Safety Data Sheet - GHS

1. IDENTIFICATION

Product identifier

PRODUCT NAME: Zeltera Cereals
PMRA REGISTRATION NUMBER: PMRA 34751
VC NUMBER(S): 2159, 2163
SYNONYM: V-10492 FS
PRODUCT DESCRIPTION: Fungicide mixture for seed treatment.

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 (24 hr):
(800) 892-0099
TRANSPORTATION (24 hr.):
U.S. Transportation (24 hr.): CHEMTREC (800) 424-9300
International Transportation (24 hr): 703-741-5970

PRODUCT INFORMATION
AGRICULTURAL PRODUCTS: (800) 682-5368

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	Category 4
Acute Aquatic Toxicity	Category 2
Chronic Aquatic Toxicity	Category 3

Label elements

EMERGENCY OVERVIEW

WARNING

Hazard statements
Harmful if inhaled.
Toxic to aquatic life
Harmful to aquatic life with long term effects

Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray.

Precautionary Statements - Response
IF INHALED: remove person to fresh air and keep comfortable for breathing. Call a poison control/ doctor if you feel unwell.

Precautionary Statements - Storage
None

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)
Other Information
• None

For information on Transportation requirements, see Section 14.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%
Metconazole	25116-23-6	0.4 - 0.5
Metalaxyl	57837-19-1	0.8 -1.0
Inpyrfluxam	1352994-67-2	0.27 - 0.33
Ethaboxam	162650-77-3	1.4 - 1.6
Hexylene glycol	107-41-5	15 - 25
Trade secret	(VARIOUS CAS#S)	44.13 - 71.57

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 Show this safety data sheet to the doctor in attendance.

Move the person to fresh air. If the person is not breathing, call 911 or an ambulance, thengive artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contactlenses, if present, and after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20minutes. Call a poison control centre or doctor for treatment advice.

Call a poison control centre or doctor immediately for treatment advice. Have person sip aglass of water if able to swallow. DO NOT induce vomiting unless told to do so by the poison control centre or doctor. Do not give anything 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 Treat symptomatically.

5. FIRE FIGHTING MEASURES

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 compound: Will not burn but if involved in a fire toxic fumes may be evolved. 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. Read the entire document.

Hazardous combustion products Thermal decomposition or combustion may produce harmful/irritant gas or fume such as nitrogen oxides, carbon oxides, hydrogen fluoride or organic compounds.

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 contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from upwind of spill/leak.

Methods and material for containment and cleaning up

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

Methods for cleaning up 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.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wearsuitable respiratory equipment. Do not eat, drink or smoke when using this product. Washthoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and shoes immediately. Then wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep/store

only in original container. Keep out of the reach of children. Do not contaminate food or feed stuffs. Do not put formulation or dilute spray solution into food or drink containers. Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical name	Alberta	British Columbia	Ontario	Quebec
Propylene glycol	None	None	TWA: 10 mg/m3 TWA: 50 ppm TWA: 155 mg/m3	None

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear chemical-resistant gloves.

Skin and body protection Mixer/Loader/Clean-up and Repair (open cab) requires cotton overalls over long-sleeved shirt, pants, socks and shoes.

Mixer/Loader/Clean-up and Repair (closed cab) requires chemical-resistant overalls overlong-sleeved shirt, long pants, sock and shoes.

Application with a backpack/manually-pressurized handwand or with a groundboom (openor closed cab) requires long-sleeved shirt, long pants, socks and shoes.

Application with a Right-of-Way sprayer or with a Mechanically-pressurized handgunrequires chemical-resistant overalls over long-sleeved shirt, pants, socks and shoes.

Respiratory protection No respiratory protection is required, except when using a mechanically-pressurized handgun for application. An appropriate NIOSH-approved cartridge or canister is thenrequired, as described on the label.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Opaque Liquid	**Vapor pressure**	Not determined
Physical State	Liquid	**Vapor density**	Not determined
Color	Red	**Specific Gravity**	1.03 - 1.04 g/mL
Odor	Faint almond odor	**Water solubility**	Not determined
pH (1% w/v in water)	6.5 - 7.5	**Solubility in other solvents**	Not determined

Melting point / freezing point	Not determined	**Partition coefficient**	Not determined
Boiling point / boiling range	Not determined	**Autoignition temperature**	Not determined
Flash point	>212° F	**Decomposition temperature**	Not determined
Evaporation rate	Not determined	**Viscosity**	98.9 cP at 20 C 72.9 cP at 40 C
Flammability (solid, gas)	Not determined	**Explosive properties**	Not determined
Flammability Limits in Air:		**Oxidizing properties**	Not determined
Upper flammability limits	Not determined	**Liquid Density**	Not determined
Lower flammability limits	Not determined	**Bulk density**	49 lb/ft³

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	GHS Classification	Not classified
Dermal Toxicity LD_{50} (rabbits)	> 5000 mg/kg	GHS Classification	Not classified
Inhalation Toxicity LC_{50} (rats)	2.36 mg/L	GHS Classification	Category 4
Eye Irritation (rabbits)	Minimally irritating	GHS Classification	Category 2B
Skin Irritation (rabbits)	Slightly Irritating	GHS Classification	Category 2
Skin Sensitization (guinea pigs)	Not a sensitizer	GHS Classification	Not classified

There is no information available regarding repeated dose toxicity for this experimental formulation. However, detailed information regarding mammalian toxicity of the technical active ingredients is listed below.

METCONAZOLE TECHNICAL:
SUBCHRONIC: Subchronic studies were conducted in the rat, mouse, and dog with Metconazole Technical. Liver was the primary target organ following administration of Metconazole Technical for all species tested. NOAELs were similar at 4.84 mg/kg/day, 9.58 mg/kg/day, and 2.5 mg/kg/day in the rat, mouse, and dog, respectively.
CHRONIC/CARCINOGENICITY: Chronic toxicity/and Carcinogenicity were evaluated in the rat, mouse, and dog. In chronic studies, the rat and dog were the most sensitive species, with NOAELs of 13.8 mg/kg/day and 12.0 mg/kg/day, respectively, based on adverse liver effects. Increased liver tumors were observed in mice at the highest dose tested,

166.9 mg/kg/day. Metconazole is classified as "not likely to be carcinogenic to humans". Carcinogenicity was not evaluated in the dog.
NEUROTOXICITY: Metconazole technical was not neurotoxic in the rat, mouse, dog, or rabbit in repeated dose studies.
DEVELOPMENTAL TOXICITY and REPRODUCTION: Developmental toxicity and reproduction were evaluated in the rat and rabbit. In the rat, the developmental NOAEL was12 mg/kg/day based on increased skeletal variations, post-implantation loss, and visceral anomalies. Similar effects were observed in offspring in a 2-generation study in rats but at greater dose levels. Developmental toxicity was observed in the rabbit but only at maternally toxic doses.
MUTAGENICITY: Metconazole Technical was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

METALAXYL TECHNICAL:
CHRONIC/CARCINOGENICITY: Metalaxyl Technical is classified as "Not Likely to be Carcinogenic to Humans" based on the lack of evidence for carcinogenicity in rats and mice in the long-term carcinogenicity studies. Following chronic oral administration in rat, mouse and dog, dogs were the most sensitive with a NOAEL of 32 mg/kg bw/d.
DEVELOPMENTAL TOXICITY: Metalaxyl Technical did not produce any adverse developmental effects in the rat when dosed up to 400 mg/kg/d. In the rabbit, the NOAEL for developmental toxicity was 300 mg/kg bw/d based on the number of dams with viable fetuses.
REPRODUCTION: In a 2-generation reproduction study with the rat, Metalaxyl Technical did not cause any adverse effects when administered up to 63 mg/kg bw/d, the highest dose tested.
MUTAGENICITY: Metalaxyl Technical was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

INPYRFLUXAM TECHNICAL
SUBCHRONIC: Subchronic studies were conducted in the rat, mouse, and dog with S-2399 Technical. The primary effects in all species were systemic toxicity including changes to body weight, and multiple organs. The rat was the most sensitive species with a NOAEL of 31.7 mg//kg/d. NOAELs for the mouse and dog were >973 mg/kg/d and 40 mg/kg/d, respectively.
CHRONIC/CARCINOGENICITY: Chronic toxicity and Carcinogenicity were evaluated in the rat, mouse, and dog. The rat was the most sensitive species with a NOAEL of 19 mg/kg/d based on decreased body weight and food consumption. There were no treatment-related increases in tumor incidence in the rat or mouse. Carcinogenicity was not evaluated in the dog.
NEUROTOXICITY: S-2399 technical was not neurotoxic in the rat, mouse, or dog in repeated dose studies.
DEVELOPMENTAL TOXICITY and REPRODUCTION: The NOAEL for developmental toxicity was 25 mg/kg/d in the rat based on decreased fetal body weights. S-2399 Technical did not adversely affect unborn offspring in rabbits. The NOAEL for reproduction in rats was 26 mg/kg/d based on thyroid changes in parental animals and decreased body weights in offspring.
MUTAGENICITY: Inpyrfluxam Technical was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

ETHABOXAM TECHNICAL
SUBCHRONIC: Subchronic studies were conducted in the rat, mouse, and dog with Ethaboxam Technical.
The male reproductive system is a target for ethaboxam, with alterations to the male reproductive organs as well as functional effects on male reproduction observed in several oral subchronic and chronic rat studies. The dog was the most sensitive species with a NOAEL of 15 mg/kg/d. NOAELs for the rat and mouse were 16.3 mg/kg/d and 450 mg/kg/d, respectively.
CHRONIC/CARCINOGENICITY: Chronic toxicity and Carcinogenicity were evaluated in the rat, mouse, and dog.
In chronic studies, the rat was the most sensitive species with a NOAEL of 5.5 mg/kg/d based adverse effects seen in the male reproductive organs. Increased Leydig cell tumors were observed in male rats at a dose 6-times greater than the NOAEL, therefore Ethaboxam is classified as having "suggestive evidence of carcinogenic potential". Carcinogenicity was not evaluated in the dog.
NEUROTOXICITY: Ethaboxam technical was not neurotoxic in the rat, mouse, or dog in repeated dose studies.
DEVELOPMENTAL TOXICITY and REPRODUCTION: The NOAEL for developmental toxicity was 300 mg/kg/d in the rat. Ethaboxam Technical did not adversely affect unborn offspring in rabbits. The NOAEL for reproduction in rats was 16 mg/kg/d based on adverse effects observed in parental animals and offspring.
MUTAGENICITY: Ethaboxam Technical was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

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

There is no information available based on this experimental formulation. However, detailed information on the technical active ingredients is listed below.

Metconazole Technical
Oral LD_{50} Bobwhite Quail: greater than 787 mg ai/kg-bw
Dietary LC_{50} Bobwhite Quail: 1057 ppm
Dietary LC_{50} Mallard Duck: greater than 5,200 ppm

96-hour LC_{50} Rainbow Trout: 2.1 mg/L
48-hour LC_{50} Daphnia magna: 4.2 mg/L
Fish early life-stage (Rainbow Trout): NOEC: 1.14 mg/L
Chronic toxicity (Daphnia magna): NOEC 0.078 µg/L

5-day EC_{50} Green Algae: 1.7 mg/L
Honeybee 48-hour contact LD_{50}: >100 µg/bee

Metalaxyl Technical
Oral LD50 Mallard Duck: greater than 1,466 mg/kg
Dietary LC50 Bobwhite Quail: greater than 10,000 mg/kg
Dietary LC50 Mallard Duck: greater than 10,000 mg/kg

96-hour LC50 Rainbow Trout: 130 mg/L
96-hour LC50 Bluegill Sunfish: 139 mg/L
48-hour LC50 Daphnia magna: 28 mg/L
96-hour (shell deposition) EC50 Eastern Oyster: 4.6 mg/L
96-hour LC50 Mysid Shrimp: 25.7 mg/L
14-day EC50 Duckweed (Lemna gibba): 85 mg/L

Honeybee 48-hour contact LD50: > 100 µg/bee

Inpyrfluxam Technical
Oral LD50 Bobwhite Quail; >2250 mg/kg bw
Dietary LC50 Bobwhite Quail: > 6367 mg/kg diet
Dietary LC50 Mallard Duck: > 6367 mg/kg diet
Dietary LC50 Zebra Finch: >359 mg/kg diet

96 hr LC50 Fathead Minnow: 0.047 mg/L
96 hr LC50 Rainbow Trout: 0.031 mg/L
96 hr LC50 Sheepshead Minnow: 0.15 mg/L
96 hr LC50 Carp: <0.065 mg/L
48 hr LC50 Daphnia magna: 1.1 mg/L
96 hr LC50 Mysid Shrimp: 1.1 mg/L
96 hr EBC50 Green algae: > 7.1 mg/L

48 hr Adult Acute Oral Exposure: > 111.3 micrograms ai/bee
72 hr Larval Acute Exposure: > 100 micrograms ai/larva

Ethaboxam Technical
Oral LD50 Bobwhite Quail: > 2000 mg/kg
Oral LD50 Zebra Finch: > 2000 mg/kg
Dietary LC50 Bobwhite Quail: > 5000 ppm
Dietary LC50 Mallard Duck: > 5620 ppm

LC50 (96 hr) Fathead Minnow: > 4.6 mg/L
LC50 (96 hr) Rainbow Trout: 2.3 mg/L
LC50 (96 hr) Sheepshead Minnow: > 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: > 3.6 mg/L

Honeybee 48-hour oral LD50: >100 µg (microgram)/bee
Honeybee 48-hour contact LD50: >100 µg (microgram)/bee.

13. DISPOSAL CONSIDERATIONS

Waste from residues/unused Products	Canadian formulators using this product should dispose of unwanted active ingredient and containers in accordance with municipal or provincial regulations. For information on disposal or unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.
Contaminated packaging	Do not reuse empty containers. Triple- or pressure-rinse the container. Add the rinsings to the spray mixture in the tank. Make the empty container unsuitable for further use. If there is no container collection site in

14. TRANSPORTATION INFORMATION

DOT (ground) SHIPPING NAME:	Not regulated for domestic ground transport by U.S. DOT or Canda TDG.
REMARKS:	Possible marine pollutant -- excepted from Dangerous Goods regulations in containers < 5L.
EMERGENCY RESPONSE GUIDEBOOK NO.:	Not applicable N/A
ICAO/IATA SHIPPING NAME:	UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Metconazole, inpyrfluxam), 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. (metconazole, inpyrfluxam), 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

PMRA LABEL INFORMATION:

Pesticide products in Canada are registered by Pest Management Regulatory Agency (PMRA) and are subject to certain labeling requirements under federal pesticide law. The label, as specified in the *Pest Control Products Act* (PCPA), 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 Assigned

PMRA pesticide label hazard information: Keep out of reach of children. Avoid breathing dust or spray mist. Avoid contact with eyes, skin and clothing.

Chemical name	Canada - WHMIS - Ingredient Disclosure List
Others	Non-controlled

Chemical name	Canada DSL Inventory List -	Canada NDSL Inventory List -	EINECS Inventory List -

PESTICIDE REGULATIONS: All pesticides are registered by PMRA. 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.

PMRA Pesticide Regulations
Product must have PMRA Approved Pesticide Label attached to or accompanying all containers.

16. OTHER INFORMATION

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:

REASON FOR ISSUE: Updates to sections 12, 14 and 15
SDS NO.: CAN-0607
PCPA REGISTRATION NUMBER: 34751
REVISION NUMBER: 1
REVISION DATE: 09/21/2023
SUPERCEDES DATE: 09/08/2023
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 Canada, Inc. 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 Canada, Inc. 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 Canada, Inc. to confirm that you have the most current product label and SDS.

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.