



Safety Data Sheet - GHS

1. IDENTIFICATION: CHEMICAL PRODUCT AND COMPANY

PRODUCT NAME: Elumin® Fungicide
EPA REGISTRATION NUMBER: 59639-211
PRODUCT CODE: 61311
VC NUMBER(S): 1917, 1951. May include other numbers for similar formulations.
SYNONYM(S): V-10208 4 SC Fungicide
PRODUCT DESCRIPTION: Agricultural Fungicide

Elumin is a Registered Trademark of Valent U.S.A. LLC

MANUFACTURER/DISTRIBUTOR

VALENT U.S.A. LLC
 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

2. HAZARDS IDENTIFICATION

This product is an EPA FIFRA registered pesticide. Some classifications on this SDS are not the same as the FIFRA-required classifications on the product label. Certain sections of this SDS are superseded by federal law under EPA FIFRA for a registered pesticide. Please see Section 15, REGULATORY INFORMATION for an explanation.

Classification - (per U.S. OSHA 29 CFR 1910.1200 (Hazcom 2012))

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
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Label elements

EMERGENCY OVERVIEW

WARNING

Hazard statements

Harmful if inhaled

Precautionary statements

Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

Response

Eyes None.

Skin None.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion None.

FIRE None.

Spill None.

Storage

None

Disposal

None

Hazards not otherwise classified (HNOC)

Other Information

- Toxic to aquatic invertebrates
- <5% 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 No.	Weight-%	TRADE SECRET
Ethaboxam	162650-77-3	42.5	
Propylene glycol	57-55-6	9.85	*
Others	VARIOUS CAS NOS	47	

* The chemical name, CAS number and/or exact percentage have been withheld as a trade secret

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:

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

SDS NO.: 0432
REVISION DATE: 05/16/2019

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 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:

None

5. FIRE FIGHTING MEASURES

Flash point °C	> 100 °C	
Flash point °F	> 212 °F	
EXTINGUISHING MEDIA:	Water fog, carbon dioxide, foam, dry chemical	
FLAMMABLE LIMITS IN AIR - LOWER (%):		Not determined
FLAMMABLE LIMITS IN AIR - UPPER (%):		Not determined

NFPA RATING:

Health:	1
Flammability:	1
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.

FIRE FIGHTING INSTRUCTIONS: Products of combustion from fires involving this material may be toxic. Avoid breathing smoke and mists. Avoid personnel and equipment contact with fallout and runoff. Minimize the amount of water used for fire fighting. Do not enter any enclosed area without full protective equipment, including self-contained breathing equipment. Contain and isolate runoff and debris for proper disposal. Decontaminate personal protective equipment and fire fighting equipment before reuse.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce toxic gases of: Hydrogen cyanide (HCN), carbon dioxide. Carbon monoxide (CO), oxides of sulfur, oxides of nitrogen, various hydrocarbons, etc.

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
FOR SPILLS ON LAND:

EMERGENCY RESPONSE GUIDEBOOK NO.: Not applicable

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 is miscible in water. Stop or reduce contamination of any water. Isolate contaminated 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:

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.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STORAGE:

Keep pesticide in original container only. Keep container closed when not in use. 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 and away from heat, flame and strong acids. Do not store or transport near food or feed. 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. Not for use or storage in or around the home.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Mixers, loaders, applicators and other handlers should refer to the product label before use for detailed information on personal protective equipment (PPE).

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

RESPIRATORY PROTECTION: Use this material only in well ventilated areas. If ventilation is not adequate to keep airborne concentrations below recommended exposure standards, approved respiratory protection should be worn.

SKIN & HAND PROTECTION: Avoid contact with skin or clothing. Skin contact can be minimized by wearing protective clothing including gloves. Wash hands before breaks and at the end of work. Immediately take off all contaminated clothing and wash before reuse.

EXPOSURE LIMITS

Chemical name	ACGIH Exposure Limits	OSHA Exposure Limits	Manufacturer's Exposure Limits
Ethaboxam	None	None	None
Propylene glycol	None	None	None
Others	None	None	None

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid	Odor	Paint-like
Appearance	Opaque	Odor threshold	No information available
Color	Off-white		

<u>PROPERTIES</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	8.6 @ 25° C	1% (w/v) suspension in water
Melting point/freezing point	No information available	
Boiling point/boiling range	No information available	
Flash point	> 100 °C / > 212 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limits	No information available	
Lower flammability limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	No information available	
Water solubility	Miscible 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	143 cP @ 20° C; 113 cP @ 40° C	
Explosive properties	No information available	
Oxidizing properties	No information available	
Liquid Density	1.137 g/mL (9.492 lb/gal) @ 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

Not explosive. Hazardous polymerization does not occur. Not an oxidizing or reducing agent.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

Strong acids.

Hazardous Decomposition Products

May produce toxic gases of: hydrogen cyanide, carbon dioxide, carbon monoxide, oxides of sulfur, oxides of nitrogen, and various other hydrocarbons.

11. TOXICOLOGICAL INFORMATION

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

SDS NO.: 0432
 REVISION DATE: 05/16/2019

ACUTE TOXICITY:

The following information is for the formulated product.

Oral Toxicity LD ₅₀ (rats)	> 5,000 mg/kg	EPA Tox Category	IV
Dermal Toxicity LD ₅₀ (rabbits)	> 5,000 mg/kg	EPA Tox Category	IV
Inhalation Toxicity LC ₅₀ (rats)	> 2.11 mg/L (4 hr)	EPA Tox Category	IV
Eye Irritation (rabbits)	Non-irritating	EPA Tox Category	IV
Skin Irritation (rabbits)	Non-irritating	EPA Tox Category	IV
Skin Sensitization (guinea pigs)	Non-sensitizer	EPA Tox Category	Not applicable

CARCINOGEN CLASSIFICATION

Chemical name	IARC	OSHA - Select Carcinogens	NTP Carcinogen List
Ethaboxam	Not listed	Not listed	Not listed
Propylene glycol	Not listed	Not listed	Not listed
Others	Not listed	Not listed	Not listed

CHRONIC/CARCINOGENICITY: In a one-year dog study, Ethaboxam Technical produced no adverse effects up to 30 mg/kg/day (HDT). In a 2-year study in rats, Ethaboxam Technical produced adverse effects in the male reproductive organs and Interstitial/Leydig cell adenomas. The NOAEL for this study was 5.5 mg/kg/day. In a one-year mouse study with Ethaboxam Technical, no evidence of carcinogenicity was observed.

NEUROTOXICITY: Ethaboxam Technical was not neurotoxic in acute or subchronic neurotoxicity studies.

IMMUNOTOXICITY: Ethaboxam Technical was not immunotoxic when tested in rats using a modified plaque forming assay.

DEVELOPMENTAL TOXICITY: Developmental toxicity studies at doses high enough to cause maternal toxicity produced developmental effects (abnormal liver lobation) in rats. Similar developmental effects were not observed in rabbits.

REPRODUCTION: Ethaboxam Technical was tested in a 2-generation rat reproduction study. Reduced body weight gain was noted at 650 ppm (HDT). Testicular lesions and reduced fertility were also observed in F1 males at this level. Decreased body weight and viability were observed at the highest dose tested. The parental, reproductive and offspring NOAEL was 200 ppm (16.2 mg/kg/day).

MUTAGENICITY: Genetic toxicity studies show that Ethaboxam Technical may cause numerical chromosome effects (via effects on the mitotic spindle), but does not cause gene mutations or structural chromosome aberrations.

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

Oral LD₅₀ bobwhite quail: greater than 2000 mg/kg
 Oral LD₅₀ zebra finch: greater than 2000 mg/kg
 Dietary LC₅₀ bobwhite quail: greater than 5000 ppm
 Dietary LC₅₀ mallard duck: greater than 5620 ppm

AQUATIC ORGANISM TOXICITY: Based upon EPA designation, Ethaboxam Technical is toxic to aquatic invertebrate species. Test results include:

LC₅₀ (96 hr) Fathead Minnow: greater than 4.6 mg/L
 LC₅₀ (96 hr) Rainbow Trout: 2.3 mg/L
 LC₅₀ (96 hr) Sheepshead Minnow: greater than 3.1 mg/L
 EC₅₀ (48 hr) Daphnia magna: 0.35 mg/L
 LC₅₀ (96 hr) Mysid Shrimp: 0.42 mg/L
 EC₅₀ (96 hr) Oyster Shell Deposition: 0.31 mg/L
 EC₅₀ (96 hr) Green algae: greater than 3.6 mg/L

OTHER NON-TARGET ORGANISM TOXICITY:

The following information is based on Ethaboxam Technical:
 Honeybee 48-hour oral LD₅₀ = >100 µg (microgram)/bee
 Honeybee 48-hour contact LD₅₀ = >100 µg (microgram)/bee.

OTHER ENVIRONMENTAL INFORMATION:

This pesticide is toxic to aquatic invertebrates, oysters and shrimp.

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below mean high water mark. Do not apply where runoff is likely to occur. Do not apply where weather conditions favor drift from areas treated. Do not contaminate water when cleaning equipment or disposing of equipment washwater or rinsate. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollution Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the Environmental Protection Agency (EPA.)

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: Non-refillable container. Refer to pesticide label for proper container disposal instructions.

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 Not applicable

GUIDEBOOK NO.:

ICAO/IATA SHIPPING NAME: UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Ethaboxam), 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 IATA Special Provision A197. •For US shipping, Emergency Response Guidebook No. 171

IMDG SHIPPING NAME: UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Ethaboxam), 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 IMDG 2.10.2.7
 •For US shipping, Emergency Response Guidebook No. 171
 •For US shipping, Emergency Response Guidebook No. 171

EMS NO.: F-A, S-F

15. REGULATORY INFORMATION

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

Pesticide products in the U.S. are registered by the EPA under FIFRA and are 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.*

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.

Propylene glycol

NJ Right To Know	3595
PA Right To Know	Present
RI Right To Know	Listed
MN Hazardous Substance	Present

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 trademark status.
SDS NO.:	0432
EPA REGISTRATION NUMBER:	59639-211
REVISION NUMBER:	3
REVISION DATE:	05/16/2019
SUPERCEDES DATE:	08/14/2017
RESPONSIBLE PERSON(S):	Valent U.S.A. LLC, Corporate EH&S, (925) 256-2803

The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, to the extent consistent with applicable law, Valent U.S.A. LLC and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, to the extent consistent with applicable law, neither Valent U.S.A. LLC nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property rights of others. Except to the extent a particular use and particular information are expressly stated on the product label, it is the users' own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Valent U.S.A. LLC to confirm that you have the most current product label and SDS.

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 as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom").

The product label provides information specifically for product use in the ordinary course. All necessary hazard classification and appropriate precautionary use, storage, and disposal information is set forth on that label or labeling accompanying the pesticide or to which reference is made on the label.

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