Safety Data Sheet

Stellar™ Fungicide

1. IDENTIFICATION: CHEMICAL PRODUCT AND COMPANY

PRODUCT NAME: Stellar™ Fungicide
EPA REGISTRATION NUMBER: 59639-143
VC NUMBER(S): 1736
PRODUCT DESCRIPTION: Fungicide
Stellar is a trademark of Valent U.S.A. Corporation.

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
AGRICULTURAL PRODUCTS: (800) 682-5368

The current SDS is available through our website (www.valent.com), or by calling the product information numbers listed above.

2. HAZARDS IDENTIFICATION

For EPA FIFRA-specific information see Section 15

Classification

Acute toxicity - Oral	Category 4

Label elements

EMERGENCY OVERVIEW

WARNING

Hazard statements
Harmful if swallowed
May be harmful in contact with skin

Precautionary Statements - Prevention
Read product label prior to using this product. For specific handling instruction refer to Section 7, Handling and Storage

Precautionary Statements - Response
See Section 4, First Aid Measures

Precautionary Statements - Storage
For information on Storage and Handling see Section 7.

Precautionary Statements - Disposal
For further information on product and container disposal see Section 13.

Hazards not otherwise classified (HNOC)
Other Information
• Toxic to aquatic life with long lasting effects
25% of the mixture consists of ingredient(s) of unknown toxicity

For information on Transportation requirements see Section 14.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight/ Percent	TRADE SECRET
Fluopicolide	239110-15-7	5.54	
Propamocarb HCl	25606-41-1	55.4	
Others	Various CAS#s	39.1	

Other ingredients, which may be maintained as trade secrets, are any substances other than an active ingredient contained in this product. Some of these may be hazardous, but their identities are 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.

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 °C Not applicable
AUTOIGNITION: 420° C
FLAMMABLE LIMITS IN AIR - LOWER (%): Not applicable
FLAMMABLE LIMITS IN AIR - UPPER (%): Not applicable

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 DECOMPOSITION 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.

UN/NA NUMBER: Not applicable **EMERGENCY RESPONSE GUIDEBOOK NO.:** Not applicable

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.

HANDLING:

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear protective clothing and equipment when handling this product. Goggles or protective eyeware, gloves, long-sleeved shirt, long pants, socks and shoes are appropriate. Remove and wash contaminated clothing before reuse. Do not put into food or drink containers. Do not dilute in food or drink containers.

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

STORAGE:

Store in a cool, dry place. Keep pesticide in original container only. Keep container closed when not in use. Not for use or storage in or around the home. Do not store at temperatures below 32ºF. If the product is exposed to temperatures below 32ºF, thaw at room temperature to 50ºF 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.

ENGINEERING CONTROLS: Local exhaust ventilation may be necessary.

INFORMATION FOR END USERS

EYES & FACE: 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 a NIOSH approved air purifying respirator with a dust-mist filter / organic vapor cartridge combination.

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

EXPOSURE LIMITS

Chemical Name	ACGIH Exposure Limits	OSHA Exposure Limits	Manufacturer's Exposure Limits
Fluopicolide	None	None	None
Propamocarb HCl	None	None	None
Others	None	None	None

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid		
Appearance	Opaque	**Odor**	Odorless
Color	Beige	**Odor threshold**	No information available

PROPERTIES	Values	Remarks • Method
pH	7.0	1:1 dilution with water
Melting point/freezing point	No information available	
Boiling point/boiling range	> 100 °C	
Flash point	Not applicable	

Evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limits in Air	
Upper flammability limits	Not applicable
Lower flammability limit	Not applicable
Vapor pressure	No information available
Vapor density	No information available
Specific Gravity	No information available
Water solubility	Dispersible in water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity	57 mPa @ 20° C
Explosive properties	No information available
Oxidizing properties	No information available
Density	1.13 g/cm^3 @ 20° C
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Extremes of temperature and direct sunlight.

Incompatible materials
None known based on information supplied.

Hazardous Decomposition Products
None known based on information supplied.

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

CARCINOGEN CLASSIFICATION

Chemical Name	IARC	OSHA - Select Carcinogens	NTP Carcinogen List
Fluopicolide	Not listed	Not listed	Not listed
Propamocarb HCl	Not listed	Not listed	Not listed
Others	Not listed	Not listed	Not listed

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.

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 2. For information regarding regulations pertaining to this product, refer to Section 15.

12. ECOLOGICAL INFORMATION

AVIAN TOXICITY: Based upon EPA designation, fluopicolide technical is practically non-toxic to avian species. The following results were obtained from studies with fluopicolide technical:

Oral LD_{50} mallard duck: greater than 2250 mg/kg
Dietary LC_{50} bobwhite quail: greater than 5620 ppm
Dietary LC_{50} mallard duck: greater than 5620 ppm

AQUATIC ORGANISM TOXICITY: Based upon EPA designation, fluopicolide technical may be highly toxic to aquatic organisms. The following are results of tests with fluopicolide technical:

Rainbow trout 96-hr LC_{50} : = 0.36 mg/L
Sheepshead minnow 96-hr LC_{50} : = 0.41 mg/L
Daphnia 48-hr LC_{50} : > 1.8 mg/L
Fathead minnow Chronic NOEC = 0.155 mg/L
Daphnia Chronic NOEC = 0.37 mg/L
Algae (Pseudokirchneriella) 72-hr LC_{50} : > 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.

OTHER ENVIRONMENTAL INFORMATION:
This product is toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters. See Directions for Use on product label for additional precautions and restrictions.

13. DISPOSAL CONSIDERATIONS

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

PRODUCT DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure 2 more times.

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

14. TRANSPORTATION INFORMATION

DOT (ground) SHIPPING NAME:	Not regulated for domestic ground transport by U.S. DOT
EMERGENCY RESPONSE GUIDEBOOK NO.:	Not applicable
ICAO/IATA SHIPPING NAME:	UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Fluopicolide), 9, III, Marine Pollutant
REMARKS:	Single or inner packaging less than 5 L (liquid) or 5 Kg net (solids) excepted from Dangerous Goods regulations -- see UN Special Provision 375.
IMDG SHIPPING NAME:	UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Fluopicolide), 9, III, Marine Pollutant
EMS NO.:	F-A, S-F

15. REGULATORY INFORMATION

EPA-FIFRA LABEL INFORMATION THAT DIFFERS FROM OSHA-GHS REQUIREMENTS:

This material is a pesticide product registered by the EPA under FIFRA and is subject to certain labeling requirements under federal pesticide law. These requirements may differ from the classification criteria and hazard information required by OSHA GHS for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the FIFRA pesticide label:

EPA FIFRA SIGNAL WORD: CAUTION

- ***Keep out of reach of children.***
- ***Harmful if inhaled or absorbed through skin.***
- ***Causes moderate eye irritation***
- ***Toxic to fish and aquatic invertebrates***
- ***May cause long-term adverse effects in the aquatic environment***

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: Ingredients in this product are reviewed against an inclusive list of federal regulations. Therefore, the user should consult appropriate authorities. The federal regulations reviewed include: Clean Water Act, SARA, CERCLA, RCRA, DOT, TSCA and OSHA. If no components or information is listed in the space below this paragraph, then none of the regulations reviewed are applicable.

SARA (311, 312):

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

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 8 for Exposure Limit information. For Louisiana Right to Know refer to SARA information listed under U.S. Regulations above. If no components or information is listed in the space below this paragraph, then none of the regulations reviewed are applicable.

For information regarding potential adverse health effects from exposure to this product, refer to Sections 2 and 11.

16. OTHER INFORMATION

REASON FOR ISSUE:	Updated information to meet OSHA Hazcom 2012 (GHS) regulations.
SDS NO.:	0288
EPA REGISTRATION NUMBER:	59639-143
REVISION NUMBER:	1
REVISION DATE:	02/26/2015
SUPERCEDES DATE:	None
RESPONSIBLE PERSON(S):	Valent U.S.A. Corporation, Corporate EH&S, (925) 256-2803

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS 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, 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.

The information in this SDS is based on data available to us as of the revision date given herein, and believed to be correct. Contact Valent U.S.A. Corporation to confirm if you have the most current SDS.

Judgments as to the suitability of information herein for the individual's own use or purposes are necessarily the individual's own responsibility. Although reasonable care has been taken in the preparation of such information, Valent extends no warranties, makes no representations, and assumes no responsibility as to the accuracy or suitability of such information for application to the individual's purposes or the consequences of its use.

2015 Valent U.S.A. Corporation