



SAFETY DATA SHEET (SDS) ID: EPA Reg. No. 74530-79, Quiz [Herbicide]

SECTION 1: Product and Company IDs

Product name: QUIZ
Product use / type: Herbicide
Restrictions on use: See product label.
SDS ID: EPA Reg. No.: 74530-79
Chemical name / active ingredients: See Section 3.
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: Danger. **Pictograms:**



**Acute Toxicity, Inhalation
 Eye Damage / Irritation
 Aspiration Hazard**

Category 4
 Category 2A
 Category 1

Hazard Statements:

- Harmful if inhaled.
- Causes serious eye irritation.
- May be fatal if swallowed and enters airways.

Precautionary Statements:

- Refer Section 4, First Aid Measures.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Wash thoroughly after handling.
- Avoid breathing mist/vapors/spray.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Do not eat drink or smoke when using this product.
- Wear protective gloves/eye protection.
- Use only outdoors or in a well-ventilated area.
- Wear respiratory protection.
- If experiencing respiratory symptoms: Immediately call a poison center.
- If exposed or concerned, get medical attention. Call POISON CENTER or doctor/physician if you feel unwell.
- Refer Sections 7 and 13. Store locked up.

Other Information / Potential Hazards:

- Very toxic to aquatic life with long lasting effects.

SECTION 3: Ingredient Composition

Chemical Name	CAS #	% Composition (exact values may be withheld as trade secrecy)
Ethyl (R)-2-[4-(6-chloroquinoxalin-2-ylloxy)phenoxy]propionate; Quizalofop-P-ethyl	100646-51-3	10.3
Acetophenone	98-82-8	10-20**
Solvent naphtha, petroleum, heavy aromatic	64742-95-4	10-30**
Other:	N/R as trade** secrecy	30-60**

** 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. Wash before reuse. 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:** Treat symptomatically. If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5: Fire Fighting Measures

Flammable properties: Not flammable. **Flash point:** 217.4° F / 103° C. **Extinguishing media:** Water fog, dry chemical, foam or CO2. **Unsuitable extinguishing media:** High pressure water streams. **Firefighting measures:** Evacuate area. Use extinguishing media appropriate for surrounding fire. Prevent contaminated firefighting waters and spillage from entering sewers, drains and waterways. Contain run-off water with temporary dike. Prevent use of contaminated buildings, area and equipment until decontamination. **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:** Under fire conditions may emit hydrocarbons, smoke and oxides of carbon, nitrogen and sulfur.

SECTION 6: Accidental Release Measures

Personal precaution: Isolate and post, and clean spill area. Keep unnecessary personnel, pets and livestock from spill area. Wear protective gloves / clothing and eye protection. Avoid breathing, wear 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. Avoid unintentional releases to the environment. Do not flush into surface water or sanitary sewer system. If spilled in area with desirable trees or plants remove top two inches of soil after initial clean up. Report spills as required by local and federal regulations. **Methods for containment:** Contain spill with inert material (e.g. sand, silica gel, binder). Clean immediately with water and detergent. **Methods for cleanup:** Pick up absorbent by shovel and transfer to properly labeled containers for disposal in accordance wither regulations. Observe label for further safeguards, containment, and disposal.

SECTION 7: Handling and Storage

Precautions for safe handling: Wear protective attire. Use only outdoors and with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mist. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid contamination of work clothing; remove and clean after handling. **Precautions for safe storage:** Store and handle in accordance with good industrial hygiene practices. Keep container tightly closed. Store in original container in a cool, dry and well-ventilated place away from children and animals. Keep away from incompatible materials, heat, and direct sunlight. **Incompatible storage situations:** Store product in original container only. Keep container closed when not in use, away from food or feed, fertilizer and other pesticides. Do not put formulation or spray solution in food or drink containers. Store in a cool, dry place and avoid excess heat. Protect container from physical damage. Do not contaminate water, food or feed by storage or disposal or cleaning of equipment.

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. This product contains any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies. **Refer to the following table:**



Component	NIOSH	ACGIH OSHA	OSHA
Acetophenone (98-86-2)		10ppm TWA	10ppm
Solvent naphtha, petroleum, heavy aromatic (64742-94-5)	400 mg/m3 100 ppm IDLH – 1000 ppm	200 mg/m3 TWA hydrocarbon vapor	400 mg/m3 TWA 100 ppm TWA

Engineering controls: Emergency eye wash/drench. Shower or suitable water supply near the work area. Ensure adequate ventilation or provide local exhaust. **Personal protective equipment eye/face protection:** Safety glasses with side-shields. If potential for eye contact to occur, wear chemical tight goggles and/or face shield. **Body/skin protection:** Long sleeved shirt, long pants, shoes plus socks. Applicators must wear chemical resistant clothing and footwear plus socks. Wash work clothing before reuse. Launder separately from other laundry. Discard heavily contaminated work clothing. **Hand protection:** Wear chemical resistant gloves / hand protection. **Respiratory protection:** If handling without sufficient ventilation or excess airborne exposure, wear a dust/mist filtering respirator with organic cartridge(s) or pesticide rated filters. Consult personal protective equipment manufacturers recommendations for cleaning and maintenance.

SECTION 9: Physical & Chemical Properties

Physical state: Liquid.

Appearance: Clear, yellow to light amber. **Odor:** Aromatic. **pH:** 5.05 (1% solution). **Melting point:** N/A. **Boiling point:** N/A. **Flash point:** 103° C / 217.4° F. **Explosive properties:** N/A. **Autoignition temperature:** No information available. **Oxidizing properties:** No information available. **Relative density:** 1.01 g/mL. **Water solubility:** Miscible. **Vapor pressure:** N/A. **Viscosity:** 15.9 mm2/s at 20° C / 8.0 mm2/s at 40° C. **Partition coefficient:** N/A. **Other as commonly listed:** No info available.

SECTION 10: Stability & Reactivity

Reactivity / chemical stability: None expected. Stable under normal temperature and conditions.

Conditions / Materials to avoid: Extreme heat, sparks, incompatible agents, strong oxidizers. Avoid contact with oxidizing agents, strong acids and strong bases. **Hazardous decomposition products:** None known or none listed. **Hazardous reactions:** Not expected under normal use.

SECTION 11: Toxicological Information

See Section 4 for

information on likely routes of exposure and effects. Harmful if inhaled. Causes serious (severe/burning) eye irritation. **Product numerical measures of toxicological effects:** **Acute oral LD50:** Rat LD50: >2000 mg/kg. **Acute dermal LD50:** Rat LD50: >2000 mg/kg. **Acute inhalation LC50:** Rat female 4-hr LC50: >5.16 mg/l, Rat male 4-hr LC50: >3.0 - <5.16 mg/l. **Eye irritation:** Causes eye irritation. **Skin irritation:** Non-irritating. **Sensitization:** Not a sensitizer. **Component numerical measures of toxicological effects: Quizalofop-p-ethyl (CASRN 100646-51-3), Acute oral LD50:** Rat LD50: =2000 mg/kg. **Acute dermal LD50:** Rat LD50: >2000 mg/kg. **Acute inhalation LC50:** Rat 4-hr LC50: >5.04 mg/L. **Eye irritation:** Minimal irritation. **Skin irritation:** Non-irritating. **Sensitization:** Not a sensitizer. **Acetophenone (CASRN 98-86-2), Acute oral LD50:** No information available. **Acute dermal LD50:** No information available. **Acute inhalation LC50:** No information available. **Eye irritation:** Causes eye irritation. **Skin irritation:** May cause skin irritation. **Sensitization:** No information available. **Solvent naphtha, petroleum, heavy aromatic (CASRN 64742-94-4), Acute oral LD50:** Rat LD50: >5000 mg/kg. **Acute dermal LD50:** Rat LD50: >2000 mg/kg. **Eye irritation:** Causes eye irritation. **Skin irritation:** Non-irritating, may dry the skin. **Sensitization:** Not a sensitizer. **Delayed and immediate effects as well as chronic effects from short and long-term exposure:** **Serious eye damage/eye irritation:** Causes serious eye 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. **Aspiration hazard:** May be fatal if swallowed and enters airways.

SECTION 12: Ecological Information

Environmental

Hazards: Very toxic to aquatic life with long lasting effects. Keep out of any body of water. **Ecotoxicity: Quizalofop-P-ethyl (CASRN 100646-51-3), 96-hour LC50:** 0.21 mg/l *Onchorhynchus mykiss*, 48-hour EC50: 0.35 mg/l *Daphnia magna*, 78-hour EC50: 41.0 mg/l *Pseudokirchneriella subcapitata*. **Persistence and degradability: Quizalofop-P-ethyl (CASRN 100646-51-3),** Degrades by hydrolytic reaction. Stable under aqueous and soil photodegradation. **Bioaccumulation:** 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. Do not dispose of into environment. **Container disposal:** Empty container contains residue. Observe all labeled safeguards until container is destroyed to prevent unauthorized use of used container. Clean container promptly after emptying. Refer product label. See Section 15.

SECTION 14: Transport Information

Not subject to U.S.

DOT regulation in packages less than or equal to 119 gallons (450 liters). U.S. DOT for packages greater than 119 gallons (450 liters), IMDG, IATA : UN3082, Environmentally hazardous substance, liquid, n.o.s.(Quizalofop-P-ethyl), 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.:** 74530-79. **Hazards to Humans and Domestic Animals:** Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. 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. **ENVIRONMENTAL HAZARDS:** Quiz is toxic to fish and 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 aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate. **Read EPA registered product label and advisories, EPA Registration No.:** 74530-79.

SARA 311/312 Hazard Categories: Acute health. Refer Section 2. **SARA 313:** Naphthalene (91-20-3) <0.2%, Acetophenone (98-86-2) 10 – 20%. **CERCLA:** Acetophenone (98-86-2) RQ=5000 lb. **TSCA:** Components listed or exempt. **Clean Water Act:** N/A. **Proposition 65 (California):** This product contains substance(s) known to the state of California to cause cancer and/or reproductive/developmental effects.

State Right-to-Know Regulations: This product contains substances subject to state right-to-know regulations.

Component	CAS No.	MA	NJ	PA
Solvent	64742-94-5	X	X	X
Naphthalene	91-20-3	X	X	X
Acetophenone	98-86-2	X	X	X

SECTION 16: Other Information

NFPA Ratings:	Health = 3	Fire = 1	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; 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; ILEL - 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: December 6th, 2023. **Revision no. 1. Reason for Revision:** SDS review and truncate. Confirm/Update Section 14. Review, truncate, and/or update Sections. Address change. Other edits/updates.

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