



SAFETY DATA SHEET

SDS ID: 74530-79

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	QUIZ
Product use / type:	Herbicide
EPA Registration No.:	74530-79
Chemical name / active ingredient(s):	Ethyl (R)-2-[4-(6-chloroquinoxalin-2-yloxy)phenoxy]propionate; Quizalofop-P-ethyl
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 considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200).

Classification

Acute Toxicity – inhalation	Category 4
Eye Damage / Irritation	Category 2A
Aspiration Hazard	Category 1

EMERGENCY OVERVIEW

Signal Word: **DANGER**

Pictogram:



Appearance: Yellow to light amber

Physical state: Liquid

Odor: Aromatic

Hazard Statements:

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

Precautionary Statements:

- Avoid breathing fume / mist / vapors / spray.
- Use only outdoors in a well ventilated area.
- Wash hands thoroughly after handling.
- Wear eye protection / face protection.

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- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- Call a poison center / doctor if you feel unwell.
- 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 advice / attention.
- IF SWALLOWED: Immediately call a poison center / doctor. Do not induce vomiting.
- Store locked up.
- Dispose of contents / container in accordance with local / state / federal regulations.

Other Information / Potential Hazards:

Very toxic to aquatic life with long lasting effects.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight % **
Ethyl (R)-2-[4-(6-chloroquinoxalin-2-yloxy)phenoxy]propionate; Quizalofop-P-ethyl	100646-51-3	10.3
Acetophenone	98-82-8	10.0 – 20.0
Solvent naphtha, petroleum, heavy aromatic	64742-95-4	10.0 – 30.0
Other ingredients	-	30.0 – 60.0

** Exact concentration of components withheld as a trade secret. 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.• Do not induce vomiting unless told to do so by a poison control center or doctor.• Do not give any liquid by mouth to the victim or 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.
Note to physician:	<ul style="list-style-type: none">• If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

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5. FIRE-FIGHTING MEASURES

Flammable properties:	Not flammable. Flash point: 217.4° F / 103° C.
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 decomposition products:	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. If spilled in area with desirable trees or plants remove top two inches of soil after initial clean up. Dispose of properly.
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 by 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.
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Precautions 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

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:

Component	NIOSH	ACGIH	OSHA
Acetophenone (98-86-2)	-	10 ppm TWA	10 ppm
Solvent naphtha, petroleum, heavy aromatic (64742-94-5)	400 mg/m ³ 100 ppm IDLH – 1000 ppm	200 mg/m ³ TWA hydrocarbon vapor	400 mg/m ³ TWA 100 ppm TWA

Engineering controls:	Emergency eye wash/drench in work area. Emergency shower or suitable water supply near the work area. Ensure adequate ventilation, especially in confined areas.
Personal protective equipment	
Eye / face protection:	Chemical tight goggles. If splashing is likely to occur, wear face shield.
Body / skin protection:	Long sleeved shirt, long pants, shoes plus socks. Wash work clothing before reuse separate from regular laundry. Heavily contaminated work clothing should be discarded.
Hand protection:	Wear chemical resistant gloves, such as Viton.
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:	Liquid
Appearance:	Clear, yellow to light amber
Odor:	Aromatic
pH:	5.05 (1% aqueous solution)
Boiling point:	No information available

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Melting point:	No information available
Flash point:	103° C / 217.4° F
Relative density:	1.01 g/ml
Water solubility:	Miscible
Vapor pressure:	No information available
Dissociation constant:	No information available
Viscosity:	15.9 mm ² /s at 20° C / 8.0 mm ² /s at 40° C

10. STABILITY AND REACTIVITY

Reactivity / chemical stability:	Stable under normal temperature and conditions.
Conditions / Materials to avoid:	Extreme heat, sparks and flames. Strong acids, bases and oxidizing agents.
Hazardous decomposition products:	No hazardous decomposition products known.
Hazardous reactions:	Not expected under normal conditions of handling and use.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure of product

Inhalation:	Harmful if inhaled
Eye contact:	Causes serious eye irritation
Ingestion:	May be fatal if swallowed and enters airways
Skin contact:	Non-irritating.

Symptoms: Severe eye irritation, burning.

Product numerical measures of toxicological effects

Acute oral LD50:	Rat LD ₅₀ : >2000 mg/kg
Acute dermal LD50:	Rat LD ₅₀ : >2000 mg/kg
Acute inhalation LC50:	Rat female 4-hr LC ₅₀ : >5.16 mg/l Rat male 4-hr LC ₅₀ : >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 LD ₅₀ : =2000 mg/kg
Acute dermal LD50:	Rat LD ₅₀ : >2000 mg/kg
Acute inhalation LC50:	Rat 4-hr LC ₅₀ : >5.04 mg/L
Eye irritation:	Minimal irritation
Skin irritation:	Non-irritating.
Sensitization:	Not a sensitizer.

Acetophenone (CASRN 98-86-2)

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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 64742-95-4)

Acute oral LD50:	Rat LD ₅₀ : >5000 mg/kg
Acute dermal LD50:	Rat LD ₅₀ : >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

12. ECOLOGICAL INFORMATION

Environmental Hazards:	Very toxic to aquatic life with long lasting effects. Keep out of any body of water.
Ecotoxicity:	96-hour LC ₅₀ : 0.21 mg/l <i>Onchorhynchus mykiss</i>
Quizalofop-P-ethyl	48-hour EC ₅₀ : 0.35 mg/l <i>Daphnia magna</i>
(CASRN 100646-51-3)	78-hour EC ₅₀ : 41.0 mg/l <i>Pseudokirchneriella subcapitata</i>
Persistence and degradability:	Degrades by hydrolytic reaction.
Quizalofop-P-ethyl (CASRN 100646-51-3)	Stable under aqueous and soil photodegradation
Bioaccumulation:	Potential for bioaccumulation.

13. DISPOSAL CONSIDERATIONS

Product disposal:	Wastes resulting from the use of this product that cannot be used must be disposed on site or at an approved waste disposal facility. Dispose of in accordance with applicable Federal, State or local regulations. Do not contaminate water, food or feed by disposal.
Container disposal:	Emptied container retains product residue. Clean container promptly after emptying. See product label for container disposal.

14. TRANSPORT INFORMATION

U.S. DOT:	Not subject to DOT regulation in packages less than 119 gallons (450 liters).
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UN3082, Environmentally hazardous substance, liquid, n.o.s.(Quizalofop-P-ethyl), 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.: 74530-79

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.

TSCA:**SARA 311/312:****SARA 313:****CERCLA:**

Exempt, regulated under FIFRA

Acute health

Naphthalene (91-20-3) <0.2%

Acetophenone (98-86-2) 10 – 20%

Acetophenone (98-86-2) RQ=5000 lb

U.S. State Regulations:

California Proposition 65: 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

16. OTHER INFORMATION

NFPA Ratings:	Health	Fire	Instability
	3	1	0

Revision No.:

1.0

Revision Date:

22-December-2017

Revision Note:

Initial release

QUIZ

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