



SAFETY DATA SHEET (SDS) ID: EPA Reg. No. 74530-60, ZONE Herbicide

SECTION 1: Product and Company IDs

Product name: ZONE Herbicide
Product use / type: Herbicide
Restrictions on use: See product label.
SDS ID: EPA Reg. No.: 74530-60
Chemical name / active ingredients:

- Sulfentrazone, CAS# 122836-35-5
- Chlorimuron ethyl, CAS# 90982-32-4

Manufacturer / Registrant Info:
HELM Agro US, Inc. 401 E. Jackson St.
Suite 1600, Tampa, FL 33602
(813)-621-8846, info@helmagro.com
Chemical Emergency Number: 1-800-424-9300 (Chemtrec)

SECTION 2: Hazard Communication

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200).

Signal Word: Warning. **Pictograms:**



Eye Damage / Irritation: Category 2B
Acute Oral Toxicity: Category 4

Hazard Statements:

- Harmful if swallowed
- Causes eye irritation.

Precautionary Statements:

- Do not eat drink or smoke when using this product.
- Wash face, hands, and skin thoroughly after handling.
- Contaminated work clothing should not be allowed out of the workplace.
- Wear protective gloves/eye/clothing and face protection.
- 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 attention. IF SWALLOWED: Call a poison control center or if you feel unwell. Rinse mouth.
- See Section 4:** IF SWALLOWED, IF ON SKIN: IF INHALED: IF IN EYES: Call POISON CENTER or doctor if you feel unwell.
- Wash contaminated clothing before reuse.
- Store locked up. Dispose of contents/container in accordance with local/state/federal regulations.

Other Information / Potential Hazards:

- Toxic to Aquatic Organisms.
- See sections 4 & 15.

SECTION 3: Ingredient Composition

Chemical Name	CAS #	% Composition (exact values may be withheld as trade secrecy)
Sulfentrazone; N-[2,4-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl]phenyl]-methanesulfonamide	122836-35-5	62.2
Chlorimuron ethyl; Ethyl-2-[[[(4-chloro-6-methoxyprymidin-2-yl)amino]carbonyl]-amino]sulfonyl]benzoate	90982-32-4	7.8
Other:	N/R as trade** secrecy	30

** Values are not product specifications.

SECTION 4: First Aid Measures

If swallowed: 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. **If on skin or clothes:** Wash and remove contaminated clothing and shoes. Rinse skin immediately with plenty of water for 15 or 20 minutes. Call a poison control center/doctor for treatment advice. Sensitized

persons should avoid reuse. **If in eyes:** 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 center or doctor for treatment advice. **If inhaled:** Move person to fresh air. If person is not breathing, call 911 or get medical help, then give artificial respiration, preferably with the aid of a pocket mask equipped with a one-way valve. Call a poison control center or doctor for further treatment advice. **First Aid Note:** Have this safety data sheet, the product container or label with you when calling a poison control center or doctor or going for treatment. **Physician:** Protect self from material. Treat symptomatically.

SECTION 5: Fire Fighting Measures

Flammable

properties: Not flammable; however, dust may form explosive air-dust mixture; may support combustion at elevated temperatures. **Extinguishing media:** Water fog or spray, dry chemical, alcohol resistant foam or CO₂. **Unsuitable extinguishing media:** High pressure water streams. **Firefighting measures:** Use extinguishing media appropriate for surrounding fire. 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). Decontaminate equipment after use. **Hazardous decomposition products:** Oxides of carbon and nitrogen. May release irritating and toxic vapors due to thermal decomposition.

SECTION 6: Accidental Release Measures

Personal

precautions: Isolate and post spill area. Keep unnecessary personnel, pets and livestock from spill area. Wear protective gloves / clothing and eye protection. Avoid contact with eyes, skin and clothing. Ensure adequate ventilation. See section 8 for personal protective equipment. **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. Under certain conditions this chemical can leach through soil and contaminate ground water. **Methods for containment:** Contain spill with inert material (e.g. sand, silica gel, binder). Prevent formation of dust with water mist or moist sweeping compound. **Methods for cleanup:** Pick up by shovel and transfer to properly labeled containers for disposal. Thoroughly clean tools and contaminated surfaces with detergent and water. Place rinse waters into disposal containers. Place leaking containers in oversize drums for transport and disposal.

SECTION 7: Handling and Storage

Precautions for safe

handling: Wear protective attire. Use only with adequate ventilation. Avoid breathing dusts/mists/granules. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid contamination of work clothing. **Precautions for safe storage:** Store and handle in accordance with good industrial hygiene practices. Keep container tightly closed and do not reuse. Store in a cool, dry and well-ventilated place away from children and animals. **Incompatible storage situations:** Separate pesticides during storage to prevent cross-contamination of other pesticides, fertilizers, food, water, feed.

SECTION 8: Exposure Control / Protection

The following recommendations for exposure controls and personal protection are intended for the manufacture, formulation, and packaging of this material. All forms of application should refer to the product label for personal protection equipment. **Exposure Guidelines:** This product does not contain hazardous substances with occupational exposure limits established by the region-specific regulatory bodies. **Engineering controls:** Have a clean water supply near the work and mixing area in case of eye or skin exposure. Ensure adequate ventilation, especially in confined areas. **Personal protective equipment: Eye / face protection:** Wear chemical-tight goggles. If splashing is likely to occur, wear a full-face shield. **Body / skin protection:** Long sleeved shirt, long pants, shoes plus socks. Wash work clothing before reuse separately from regular household laundry. **Hand protection:** Wear gloves / hand protection. **Respiratory protection:** If handling without sufficient ventilation, wear a dust / mist filtering respirator with organic cartridge(s) or pesticide rated filters.

SECTION 9: Physical & Chemical Properties

Physical state:

Solid granule. **Appearance:** Light brown. **Odor:** Sweet, brown sugar-like. **pH:** 5.0 (1%)



solution in water). **Melting pt. & boiling pt.:** N/A. **Flash point:** Not listed; see Section 5. **Relative density:** 0.62 g/ml. **Water solubility:** Miscible. **Viscosity:** No info available. **Vapor pressure:** Not listed. n-Octanol / **water partition coefficient:** Not listed. **Explosion:** Not listed. **Oxidizing properties:** N/A. **Other as commonly listed:** N/A.

SECTION 10: Stability & Reactivity

Reactivity / chemical

stability: Stable under normal temperature and conditions. **Conditions / Materials to avoid:** Extreme heat, sparks and creation of dust. Avoid contact with oxidizing agents. **Hazardous decomposition products:** Oxides of carbon, nitrogen and sulfur; hydrogen chloride and hydrogen fluoride. **Hazardous reactions:** Not expected under normal use.

SECTION 11: Toxicological Information

See Section 4 for

information on likely routes of exposure and effects. Product toxicology: **Acute oral LD50:** Rat LD50: 1750 mg/kg. **Acute dermal LD50:** Rat LD50: >5000 mg/kg. **Acute inhalation LC50:** Rat LC50: >5.17 mg/L. **Eye irritation:** Moderately irritating. **Skin irritation:** Non-irritating. **Sensitization:** Not a sensitizer. **Component toxicology, Carcinogenicity:** No component of this product present at levels greater than or equal to 0.1% is listed with NTP, IARC or OSHA.

SECTION 12: Ecological Information

Environmental

Hazards: Toxic to aquatic organisms. Keep out of any body of water. **Component Ecotoxicity:** Sulfentrazone (122836-35-5) 96-hour LC50: 120 mg/L Onchorhynchus mykiss, 96-hour LC50: 93.8 mg/L. Lepomis macrochirus, 48-hour EC50: 60.4 mg/L Daphnia magna. **Persistence and degradability:** Material is subject to photolysis (half-life < 12 hours). **Bioaccumulation:** Low potential for bioaccumulation. **Component Ecotoxicity:** Chlorimuron ethyl (90982-32-4). 96-hour LC50: 8.4 mg/L Onchorhynchus mykiss, 96-hour LC50: 2.0 mg/L Lepomis macrochirus, 48-hour EC50: >10.0 mg/L Daphnia magna. **Persistence and degradability:** No information available. **Bioaccumulation:** Low potential for bioaccumulation.

SECTION 13: Disposal Information

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. Keep out of drains, sewers, ditches and water ways. **Container disposal:** Refer to product label for container disposal. Emptied container retains product vapor and residue. Observe all labeled safeguards until container is reconditioned or destroyed. Clean container promptly after emptying.

SECTION 14: Transport Information

U.S. DOT: Not subject

to DOT regulation for ground transportation. **IMDG:** UN3077, Environmentally hazardous substance, solid, n.o.s.(Chlorimuron Ethyl, Sulfentrazone), 9, III, Marine Pollutant.

SECTION 15: Regulatory Information

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.:** 74530-60. **Hazards to Humans and Domestic Animals:** Harmful if swallowed. Causes moderate eye irritation. Do not get into eyes, on skin, or on clothing. **ENVIRONMENTAL HAZARDS:** This pesticide is toxic to marine/estuarine invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high-water mark. Drift and runoff may be hazardous to terrestrial and aquatic plants in neighboring areas. Do not contaminate water when disposing of equipment wash waters or rinsate. Refer Section 10. **Read EPA registered product label and label advisories, EPA Registration No.:** 74530-60.

SARA 311/312 Hazard Categories: Acute health: Yes. Other hazards: Not listed. **SARA 313:** This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: Chlorimuron Ethyl, CAS # 90982-32-4. **CERCLA:** None listed. **California Proposition 65:** None listed. **State Right-to-Know Regulations:** None listed.

SECTION 16: Other Information

NFPA Ratings:	Health = 2	Fire = 0	Instability = 0
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Acronyms which may or may not be referenced: 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; FIFRA - Federal Insecticide, Fungicide and Rodenticide Act; GHS - Global Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAD - 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; MP - Marine Pollutant; 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.

Revision Date: October 5th, 2023. **Revision no. 2**

Reason for Revision: SDS review and truncate. Confirm/Update Section 14. Review, truncate, and/or update Sections 2, 15 (PRN 2012-1), 16. Address change.

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