1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	IPCO Bifecta EZ Herbicide
Pest Control Product Number:	34589
Product Use:	Agrochemicals/Herbicide
Manufacturer /Supplier:	INTERPROVINCIAL COOPERATIVE LTD. 945 Marion St. Winnipeg, Manitoba R2J 0K7 www.ipco.ca
Effective Date:	10/04/2022
	This product is regulated under authority of the Pest Control Products Act

2: HAZARD IDENTIFICATION

Classified according to UN GHS Version 5

Physical Hazard	None
Acute Toxicity (Inhalation)	Category 4
Skin Sensitization	Category 1
Reproductive Toxicity	Category 2
Hazardous to aquatic environment, acute	Category 1
Hazardous to aquatic environment, chronic	Category 1

Pictograms:

Signal word: WARNING

Hazard statements: Potential skin sensitizer. Harmful if inhaled. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. Very toxic to aquatic life with long lasting effects.

Precautionary statement: Avoid breathing mists, vapors or spray. Use only outdoors or in a well-ventilated area. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. Avoid release to the environment.
If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center if you feel unwell. See product label and Section 4 for emergency medical advice/attention.
If on skin: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice or attention. Wash contaminated clothing before reuse.
If exposed or concerned: Get medical advice or attention. Store locked up.
Collect spillage. Dispose of contents in accordance with local, state, and federal regulations.

3: COMPOSITION AND INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	% (W/W)

Metribuzin	21087-64-9	29.0-30.9%
Flumioxazin	103361-09-7	6.4-7.0%

Other ingredients are considered non-hazardous.

4: FIRST AID MEASURES

Ingestion:	Call a poison control centre 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 a poison control centre or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
Skin Contact:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.
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 centre or doctor for treatment advice.
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 centre or doctor for further treatment advice.
General Advice:	Take container, label or product name and Pest Control Product Registration Number with you, when seeking medical attention.

5: FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Use extinguishing media suitable for surrounding materials. Dry chemical, carbon dioxide, foam, water spray or fog.
Special Fire Fighting Procedure:	Firefighters should wear NIOSH approved self-contained breathing apparatus and full firefighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.
Unusual Fire and Explosion Hazards:	If water is used to fight fire or cool containers, dike to prevent runoff contamination of municipal sewers and waterways.
Hazardous Decomposition Materials (Under fire conditions):	May produce gases such as oxides of carbon and nitrogen.

6: ACCIDENTAL RELEASE MEASURES

Personal precautions:	Wear appropriate protective gear for the situation. See Personal Protection information in section 8.
Environmental precautions:	Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.
Methods for containment:	Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.
Methods for cleaning up:	Pump any free liquid into an appropriate closed container. Collect washings for disposal. Decontaminate tools and equipment following cleanup. See section 13: DISPOSAL CONSIDERATIONS for more information.
Other information:	Large spills may be reportable to the National Response Center and/or to local agencies.

7: HANDLING AND STORAGE

Handling:	Do not get in eyes or on clothing or skin. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/Personal Protective Equipment (PPE) immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove Personal Protective Equipment (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: Do not contaminate water, food, or feed by storage or disposal.

8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Guidelines:

Chemical name	TWA*	STEL**	Reference/Note
Metribuzin	NE	NE	None found
Flumioxazin	NE	NE	None found

*Time-weighted Average, 8-hour unless otherwise noted.

**Short Term Exposure Limit

NE = Not Established

Refer to approved product label for additional exposure control guidance.

Engineering controls: Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Personal protective equipment:

Eye/Face protection: Not normally required. To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

Skin protection: To avoid contact with skin, wear long pants, long-sleeved shirt, socks and shoes. An emergency shower or water supply should be readily accessible to the work area.

Respiratory protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure, and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

9: PHYSICAL AND CHEMICAL PROPERTIES

NOTE: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification. If no value is determined for the formulation, the value listed is the most relevant value of the predominant ingredient(s).

Appearance: Opaque off-white liquid

Odor: Moderately bitter

Odor threshold: No data available

pH: 7.8 (1% dispersion)

Melting point: Not applicable

Freezing point: Not applicable

Boiling point: No data available

Flash point: No data available

Evaporation rate: No data available

Flammability (solid, gas): No data available

Flammability Limit in Air	
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Relative Density:	1.06 g/cm3 (8.85 lbs/gal)
Solubility (ies):	Readily disperses in water
Partition coefficient:	No data available
Auto ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	290 cPs @ 24° C; 332 cPs @ 39°C (50 RPM, Brookfield)

10: STABILITY AND REACTIVITY

Reactivity:	Do not mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur.
Chemical Stability:	This material is stable under normal handling and storage conditions.
Possibility of hazardous reactions:	Will not occur.
Conditions to avoid:	Excessive heat.
Incompatible Materials:	Oxidizing agents: bases and acids.
Hazardous decomposition products:	Under fire conditions may produce gases such as oxides of carbon, and nitrogen.

11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Dermal, inhalation
Symptoms of exposure:	Eye contact: Mildly irritating based on toxicity studies. Skin Contact: Minimally toxic and slightly irritating based on toxicity studies. May cause allergic skin reaction (sensitization.) Ingestion: Slightly toxic if ingested based on toxicity studies. Inhalation: Low inhalation toxicity based on toxicity studies. Delayed, immediate and chronic effects of exposure: None reported.
Acute LD50 Oral:	>2,000 mg/kg (females) (rat)
Acute LD50 Dermal:	>2,000 mg/kg
Acute LC50 Inhalation:	Rat 4-hr LC50: >2.05 mg/L (No mortalities at the highest dose tested)
Eye irritation:	Rabbit: Minimally irritating (MMTS = 6.0)
Skin irritation:	Rabbit: Non- irritating (PDII = 0)
Skin Sensitization (LLNA method):	Considered to be a contact dermal sensitizer in mice following repeated skin exposure.
Subchronic (Target organ) effects:	Repeated overexposure to metribuzin may cause effects to body weight gains, cholesterol levels, liver and thyroid. Compound related effects of flumioxazin noted in rats following subchronic exposures at high dose levels were hematotoxicity including anemia, and increases in liver, spleen, heart, kidney and thyroid weights. In dogs, the effects produced at high dose levels included a slight prolongation in activated partial thromboplastin time, increased cholesterol and phospholipid, elevated alkaline phosphatase, increased liver weights and histological changes in the liver. The lowest no-observable-effect- level (NOEL) in subchronic studies was 30 ppm in the three-month toxicity study in rats.
Carcinogenicity/ Chronic	Prolonged overexposure to metribuzin may affect liver, kidney, thyroid and blood

Health effects:	chemistry. Metribuzin did not cause cancer in laboratory animal studies. Repeated exposures to flumioxazin in animals have produced anemia and other blood formation changes, organ weight changes and changes in blood chemistry. Flumioxazin did not produce cancer in life-time feeding studies in laboratory animals.
Reproductive Toxicity:	There was no evidence of reproductive toxicity in a 2-generation reproductive study in rats treated with metribuzin. Offspring at the highest dose exhibited reduced body weight gains starting at day 14 lactation, an age correlating with the consumption of treated diets. Reproductive effects were observed in rats exposed to flumioxazin.
Developmental toxicity:	In animal studies, metribuzin did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects to the mother. Birth defects were produced in the offspring of female rats exposed to flumioxazin. No effects were observed in rabbits.
Genotoxicity:	Metribuzin mutagenicity studies, taken collectively, demonstrate that metribuzin is not genotoxic or mutagenic. Flumioxazin does not present a genetic hazard. metribuzin mutagenicity studies, taken collectively, demonstrate that metribuzin is not genotoxic or mutagenic. Flumioxazin does not present a genetic hazard.
Assessment Carcinogenicity:	None listed with ACGIH, IARC, NTP or OSHA.

12: ECOLOGICAL INFORMATION

Ecotoxicity:

Data from laboratory studies conducted on Metribuzin:

96-hour LC50 RainbowTrout:	2.3 mg/L
48-hour EC50 Daphnia Magna :	4.5 mg/L
96-hour LC50 Bluegill Sunfish:	> 21 mg/L
96-hour EC50 Marine shrimp:	48.3 mg/L
96-house LC50 Goldfish:	> 10 mg/L
Bobwhite Quail Oral LD50	>2,250 mg/kg

Data from laboratory studies conducted on Flumioxazin:

96-hour LC50 RainbowTrout:	2.3 mg/L
Bobwhite Quail Oral LD50	>2,250 mg/kg
96-hour LC50 Bluegill Sunfish:	> 21 mg/L
Bobwhite Quail 8-day Dietary LC50:	>5,620 ppm
48-hour EC50 Daphnia Magna :	> 5.5 mg/L
Mallard Duck Oral LD50	>2,250 mg/kg
96-hour LC50 Sheepshead Minnow:	> 4.7 mg/L
Mallard Duck 8-day Dietary LC50:	>5,620 ppm
96-hour LC50 Mysid Shrimp:	0.23 mg/L
Acute Contact LC50 Honeybee:	105 µg/bee

Environmental Fate:

Based on available data, the primary routes of degradation of metribuzin and its primary degradates are microbial metabolism and photolytic degradation on soil. These compounds will be available for leaching to ground water and runoff to surface water in many use conditions because they are not volatile. Once in ground water, metribuzin is expected to persist due to its stability to hydrolysis and the lack of light penetration. Conversely, residues of metribuzin are not likely to persist in clear, well-mixed, shallow surface water with good light penetration since parent metribuzin degrades rapidly by aqueous photolysis. Flumioxazin degrades rapidly in water and soil. Dissipation occurs by a combination of hydrolysis and microbial oxidation. Although flumioxazin dissipates rapidly, discrete intermediates

do not accumulate and the ultimate environmental products are incorporated into soil organic matter and carbon dioxide. Based on column leaching studies and the short aerobic soil half-life, the potential for flumioxazin or its degradation products to leach in field agricultural soils is low. The low use rate and rapid soil dissipation results in low carryover potential to rotational crops.

13: DISPOSAL CONSIDERATIONS

Container Handling and Disposal:	For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Disposal should be made in accordance with federal, provincial and local regulations. Do not reuse container for any purpose. If applicable, return container in accordance with return program. If a recyclable container, dispose of at a container collection site. Contact local distributor, dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site, triple or pressure rinse the empty container adding rinsings to spray tank, and make container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

14: TRANSPORT INFORMATION

Canadian TDG Description (Road & Rail):	Not regulated
United States: **DOT Description:**	< 119 Gallons per completed package: Not regulated by DOT unless shipped by water. See IMO / IMDG description. ≥ 119 Gallons per completed package: UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Metribuzin, Flumioxazin), 9, III, Marine Pollutant
IMO/IMDG (Transport by sea)**:**	UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Metribuzin, Flumioxazin), 9, III, Marine Pollutant
IATA (Transport by air):	UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Metribuzin, Flumioxazin), 9, III, Marine Pollutant

15: REGULATORY INFORMATION

Pest Control Products Act Registration Number: 34589

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. Following is the hazard information required on the pest control product label:

CAUTION POISON

WHMIS exempt.

16: OTHER INFORMATION

Revision Date/Reason:	October 4, 2022/ Product name change
Notice:	The enclosed information is supplied as a customer service and is provided in good faith. Although it has been based on data drawn from sources deemed to be reliable, Interprovincial Cooperative Limited cannot guarantee its accuracy and assumes no responsibility for conditions resulting from its use.