



## Safety Data Sheet - GHS

### 1. IDENTIFICATION: CHEMICAL PRODUCT AND COMPANY

**PRODUCT NAME:** Intuity™ Fungicide  
**EPA REGISTRATION NUMBER:** 59639-198  
**PRODUCT CODE:** None  
**VC NUMBER(S):** 1878, 1902, 1930 (other VC#s may also be applicable)

**MANUFACTURER/DISTRIBUTOR**  
 VALENT U.S.A. LLC  
 P.O. Box 5075  
 4600 Norris Canyon Road  
 San Ramon, CA 94583

**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 Certain sections of this SDS are superseded by federal law under EPA FIFRA for a registered pesticide.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**

- Very toxic to aquatic life with long lasting effects.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical name	CAS No.	Weight-%	TRADE SECRET
Mandestrobin	173662-97-0	43.4	
Starch	9005-25-8	1	
Propylene glycol	57-55-6	5 - 9	*
Potassium hydroxide, 45%	1310-58-3	< 0.6	
Other ingredients	Various CAS#s	47 - 51	*

\* 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:**

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, 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**  
**AUTOIGNITION:** No Data Available  
**EXTINGUISHING MEDIA:** Water fog, carbon dioxide, foam, dry chemical

**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 emit toxic gases and irritating fumes under fire conditions.

**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:**

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

**SDS NO.:** 0417  
**REVISION DATE:** 09/04/2020

**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 on to soil or into surface 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:**

Avoid contact with eyes, skin or clothing. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Wear protective clothing and equipment when handling this product. Goggles or protective eyewear, gloves, long-sleeved shirt, long pants, socks and shoes are appropriate. Do not mix product with water (except for the normal preparation).

#### **STORAGE:**

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, away from heat, flame and strong acids. 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.**

#### **INFORMATION FOR END USERS**

**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:** Not usually required. Use this material in a well ventilated area. If necessary, use an air purifying respirator with a high efficiency particulate filter (P100).

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

**ENGINEERING CONTROLS:** Use in a well ventilated area.

**EXPOSURE LIMITS**

Chemical name	ACGIH Exposure Limits	OSHA Exposure Limits	Manufacturer's Exposure Limits
Mandestrobin	None	None	None
Starch	TWA: 10 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction	None
Propylene glycol	None	None	None
Potassium hydroxide, 45%	Ceiling: 2 mg/m <sup>3</sup>	(vacated) Ceiling: 2 mg/m <sup>3</sup>	None
Other ingredients	Inhalable particles: 10 mg/m <sup>3</sup> Respirable particles: 3 mg/m <sup>3</sup>	None	None

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state</b>	Liquid	<b>Odor</b>	Sweet
<b>Appearance</b>	Opaque	<b>Odor threshold</b>	No information available
<b>Color</b>	White		

**PROPERTIES**

<b>PROPERTIES</b>	<b>Values</b>	<b>Remarks • Method</b>
<b>pH</b>	6.8	@ 25° C (1% w/v suspension in water)
<b>Melting point/freezing point</b>	No information available	
<b>Boiling point/boiling range</b>	No information available	
<b>Flash point</b>	>100 °C	
<b>Evaporation rate</b>	No information available	
<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability Limits in Air</b>		
<b>Upper flammability limits</b>	No information available	
<b>Lower flammability limit</b>	No information available	
<b>Vapor pressure</b>	No information available	
<b>Vapor density</b>	No information available	
<b>Specific Gravity</b>	No information available	
<b>Water solubility</b>	No information available	
<b>Solubility in other solvents</b>	No information available	
<b>Partition coefficient</b>	No information available	
<b>Autoignition temperature</b>	No information available	
<b>Decomposition temperature</b>	No information available	
<b>Viscosity</b>	168 cP @ 20° C	
<b>Explosive properties</b>	No information available	
<b>Oxidizing properties</b>	No information available	
<b>Liquid Density</b>	1.1 g/mL @20° C	
<b>Bulk density</b>	Not applicable	

**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 <sub>50</sub> (mouse)	3,129 mg/kg	EPA Tox Category	III
Dermal Toxicity LD <sub>50</sub> (mouse)	> 5,000 mg/kg	EPA Tox Category	IV
Inhalation Toxicity LC <sub>50</sub> (rats)	> 2.04 mg/L	EPA Tox Category	IV
Eye Irritation (rabbits)	Minimally irritating	EPA Tox Category	IV
Skin Irritation (rabbits)	Minimally irritating	EPA Tox Category	IV
Mouse (LLNA method)	Non-sensitizer	EPA Tox Category	Not applicable

**CARCINOGEN CLASSIFICATION**

Chemical name	IARC Group 1 or 2	OSHA - Select Carcinogens	NTP Carcinogen List
Mandestrobin	Not listed	Not listed	Not listed
Starch	Not listed	Not listed	Not listed
Potassium hydroxide, 45%	Not listed	Not listed	Not listed
Other ingredients	Not listed	Not Listed	Not listed
Propylene glycol	Not listed	Not listed	Not listed

**MUTAGENICITY:** Mandestrobin Technical was negative for the Ames test.

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:**

Test results for mandestrobin technical on avian species include:

Acute Oral LD<sub>50</sub> canary: greater than 2000 mg/kg bw  
 Acute Oral LD<sub>50</sub> bobwhite quail: greater than 2250 mg/kg bw  
 Acute Dietary LC<sub>50</sub> mallard duck: greater than 5620 ppm  
 Acute Dietary LC<sub>50</sub> bobwhite quail: greater than 5620 ppm  
 Reproduction bobwhite quail: NOEC = 1000 ppm  
 Reproduction mallard duck: NOEC = 1000 ppm

**AQUATIC ORGANISM TOXICITY:** Test results for mandestrobin technical on aquatic species include:

Acute LC<sub>50</sub> (96 hr) Bluegill Sunfish: 2.3 mg/L  
 Acute LC<sub>50</sub> (96 hr) Rainbow Trout: 0.94 mg/L  
 Acute LC<sub>50</sub> (96 hr) Sheepshead Minnow: greater than 2.2 mg/L  
 Acute EC<sub>50</sub> (48 hr) Daphnia magna: 1.2 mg/L  
 Acute LC<sub>50</sub> (96 hr) Mysid Shrimp: 0.43 mg/L  
 Acute EC<sub>50</sub> (96 hr) Green algae: = 0.33 mg/L  
 Acute EC<sub>50</sub> (7 d) Duckweed: greater than 2.3 mg/L

**OTHER NON-TARGET ORGANISM TOXICITY:**

Test results for mandestrobin technical on non-target species include:

Honeybee Acute Oral LD<sub>50</sub> : greater than 111 ug (microgram)/bee

Honeybee Acute Contact LD<sub>50</sub> : greater than 100 ug (microgram)/bee

**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. 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 1/4 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 two more times. Offer for recycling if available, or dispose in a sanitary landfill or incinerate; or if allowed by state and local authorities by burning. If burned, stay out of the smoke.

**DISPOSAL METHODS:** Check government regulations and local authorities for approved disposal of this material. Dispose of in accordance with applicable laws and regulations. Do not contaminate water, food or feed by disposal. Disposal of waste and used containers must be in accordance with applicable Federal, State and local regulations. Do not flush to surface water or sanitary sewer system.

**14. TRANSPORTATION INFORMATION**

**DOT (ground) SHIPPING NAME:** Not regulated for domestic ground transport by US DOT or Canada TDG.

**ICAO/IATA SHIPPING NAME:** UN 3082, Environmentally hazardous substance, liquid, n.o.s., (mandestrobin), 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.
- For U.S. shipping, Emergency Response Guidebook No. 171.

**IMDG SHIPPING NAME:** UN 3082, Environmentally hazardous substance, liquid, n.o.s., (mandestrobin), 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

**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.*

- **Harmful if swallowed**
- **Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.**

**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.

**Potassium hydroxide, 45%**

Clean Water Act - Hazardous Substances	Present
CERCLA Reportable Quantity (RQ):	1000 lb 454 kg

**SARA (311, 312):**

Immediate Health:	No
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.

**Starch**

MA Right To Know	Present
PA Right To Know	Present
RI Right To Know	Listed
MN Hazardous Substance	Present

**Propylene glycol**

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

**Potassium hydroxide, 45%**

California - Directors List of Hazardous Substances	Present
MA Right To Know	Present
NJ Right To Know	1571
PA Right To Know	Environmental hazard
MN Hazardous Substance	Present



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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 Manufacturer/Distributor Address and General Review.  
**SDS NO.:** 0417  
**EPA REGISTRATION NUMBER:** 59639-198  
**REVISION NUMBER:** 3  
**REVISION DATE:** 09/04/2020  
**SUPERCEDES DATE:** 09/30/2016  
**RESPONSIBLE PERSON(S):** Valent U.S.A. LLC, Corporate EH&S, (925) 256-2803

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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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