



SAFETY DATA SHEET

SDS ID: 74530-80

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	ZONE ASSIST
Product use / type:	Herbicide
EPA Registration No.:	74530-80
Uses advised against / restrictions:	See label.
Chemical name / active ingredient(s):	N-[2,4-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl]phenyl]-methanesulfonamide (Sulfentrazone); and 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-3-Pyridinecarboxylic acid; (Imazethapyr)
Manufacturer / Registrant:	Helm Agro US, Inc. 401 E. Jackson St., Suite 1400 Tampa, FL 33602
Manufacturer's telephone:	813-621-8846
Email:	info@helmagro.com
Chemical emergencies:	1-800-424-9300 (Chemtrec)

2. HAZARDS IDENTIFICATION

This chemical is not considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200).

Classification: Not classified.

EMERGENCY OVERVIEW

Signal Word: None

Appearance: Beige to light brown

Physical state: Liquid

Odor: Faint, sulfur-like

Hazard Statements:

- None.

Precautionary Statements:

- None.

Other Information / Potential Hazards:

Very toxic to aquatic life with long lasting effects.

SAFETY DATA SHEET

ZONE ASSIST

SDS ID: 74530-80

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %
N-[2,4-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl]phenyl]-methanesulfonamide (Sulfentrazone)	122836-35-5	33.33
2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-3-Pyridinecarboxylic acid; Imazethapyr	81335-77-5	6.67
Other ingredients	-	60.0

Values are not product specifications.

4. FIRST AID MEASURES

If in Eyes:	<ul style="list-style-type: none">• Hold eye open and rinse 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.
If on skin or clothing:	<ul style="list-style-type: none">• Remove contaminated clothing and shoes.• Rinse skin with plenty of water for 15 minutes. If irritation develops, call a poison control center or doctor for treatment advice.
If inhaled:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or get medical help, then give artificial respiration.• Call a poison control center or doctor for further treatment advice.
If swallowed:	<ul style="list-style-type: none">• 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 a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
First Aid Note:	<ul style="list-style-type: none">• Have product container or label or Safety Data Sheet with you when calling a poison control center or doctor, or going for treatment advice.
Note to physician:	<ul style="list-style-type: none">• Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties:	Not flammable.
Extinguishing media:	Water fog, dry chemical, foam or CO ₂
Unsuitable extinguishing media:	High pressure water streams.

- Firefighting measures:** Use extinguishing media appropriate for surrounding fire. Cool fire exposed surfaces and protect personnel with water spray. Prevent contaminated firefighting waters and spillage from entering sewers, drains and waterways.
- Protective equipment and precautions for firefighters:** Wear full protective firefighting gear including self-contained breathing apparatus pressure demand (MSHA/NIOSH approved or equivalent).
- Hazardous products of combustion:** Under fire conditions may emit hydrocarbons, smoke and oxides of carbon, nitrogen and sulfur.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Isolate and post spill area. Wear protective gloves / clothing and eye protection. Avoid contact with eyes, skin and clothing. Ensure adequate ventilation.
- Environmental precautions:** Prevent further spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.
- Methods for containment:** If necessary, contain spill with inert material (e.g. sand, silica gel, binder). Thoroughly clean area with water and detergent.
- Methods for cleanup:** Pick up absorbent by shovel and transfer to properly labeled containers for disposal in accordance with regulations.

7. HANDLING AND STORAGE

- Precautions for safe handling:** Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling and before eating, drinking, using tobacco or the toilet. Do not eat, drink, or smoke when using this product. Thoroughly clean personal protective equipment after use.
- Conditions for safe storage:** Store and handle in accordance with good industrial hygiene practices. Keep container tightly closed. Store in a cool and well-ventilated place in the original container. Keep out of reach of children.
- Incompatible storage situations:** Separate pesticides during storage to prevent cross-contamination of other pesticides, fertilizers, food, and feed.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

SAFETY DATA SHEET

ZONE ASSIST

SDS ID: 74530-80

The following recommendations for exposure controls and personal protection are intended for the manufacture, formulation and packaging of this material. Commercial applicators and/or on-farm applications should refer to the product label for personal protection equipment.

Exposure Guidelines:

Control Parameters:	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Engineering controls:	Ensure adequate ventilation, especially in confined areas. Emergency eye wash/drench in work area.
Personal protective equipment	
Eye / face protection:	Safety glasses with side-shields. If splashing is likely to occur, wear goggles.
Body / skin protection:	Long sleeved shirt, long pants, shoes plus socks. Wash work clothing before reuse separate from regular laundry.
Hand protection:	Wear protective gloves.
Respiratory protection:	If handling without sufficient ventilation, wear a dust / mist filtering respirator with organic cartridge(s) or pesticide rated filters.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Viscous liquid
Appearance:	Beige to light brown
Odor:	Faint, chemical/sulfur-like
pH:	3.22 (1% w/v aqueous solution)
Boiling point:	No information available
Melting point:	No information available
Flash point:	>100° C / 212° F
Relative density:	1.188 g/ml
Water solubility:	Miscible
Vapor pressure:	No information available
Dissociation constant:	No information available
Viscosity:	222.4 Cst at 20° C / 156.6 Cst at 40° C

10. STABILITY AND REACTIVITY

Reactivity / chemical stability:	Stable under normal temperature and conditions.
Conditions / materials to avoid:	Extreme temperatures. Strong acids, bases and oxidizing agents.
Hazardous decomposition products:	No hazardous decomposition products known.

SAFETY DATA SHEET

ZONE ASSIST

SDS ID: 74530-80

Hazardous reactions: Not expected under normal conditions of handling and use.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Inhalation May be harmful if inhaled

Product toxicological effects:

Acute oral LD50: Rat LD₅₀: >2000 mg/kg
Acute dermal LD50: Rat LD₅₀: >2000 mg/kg
Acute inhalation LC50: Rat LC₅₀: >2.27 mg/L
Eye irritation: Non-irritating.
Skin irritation: Non-irritating.
Sensitization: Not a sensitizer.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Serious eye damage/eye irritation: Contact with eyes may cause mechanical irritation.
Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is listed with NTP, IARC or OSHA.
Germ cell mutagenicity Not mutagenic

12. ECOLOGICAL INFORMATION

Environmental Hazards: Very toxic to aquatic life with long lasting effects. Keep out of any body of water.

Ecotoxicity: 96-hour LC₅₀: 120 mg/l *Onchorhynchus mykiss*
Sulfentrazone (122836-35-5) 96-hour LC₅₀: 93.8 mg/l *Lepomis macrochirus*
48-hour EC₅₀: 60.4 mg/l *Daphnia magna*
78-hour EC₅₀: 31 ug/l *Pseudokirchneriella subcapitata*

Ecotoxicity: 96-hour LC₅₀: 340 mg/l *Onchorhynchus mykiss*
Imazethapyr (81335-77-5) 96-hour LC₅₀: 420 mg/l *Lepomis macrochirus*
48-hour EC₅₀: >1000 mg/l *Daphnia magna*
78-hour EC₅₀: 59.2 mg/l *Pseudokirchneriella subcapitata*

Persistence and degradability: Sulfentrazone: Not readily biodegradable. Subject to photolysis.
Imazethapyr: Not readily biodegradable.

Bioaccumulation: Sulfentrazone: No potential for bioaccumulation.
Imazethapyr: Low potential for bioaccumulation.

Mobility: Sulfentrazone: Mobile, has potential to reach ground water.

SAFETY DATA SHEET

ZONE ASSIST

SDS ID: 74530-80

13. DISPOSAL CONSIDERATIONS

Product disposal: Wastes resulting from the use of this product that cannot be used must be disposed in accordance with applicable Federal, State or local regulations at an approved waste disposal facility.

Container disposal: Triple rinse container thoroughly in accordance with EPA label recommendations. Observe all labeled safeguards until container is destroyed to prevent unauthorized use of used container. Clean container promptly after emptying.

14. TRANSPORT INFORMATION

U.S. DOT: Not subject to DOT regulation in packages less than 119 gallons (450 liters).

UN3082, Environmentally hazardous substance, liquid, n.o.s.(Sulfentrazone, Imazethapyr), 9, III, Marine pollutant.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Signal word: Caution

EPA Registration No.: 74530-80

Hazards to Humans and Domestic Animals

Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

TSCA: Exempt, regulated under FIFRA
SARA 311/312: None listed
SARA 313: None listed
CERCLA: None listed

U.S. State Regulations:

State Right-to-Know Regulations:

Component	MA	NJ	PA	NY
Propylene glycol (57-55-6)	X	X	X	-

California Proposition 65: This product contains no substances known to the state of California to cause cancer and/or reproductive/developmental effects.

16. OTHER INFORMATION

SAFETY DATA SHEET

ZONE ASSIST

SDS ID: 74530-80

NFPA Ratings:	Health	Fire	Instability
	1	0	0

Revision No.: 1.0
Revision Date: 06-February-2018
Revision Note: Initial release

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; CST - Centistokes; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; GHS - Global Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Association; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

Other information / Disclaimer

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

End of Safety Data Sheet