODUCTS: (800) 898-2536

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight/ Percent	ACGIH Exposure Limits	OSHA Exposure Limits	Manufacturer's Exposure Limits
Fluopicolide (2,6-dichloro-N-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]methyl]benzamide)* (239110-15-7)	5 - 6	None	None	See regulated exposure limits
Propamocarb HCl (propyl [3-(dimethylamino)propyl]carbamate hydrochloride)* (25606-41-1)	53 - 58	None	None	See regulated exposure limits
Quartz (crystalline silica) (14808-60-7)	< 0.4	0.025 mg/m ³ TWA	(10)/(%SiO ₂ + 2) mg/m ³ TWA (250)/(%SiO ₂ + 5) mppcf TWA (30)/(%SiO ₂ + 2) mg/m ³ TWA	See regulated exposure limits
Others ** (Various CAS#s)	36 - 42	None	None	None

* Active Ingredient

** Other ingredients, which are maintained as trade secrets, are any substances other than an active ingredient contained in this product. Some of these may be hazardous, but their identity is withheld because they are considered trade secrets. The hazards associated with the other ingredients are addressed in this document. Specific information on other ingredients for the management of exposures, spills, or safety assessments can be obtained by a treating physician or nurse by calling **(800) 892-0099** at any time.

Emergency Telephone: (800) 892-0099
REVISION NUMBER: 3

MSDS NO.: 0288
REVISION DATE: 03/20/2008

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- CAUTION**
- Harmful if swallowed, inhaled or absorbed through skin.
 - Causes moderate eye irritation.
 - Highly toxic to fish.
 - May cause long-term adverse effects in the aquatic environment.
 - Avoid contact with eyes, skin and clothing.
 - Avoid breathing vapors or spray mist.
 - Keep out of reach of children.

POTENTIAL HEALTH EFFECTS

Acute Toxicity (Primary Routes of Exposure)

Signs and Symptoms of Systemic Effects: Not applicable

Acute Eye Contact: This product is expected to cause moderate eye irritation. The expected adverse health effects resulting from an exposure may include redness and possibly some minor swelling.

Acute Skin Contact: This product is expected to cause moderate skin irritation. The expected adverse health effects resulting from an exposure may include redness and possibly some minor swelling. This product is harmful if absorbed through the skin.

Acute Ingestion: This product may be harmful if swallowed.

Acute Inhalation: This product may be harmful if inhaled in excess.

Chronic Toxicity (including cancer): Fluopicolide Technical produced liver tumors in high dose studies in mice, but is unlikely to be carcinogenic to humans. This material may contain a small amount of crystalline silica. Repeated inhalation of large amounts of silica dust over an extended period of time may result in a progressive, disabling disease, silicosis. The International Agency for Research on Cancer (IARC) has determined that respirable crystalline silica is carcinogenic to humans. The National Toxicology Program (NTP) classifies respirable crystalline silica as a known carcinogen.

Developmental Toxicity (birth defects): Not considered a developmental hazard.

Reproductive Toxicity: Not considered a reproductive hazard.

Potentially Aggravated Medical Conditions: None known

For complete discussion of the toxicology data from which this evaluation was made, refer to Section 11. For Regulatory Information, refer to Section 15.

4. FIRST AID MEASURES

EMERGENCY NUMBER (800) 892-0099

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-800-892-0099** for emergency medical treatment information.

EYE CONTACT:

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 poison control center or doctor for treatment advice.

SKIN CONTACT:

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION:

Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

INHALATION:

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

NOTES TO PHYSICIAN:

Treatment is supportive and symptomatic.

5. FIRE FIGHTING MEASURES

FLASH POINT:	Not relevant, aqueous suspension
AUTOIGNITION:	420° C
NFPA RATING:	
Health:	1
Flammability:	0
Reactivity:	0
Special:	None

(Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using professional judgement. Values were not available in the guidelines or published evaluations prepared by the National Fire Protection Association, NFPA.

HAZARDOUS COMBUSTION PRODUCTS: Combustion may produce toxic gases of: hydrogen chloride, hydrogen cyanide, carbon monoxide, Hydrogen fluoride.

6. ACCIDENTAL RELEASE MEASURES

VALENT EMERGENCY PHONE NUMBER: (800) 892-0099
CHEMTREC EMERGENCY PHONE NUMBER: (800) 424-9300
OBSERVE PRECAUTIONS IN SECTION 8: PERSONAL PROTECTION

Stop the source of the spill if safe to do so. Contain the spill to prevent further contamination of the soil, surface water, or ground water. For additional spill response information refer to the North American Emergency Response Guidebook.

FOR SPILLS ON LAND:

CONTAINMENT: Avoid runoff into storm sewers and ditches which lead to waterways. Contain spilled liquids with dry sorbents.

CLEANUP: Clean up spill immediately. Absorb spill with inert material (such as dry sand or earth), then place in a chemical waste container. Wash area with soap and water. Pick up wash liquid with additional absorbent and place in a chemical waste container.

FOR SPILLS IN WATER:

CONTAINMENT: This material will disperse or dissolve in water. Stop the source of the release. Contain and isolate to prevent further release into soil, surface water and ground water.

CLEANUP: Clean up spill immediately. Absorb spill with inert material. Remove contaminated water for treatment or disposal.

7. HANDLING AND STORAGE

END USER MUST READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

Use only in well ventilated area. Avoid contact with skin and eyes. Do not breath spray mist.

Keep pesticide in original container. Do not store or transport near food or feed. Do not contaminate food or feed. Do not put concentrate into food or drink containers. Do not dilute concentrate in food or drink containers. Store in a cool, dry place, out of direct sunlight.

Do not store at temperatures below 32°F. If the product is exposed to temperatures below 32°F, thaw at room temperature to 50°F or warmer and shake gently to unify the product.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

END USER MUST READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

EYES: Do not get this material in your eyes. Eye contact can be avoided by wearing protective eyewear.

RESPIRATORY PROTECTION: Not usually required. Use this material in a well ventilated area. If necessary, use an air purifying respirator with a dust-mist/organic vapor cartridge combination.

SKIN PROTECTION: Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including gloves.

EXPOSURE LIMITS - See Section 2.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Opaque Liquid
COLOR:	Dark beige
ODOR:	Odorless
BOILING POINT:	> 100 °C
DENSITY:	1.13 g/cm ³ @ 20 °C
pH:	7 @ 10 g/L (23 °C)
VISCOSITY:	57 mPa @ 20 °C
SOLUBILITY:	Dispersible in water

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable at normal ambient temperatures. Storage stability > 24 months @ 0 - 30 °C.
THERMAL STABILITY:	No decomposition if used as directed.
INCOMPATABILITY:	None known
OXIDATION/REDUCTION PROPERTIES:	No oxidizing properties
EXPLODABILITY:	Not explosive.
HAZARDOUS DECOMPOSITION PRODUCTS:	When heated to the point of decomposition toxic fumes of oxides of carbon and nitrogens may be given off.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral Toxicity LD ₅₀ (rats)	> 2000 mg/kg	EPA Tox Category	III
Dermal Toxicity LD ₅₀ (rats)	> 4000 mg/kg	EPA Tox Category	III
Inhalation Toxicity LC ₅₀ (rats)	> 3.195 mg/L	EPA Tox Category	IV
Eye Irritation (rabbits)	Moderately irritating	EPA Tox Category	III
Skin Irritation (rabbits)	Non-irritating	EPA Tox Category	IV
Skin Sensitization (guinea pigs)	Positive - local lymphnode assay Negative - Buehler	EPA Tox Category	Not applicable

CHRONIC/CARCINOGENICITY: The liver and kidney are target organs in high dose animal experiments. Fluopicolide Technical did not cause cancer in rats, but produced benign liver tumors in mice at the maximum tolerated dose. The mechanism of liver tumor formation in the mouse is believed to be not relevant to humans. Long term animal studies with Propamocarb HCl did not produce carcinogenic effects.

This product may contain crystalline silica. Repeated inhalation of the dust may cause insidious lung injury and possibly silicosis. In patients with silicosis, areas of the lung become filled with scar tissue. The signs and symptoms may include cough, shortness of breath, difficulty in breathing, and loss of weight. The disease can progressively worsen and result in death. In their Monograph - Volume 42, the International Agency for Research on cancer (IARC) classified crystalline silica as a probable human carcinogen. Users of this product should confirm that their operating, storage, and distribution facilities comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200) for all materials containing more than 0.1% crystalline silica. Employee exposures to airborne crystalline silica dust should be controlled to below the OSHA 8 hour PEL for the particular type of crystalline silica present.

DEVELOPMENTAL TOXICITY: Animal studies with the two active ingredients did not produce teratogenic effects.

REPRODUCTION: Animal studies with the two active ingredients did not produce reproductive effects.

MUTAGENICITY: Fluopicolide Technical is not genotoxic. Propamocarb HCl did not show any mutagenic effects in animals.

For a summary of the potential for adverse health effects from exposure to this product, refer to Section 3. For information regarding regulations pertaining to this product, refer to Section 15.

12. ECOLOGICAL INFORMATION

AVIAN TOXICITY:

Fluopicolide Technical is practically non-toxic to avian species. The following results were obtained from studies with Fluopicolide Technical:

Oral LD₅₀ mallard duck: greater than 2250 mg/kg;
 Dietary LC₅₀ bobwhite quail: greater than 5620 ppm;
 Dietary LC₅₀ mallard duck: greater than 5620 ppm.

AQUATIC ORGANISM TOXICITY: May be highly toxic to aquatic organisms. The following are results of tests with Fluopicolide Technical:

Rainbow trout 96-hr LC₅₀ : = 0.36 mg/L
 Sheepshead minnow 96-hr LC₅₀ : = 0.41 mg/L
 Daphnia 48-hr LC₅₀ : > 1.8 mg/L
 Fathead minnow Chronic NOEC = 0.155 mg/L
 Daphnia Chronic NOEC = 0.37 mg/L
 Algae (Pseudokirchneriella) 72-hr LC₅₀ : > 4.3 mg/L
 Bioaccumulation, Bluegill sunfish: BCF 117

Tests indicate that Propamocarb HCl is slightly toxic to fish and aquatic invertebrates.

OTHER NON-TARGET ORGANISM TOXICITY: Fluopicolide Technical is practically non-toxic to bees. The acute contact LC50 in bees was greater than 100 µg/bee.

13. DISPOSAL CONSIDERATIONS

END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS.

DISPOSAL METHODS: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Check government regulations and local authorities for approved disposal of this material. Dispose in accordance with applicable laws and regulations.

14. TRANSPORT INFORMATION

DOT (ground) SHIPPING NAME:	Fungicide, liquid, non-regulated
DOT TECHNICAL SHIPPING NAME:	Fluopicolide 6%/Propamocarb HCl 58% Liquid
DOT REPORTABLE QUANTITY (RQ):	None
UN/NA NUMBER:	Not applicable
HAZARD CLASS:	Not applicable
PACKING GROUP:	Not applicable

15. REGULATORY INFORMATION

PESTICIDE REGULATIONS: All pesticides are governed under FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act). Therefore, the regulations presented below are pertinent only when handled outside of the normal use and applications of pesticides. This includes waste streams resulting from manufacturing/formulation facilities, spills or misuse of products, and storage of large quantities of products containing hazardous or extremely hazardous substances.

U.S. FEDERAL REGULATIONS:

Chemical Name	RCRA - U Series Wastes	Clean Water Act - Hazardous Substances	Clean Water Act Section 307
Fluopicolide (2,6-dichloro-N-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]methyl]benzamide)* (239110-15-7)		Not listed	Not listed
Propamocarb HCl (propyl [3-(dimethylamino)propyl]carbamate hydrochloride)* (25606-41-1)	None	Not listed	Not listed
Quartz (crystalline silica) (14808-60-7)	None	Not listed	Not listed

CWA Section 311: No data

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Chemical Name	SARA 313 Chemicals	SARA Section 302	CERCLA Reportable Quantity (RQ):
Fluopicolide (2,6-dichloro-N-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]methyl]benzamide)* (239110-15-7)	Not listed	Not listed	None
Propamocarb HCl (propyl [3-(dimethylamino)propyl]carbamate hydrochloride)* (25606-41-1)	Not listed	Not listed	None
Quartz (crystalline silica) (14808-60-7)	Not listed	Not listed	None

SARA (311, 312):

Immediate Health:	Yes
Chronic Health:	Yes
Fire:	No
Sudden Pressure:	No
Reactivity:	No

Chemical Name	IARC - Group 1 (carcinogenic to humans)	IARC - Group 2A (Probably carcinogenic)	IARC - Group 2B (Possibly carcinogenic)	NTP Carcinogen List
Fluopicolide (2,6-dichloro-N-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]methyl]benzamide)* (239110-15-7)	No	No	No	Not listed
Propamocarb HCl (propyl [3-(dimethylamino)propyl]carbamate hydrochloride)* (25606-41-1)	No	No	No	Not listed
Quartz (crystalline silica) (14808-60-7)	Yes	No	No	Known Carcinogen

STATE REGULATIONS:

Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities. The state regulations reviewed include: California Proposition 65, California Directors List of Hazardous Substances, Massachusetts Right to Know, Michigan Critical Materials List, New Jersey Right to Know, Pennsylvania Right to Know, Rhode Island Right to Know and the Minnesota Hazardous Substance list. For Washington State Right to Know, see Section 2 for Exposure Limit information. For Louisiana Right to Know refer to SARA information listed under U.S. Regulations above.

Chemical Name	California Proposition 65	California - Directors List of Hazardous Substances
Fluopicolide (2,6-dichloro-N-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]methyl]benzamide)* (239110-15-7)	Not listed	Not listed
Propamocarb HCl (propyl [3-(dimethylamino)propyl]carbamate hydrochloride)* (25606-41-1)	Not listed	Not listed
Quartz (crystalline silica) (14808-60-7)	carcinogen, initial date 10/1/88 (airborne particles of respirable size)	Not listed

Chemical Name	MI - Critical Materials List	MA Right To Know	NJ Right To Know
Fluopicolide (2,6-dichloro-N-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]methyl]benzamide)* (239110-15-7)	Not listed	Not listed	Listed
Propamocarb HCl (propyl [3-(dimethylamino)propyl]carbamate hydrochloride)* (25606-41-1)	Not listed	Not listed	Listed
Quartz (crystalline silica) (14808-60-7)	Not listed	Listed	Listed

Chemical Name	PA Right To Know	RI Right To Know	MN Hazardous Substance
Fluopicolide (2,6-dichloro-N-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]methyl]benzamide)* (239110-15-7)	Not listed	Not listed	Not listed
Propamocarb HCl (propyl [3-(dimethylamino)propyl]carbamate hydrochloride)* (25606-41-1)	Not listed	Not listed	Not listed
Quartz (crystalline silica) (14808-60-7)	Listed	Listed	Listed

California Proposition 65: WARNING: This product contains a chemical known to the State of California to cause cancer.

CANADIAN REGULATIONS:

WHMIS Hazard Class: Not determined

For information regarding potential adverse health effects from exposure to this product, refer to Sections 3 and 11.

16. OTHER INFORMATION

REASON FOR ISSUE: Updated product name. Add the Item and EPA registration number. Correct the transportation information.

MSDS NO.: 0288

EPA REGISTRATION NUMBER: 59639-143

REVISION NUMBER: 3

REVISION DATE: 03/20/2008

SUPERCEDES DATE: 12/2/2005

RESPONSIBLE PERSON(S): Valent U.S.A. Corporation, Corporate EH&S, (925) 256-2803

THE INFORMATION IN THIS MSDS IS BASED ON DATA AVAILABLE TO US AS OF THE REVISION DATE GIVEN HEREIN, AND BELIEVED TO BE CORRECT. CONTACT VALENT U.S.A . CORPORATON TO CONFIRM IF YOU HAVE THE MOST CURRENT MSDS.

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