



Safety Data Sheet - GHS

1. IDENTIFICATION: CHEMICAL PRODUCT AND COMPANY

PRODUCT NAME: INTEGO™ SUITE Cereals OF
EPA REGISTRATION NUMBER: 59639-218
VC NUMBER(S): 1990
SYNONYM(S): V-10403; V-10403 FS
PRODUCT DESCRIPTION: Insecticide & Fungicide Mixture For Seed Treatment

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 Certain sections of this SDS are superseded by federal law under EPA FIFRA for a registered pesticide.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
Serious eye damage/eye irritation	Category 2B
Reproductive toxicity	Category 2

Label elements

EMERGENCY OVERVIEW

WARNING



Hazard statements
 Harmful if inhaled

Causes serious eye irritation
 Suspected of damaging fertility or the unborn child
 Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required.
 Wash face, hands and any exposed skin thoroughly after handling
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area

Response

IF EXPOSED OR CONCERNED: Get medical advice/attention
Eyes IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
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

Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other Information

<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
Clothianidin	210880-92-5	2.81	
Metconazole	125116-23-6	0.42	
Metalaxyl	57837-19-1	0.84	
Ethaboxam	162650-77-3	1.4	
Hexylene glycol	107-41-5	14 - 21	*
Propylene glycol	57-55-6	2.5 - 8.5	*
Glycerin	56-81-5	.05 - 5	
Others	(Various CAS#s)	65 - 78	
Sodium tetraborate decahydrate	1303-96-4	0.008	

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

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.

SKIN CONTACT:

Wash with soap and water. Remove and wash contaminated clothing separately. Get medical attention if irritation persists.

INGESTION:

No emergency medical treatment necessary. Get medical attention if symptoms develop.

INHALATION:

Seek fresh air. This material is not expected to present an inhalation hazard on normal conditions.

NOTES TO PHYSICIAN:

None

5. FIRE FIGHTING MEASURES

Flash point °C	> 100 °C
Flash point °F	> 212 °F
FLASH POINT METHOD:	Not applicable
AUTOIGNITION:	No data available
EXTINGUISHING MEDIA:	Water fog, carbon dioxide, foam, dry chemical

FLAMMABLE LIMITS IN AIR - LOWER (%):	Not applicable
FLAMMABLE LIMITS IN AIR - UPPER (%):	Not applicable

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 form toxic materials such as: hydrogen cyanide (HCN), carbon dioxide, hydrogen chloride (HCl), oxides of sulfur, oxides of nitrogen, carbon monoxide (CO), 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 **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 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:

Keep pesticide in original container. Do not contaminate food or feed. Do not put into food or drink containers. Do not dilute 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.

Keep container tightly closed. Stable at normal temperatures and storage conditions in closed original package.

STORAGE:

Keep container closed when not in use. Do not store near food or feed. Protect from excessive heat. Do not contaminate water, food or feed by storage or disposal. Do not reuse empty container. Open dumping is prohibited. 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. 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. To close package, replace and tighten cap to form an airtight seal.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

EYES & FACE: Not required with normal use, unless label directs otherwise.

RESPIRATORY PROTECTION: Not required with normal use, unless label directs otherwise.

SKIN & HAND PROTECTION: Not required with normal use, unless label directs otherwise. Wash hands before breaks and at the end of work.

ENGINEERING CONTROLS: Use in a well ventilated area.

EXPOSURE LIMITS

Chemical name	ACGIH Exposure Limits	OSHA Exposure Limits	Manufacturer's Exposure Limits
Clothianidin	None	None	None
Metconazole	None	None	None
Metalaxyl	None	None	None
Ethaboxam	None	None	None
Hexylene glycol	TWA: 25 ppm vapor fraction STEL: 50 ppm vapor fraction STEL: 10 mg/m ³ inhalable particulate matter, aerosol only	(vacated) Ceiling: 25 ppm (vacated) Ceiling: 125 mg/m ³	None
Propylene glycol	None	None	None
Glycerin	TWA of 15 mg/m ³ , total particulate	TWA: 15 mg/m ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction (vacated) TWA: 10 mg/m ³ mist, total particulate (vacated) TWA: 5 mg/m ³ mist, respirable fraction	None
Others	None	None	None
Sodium tetraborate decahydrate	TWA: 2 mg/m ³ inhalable particulate matter STEL: 6 mg/m ³ inhalable particulate matter	(vacated) TWA: 10 mg/m ³	None

9. PHYSICAL AND CHEMICAL PROPERTIES

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

<u>PROPERTIES</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	5.97	@ 27°C (1% dilution 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	74.9 cP @ 20° C	

Explosive properties No information available
Oxidizing properties No information available
Liquid Density 1.05 g/cm³ at 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)	> 5000 mg/kg	EPA Tox Category	IV
Dermal Toxicity LD ₅₀ (rats)	> 5000 mg/kg	EPA Tox Category	IV
Inhalation Toxicity LC ₅₀ (rats)	> 2.11 mg/L	EPA Tox Category	IV
Eye Irritation (rabbits)	Mildly irritating	EPA Tox Category	III
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 Group 1 or 2	OSHA - Select Carcinogens	NTP Carcinogen List
Clothianidin	Not listed	Not Listed	Not listed
Metconazole	Not listed	Not listed	Not listed
Metalaxyl	Not listed	Not listed	Not listed
Ethaboxam	Not listed	Not Listed	Not listed
Hexylene glycol	Not listed	Not listed	Not listed
Propylene glycol	Not listed	Not listed	Not listed
Glycerin	Not listed	Not Listed	Not listed
Others	Not listed	Not listed	Not listed
Sodium tetraborate decahydrate	Not listed	Not listed	Not listed

TOXICITY OF CLOTHIANIDIN TECHNICAL

SUBCHRONIC: The NOEL in a 3-month rat feeding study with Clothianidin Technical was 27.9 mg/kg/day (male) and 34.0 mg/kg/day (female) The NOEL in a 90-day dog feeding study was 19.3 mg/kg/day (male) and 21.2 mg/kg/day (female). In a subchronic dermal study with rats, the NOAEL is >1,000 mg/kg/day.

CHRONIC/CARCINOGENICITY: The Clothianidin NOEL for a 2-year rat study was 9.7 mg/kg/day (female); for a 18-month mouse study was 47.2 mg/kg/day (male) and for a 12-month dog study was 4.8 mg/kg/day (male). The principal target organs were the glandular stomach, kidney, ovary, and liver. No oncogenic effects were observed in the 2-year rat or 18-month mouse feeding studies.

NEUROTOXICITY: Clothianidin is not a neural toxin.

MUTAGENICITY: The overall weight of evidence indicates that Clothianidin is not mutagenic.

TOXICITY OF ETHABOXAM TECHNICAL

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 with Ethaboxam Technical 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.

TOXICITY OF METCONAZOLE TECHNICAL

SUBCHRONIC: Subchronic (28 to 90 days) studies of Metconazole Fungicide Technical in rodents and dogs reported decreased body weights, fatty vacuolation and hypertrophy of the liver, reduced RBC parameters, increased serum liver enzyme levels, and increased spleen and liver weights. The lowest no-observable-effect level (NOEL) was 2.5 mg/kg/day.

CHRONIC/CARCINOGENICITY: In a one-year dog study, Metconazole Fungicide Technical produced effects on liver histopathology, increase serum liver enzymes and bleeding/irritation in the gastrointestinal tract. The NOEL was 11.1 mg/kg/day. In a 2-year study in rats, Metconazole Fungicide Technical produced histological changes in the liver, kidney and adrenal and possibly leukemia. The NOEL for this study was 4.8 mg/kg/day. In an 18-month mouse study, increased white blood cell count, increased serum liver enzymes increased liver weights, histopathological changes in the liver, spleen and adrenal and increased liver adenomas and adenocarcinomas were observed at doses of 167 mg/kg/d or higher. The NOEL in mice was 4.8 mg/kg/day. The mechanism of liver tumor formation in mice is believed to be not relevant to humans.

DEVELOPMENTAL TOXICITY: Maternal and fetal effects were observed in rats and rabbits treated with Metconazole Fungicide Technical during gestation. The NOELs in rats and rabbits are 16 and 20 mg/kg/day, respectively.

REPRODUCTION: Metconazole Fungicide Technical was tested in a 2-generation rat reproduction study. At maternally toxic doses, effects were noted on estrus cycling, litter size, gestation length and pup body weight.

MUTAGENICITY: Metconazole is not considered a genotoxic hazard. Negative in gene mutation assays *in vitro*, in *in vivo/in vitro* UDS assays and in *in vivo* micronucleus assays in mice. Positive in an *in vitro* chromosome aberration assay in the presence of S-9 but not observed in the *in vivo* assay.

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: The following information is based upon component(s) of this material.

96-hr Oral Bobwhite quail: > 780 mg/kg
96-hr Oral Mallard duck: = 503 mg/kg
96-hr Dietary Mallard duck: > 5,200 ppm

AQUATIC ORGANISM TOXICITY: This product is toxic to aquatic invertebrates.

The following are results from testing of component(s) of this material:

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: 0.38 mg/L
EC₅₀ (96 hr) Green algae: greater than 3.6 mg/L

OTHER NON-TARGET ORGANISM TOXICITY: The following information, based on studies with Clothianidin Technical, show that it is highly toxic to bees:

Honeybee 48-hr oral LD₅₀: 0.0038 ug (microgram)/bee
Honeybee 48-hr contact LD₅₀: 0.044 ug (microgram)/bee
Earthworm 7-day LC₅₀: 19 mg/kg dry soil

13. DISPOSAL CONSIDERATIONS

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

PRODUCT DISPOSAL: To avoid waste, use all material in the container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER DISPOSAL: Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Offer for recycling, if available; otherwise dispose of in a sanitary landfill or incineration, if allowed by state and local authorities.

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 US DOT or Canada TDG.

ICAO/IATA SHIPPING NAME:	UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Clothianidin, Ethaboxam, Metconazole), 9, III, Marine Pollutant
REMARKS:	<ul style="list-style-type: none"> •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. (Clothianidin, Ethaboxam, Metconazole), 9, III, Marine Pollutant
REMARKS:	<ul style="list-style-type: none"> •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

- *Causes moderate eye irritation*
- *Avoid contact with eyes or clothing*
- *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:	Yes
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.

Hexylene glycol

California - Directors List of Hazardous Substances	Present
MA Right To Know	Present
NJ Right To Know	1003
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

Glycerin

MA Right To Know	Present
NJ Right To Know	3319
PA Right To Know	Present
RI Right To Know	Listed
MN Hazardous Substance	Present

Sodium tetraborate decahydrate

California - Directors List of Hazardous Substances	Present
MA Right To Know	Present
PA Right To Know	Present
RI Right To Know	Toxic
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:	Added the EPA registration number. Revised Section 13. Changes made to Section 15, EPA information.
SDS NO.:	0505
EPA REGISTRATION NUMBER:	59639-218
REVISION NUMBER:	3
REVISION DATE:	09/02/2020
SUPERCEDES DATE:	08/06/2018
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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