



## Safety Data Sheet (GHS)

### 1. IDENTIFICATION

**Product identifier**

**PRODUCT NAME:** INTEGO™ Solo Fungicide

**PCPA REGISTRATION NUMBER:** 31324  
**VC NUMBER(S):** VC-1892, VC-1896, and VC-1979  
**Synonyms:** None

**PRODUCT DESCRIPTION:** Seed Treatment

*INTEGO®* is a registered trademark of Valent U.S.A. LLC

**Recommended use of the chemical and restrictions on use**

**Recommended Use:** No information available

**Restrictions on use:** No information available

**Details of the supplier of the safety data sheet**

**MANUFACTURER/DISTRIBUTOR**  
 VALENT CANADA, INC.  
 Unit 201 230 Hanlon Creek Blvd.  
 Guelph, Ontario N1C 0A1  
 (519) 767-9262  
 www.valent.ca

**EMERGENCY TELEPHONE NUMBERS**  
 HEALTH EMERGENCY OR SPILL (24 hr):  
 (800) 682-5368  
 TRANSPORTATION (24 hr.): CHEMTREC  
 (800) 424-9300 or (202) 483-7616

**24 Hour Emergency Phone Number:** 800-682-5368

**Restrictions on emergency number:** None

### 2. HAZARDS IDENTIFICATION

**Classification:** Per WHMIS 2015

This product has been classified under the Guidelines of 2015 Health Canada requirements and the implementation of the GHS (Revision 5) under HPR and the HPA.

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

**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

**Inhalation**

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

**OTHER INFORMATION**

Very toxic to aquatic life

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Substance**

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Ethaboxam	162650-77-3	34.2	-	-
Glycerine	56-81-5	2.5	-	-
Sodium tetraborate decahydrate	1303-96-4	0.2	-	-
Others	VARIOUS CAS NOS	63.1	-	-

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) 682-5368** at any time.

**4. FIRST AID MEASURES****General advice**

Have the product container or label with you when calling a poison control centre or doctor, or going for treatment. You may also contact 1-800-682-5368 for emergency medical treatment information.

**Inhalation**

Move person to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor/physician if you feel unwell.

**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. Seek medical advice if irritation develops or persists.

**Skin contact**

Wash with soap and water. Remove and wash contaminated clothing separately.

Emergency Telephone: (800) 682-5368  
REVISION NUMBER: 2

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REVISION DATE: 08/19/2019

**Ingestion** Have person rinse mouth with water, and then drink plenty of water. Call a POISON CONTROL CENTRE or a doctor/physician if they feel unwell. DO NOT induce vomiting unless told to do so by the POISON CONTROL CENTRE or doctor/physician. Never give anything by mouth to an unconscious person.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** None.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media** Water fog, carbon dioxide, foam, dry chemical.

**Large Fire** Do NOT use water jet or straight streams.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** 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 firefighting. 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 firefighting equipment before reuse.

**Hazardous combustion products:** May produce toxic gases of: hydrogen cyanide (HCN), carbon dioxide, carbon monoxide (CO), oxides of nitrogen, oxides of sulfur, various hydrocarbons, etc.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid breathing dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required.

**Methods and material for containment and cleaning up**

**Methods for containment** On Land: Avoid runoff into storm sewers and ditches which lead to waterways, or other bodies of water. Contain spilled liquids with dry sorbents.

On Water: This material is miscible in water. Stop or reduce contamination of any water. Isolate contaminated water.

**Methods for cleaning up** For Spills on Land: 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. Vacuum or sweep up sorbent material and place into chemical waste container.

For Spills in Water: Clean up spill immediately. Absorb spill with inert material. Remove contaminated material for treatment or disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Advice on safe handling**

Wear personal protective equipment when handling this product. 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.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should wash hands thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

### Conditions for safe storage, including any incompatibilities

#### **Storage Conditions**

Keep pesticide in original container only. Keep container closed when not in use. Do not store near food or feed. Store in a cool, dry place, out of direct sunlight and away from heat, flame and strong acids. Do not store at temperatures below 32 °F (0 °C). If the product is exposed to temperatures below 32 °F (0 °C), thaw at room temperature to 50 °F (10 °C) or warmer and shake gently to unify the product.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **Exposure Limits**

Chemical name	Alberta	British Columbia	Ontario	Quebec
Glycerine	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>		TWA: 10 mg/m <sup>3</sup>
Sodium tetraborate decahydrate	TWA: 1 mg/m <sup>3</sup> STEL: 3 ppm	TWA: 2 mg/m <sup>3</sup> STEL: 6 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> STEL: 6 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>

### Appropriate engineering controls

#### **Engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

#### **Eye/face protection**

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

#### **Skin and body 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.

#### **Respiratory protection**

Use this material only in well ventilated areas.

#### **General hygiene considerations**

**Workers loading product, treating seed, and conducting maintenance and calibration of the treater must wear:** long-sleeved shirt, long pants, socks and shoes, and chemical-resistant gloves made of any waterproof material.

**Workers involved with handling treated seed (such as baggers, sewers, and bag stackers) must wear:** long-sleeved shirt, long pants, and socks and shoes.

**Workers who load and plant treated seed must wear:** long-sleeved shirt, long pants, socks and shoes, and chemical-resistant gloves made of any waterproof material when handling treated seed.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Opaque
Colour	Off-white
Odour	Paint-like
Odor threshold:	No information available

<u>PROPERTIES</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	8.3	1% (w/v) suspension in water
Melting point/freezing point	No Data Available	None known
Boiling point/boiling range	> 100 °C	None known
Flash point	> 98.9 °C / > 210 °F	None known
Evaporation rate	No Data Available	None known
Flammability (solid, gas)	No Data Available	None known
Flammability Limits in Air		None known
Upper flammability limits	No Data Available	
Lower Flammability Limit:	No Data Available	
Vapour pressure	No Data Available	None known
Vapour density	No Data Available	None known
Relative density	1.12	@ 20 °C (68 °F)
Water solubility	Miscible/dispersible in water	None known
Solubility in other solvents	No Data Available	None known
Partition coefficient	No Data Available	None known
Autoignition temperature	No Data Available	None known
Decomposition temperature	No Data Available	None known
Kinematic viscosity	No Data Available	None known
Dynamic viscosity	No Data Available	None known

### OTHER INFORMATION

Explosive properties	Not an explosive.
Oxidizing properties	Not an oxidizing or reducing agent.
Softening point	No information available
Molecular weight	No information available
VOC (EPA METH.24) (G/L):	No information available
Liquid Density	9.34 lb/gal
Bulk density	No information available

## 10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable at normal temperatures and storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
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**

**Acute toxicity:**

There is no toxicology information available for this product. The following information is for the technical material.

Oral Toxicity LD <sub>50</sub> (rats)	> 5,000 mg/kg	EPA Tox Category	IV
Dermal Toxicity LD <sub>50</sub> (rabbits)	> 5,000 mg/kg	EPA Tox Category	IV
Inhalation Toxicity LC <sub>50</sub> (rats)	> 2.73 mg/L (4 hr)	EPA Tox Category	IV
Eye Irritation (rabbits)	Non-irritating	EPA Tox Category	IV
Skin Irritation (rabbits)	Slightly 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
Others	Not listed	Not listed	Not listed
Sodium tetraborate decahydrate	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.

**IMMUNOTOXICTY:** 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 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 LD<sub>50</sub> bobwhite quail: > 2000 mg/kg  
 Oral LD<sub>50</sub> zebra finch: > 2000 mg/kg  
 Dietary LC<sub>50</sub> bobwhite quail: > 5000 ppm  
 Dietary LC<sub>50</sub> mallard duck: > 5620 ppm

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

LC<sub>50</sub> (96 hr) Fathead Minnow: > 4.6 mg/L  
 LC<sub>50</sub> (96 hr) Rainbow Trout: 2.3 mg/L  
 LC<sub>50</sub> (96 hr) Sheepshead Minnow: > 3.1 mg/L  
 EC<sub>50</sub> (48 hr) Daphnia magna: 0.35 mg/L  
 LC<sub>50</sub> (96 hr) Mysid Shrimp: 0.42 mg/L  
 EC<sub>50</sub> (96 hr) Oyster Shell Deposition: 0.31 mg/L  
 EC<sub>50</sub> (96 hr) Green algae: > 3.6 mg/L

**OTHER NON-TARGET ORGANISM TOXICITY:**

The following information is based on Ethaboxam Technical:  
 Honeybee 48-hour oral LD<sub>50</sub>: >100 µg (microgram)/bee  
 Honeybee 48-hour contact LD<sub>50</sub>: >100 µg (microgram)/bee.

**ECOLOGICAL TOXICITY:**

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

### 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Waste from residues/unused products**

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

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

**Contaminated packaging**

Refer to pesticide label for proper container disposal instructions based on container type and size.

### 14. TRANSPORTATION INFORMATION

**DOT (ground) shipping name:  
Emergency Response  
Guidebook No.:**

Not regulated for domestic ground transport by US DOT or Canada TDG.

Not applicable

**ICAO/IATA proper shipping  
name:  
Remarks:**

UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Ethaboxam), 9, III, Marine Pollutant

- 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 proper 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  
 EMS No.: F-A, S-F

## 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

### PMRA LABEL INFORMATION THAT DIFFERS FROM WHMIS-GHS REQUIREMENTS:

Pesticide products in Canada are registered by PMRA and are subject to certain labeling requirements under federal pesticide law. The label, as specified in the Pest Control Products Act, is the main document to be followed for safety, use, and handling. These label requirements may differ from the classification criteria and hazard information required under WHMIS GHS for the data sheets and for workplace labels of non-pesticide chemicals. The following hazard information is required on the product label:

**PMRA SIGNAL WORD:** • No Signal Word Required

#### PMRA pesticide label hazard information:

Keep out of reach of children.

Wash hands thoroughly with soap and water after handling.

Remove and wash contaminated clothing before reuse.

Chemical name	Canada DSL Inventory List -	Canada NDSL Inventory List -	EINECS Inventory List -
Glycerine	Present		Present
Sodium tetraborate decahydrate	Present		

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

**PESTICIDE REGULATIONS:** All pesticides are governed under PCPA (Pest Control Products 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.

**PROVINCIAL REGULATIONS:** This product did not trigger any provincial regulations.

#### International Regulations

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

## 16. OTHER INFORMATION

**REASON FOR ISSUE:** Corrected the regulatory section and put in a slightly new format.  
**SDS NO.:** CAN-0387  
**PCPA REGISTRATION NUMBER:** 31324  
**REVISION NUMBER:** 2  
**REVISION DATE:** 08/19/2019  
**SUPERCEDES DATE:** March 22, 2016  
**RESPONSIBLE PERSON(S):** Valent U.S.A. LLC, Corporate EH&S, (925) 256-2803

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**REVISION NUMBER:** 2

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**REVISION DATE:** 08/19/2019



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The Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE PMRA-APPROVED PRODUCT LABEL (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.

The product label provides information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products is regulated by the PMRA under the authority of the *Pest Control Products Act* through the product label. 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. It is a violation of federal law to use a PMRA-registered pesticide product in any manner inconsistent with its labeling.

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