

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE AND THE SUPPLIER

Product name: Quizalofop-P-ethyl 200G/L EC
Other name: /
Recommended use of the chemical and restrictions on use Herbicide
Supplier name: Shandong Weifang Rainbow Chemical Co., Ltd.
Supplier address: Binhai Economic Development Area, Weifang, Shandong, China
Supplier phone: +86-531-88875222, 88875231
Supplier fax: +86-531-88875232, 88875224
Emergency phone number: +86-531-88875222

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Acute toxicity - Oral (Category 4)
 Acute toxicity – Dermal (Category 5)
 Acute toxicity – Inhalation (Category 5)
 Hazardous to the aquatic environment, short-term (Category 2)
 Hazardous to the aquatic environment, long-term (Category 2)
 Flammable liquids (Category 4)

GHS Label elements, including precautionary statements:



Signal word:

Warning

Hazard statements:

H227: Combustible liquid
 H302: Harmful if swallowed
 H313: May be harmful in contact with skin
 H333: May be harmful if inhaled
 H401: Toxic to aquatic life.
 H411: Toxic to aquatic life with long lasting effects

Precautionary statements:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P264 Wash face, hands and contact areas thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P273 Avoid release to the environment.
 P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P301 + P317 IF SWALLOWED: Get medical help.
 P302 + P317 IF ON SKIN: Get medical help.
 P304 + P317 IF INHALED: Get medical help.
 P330 Rinse mouth.
 P370 + P378: In case of fire: Use appropriate media to extinguish.

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P391 Collect spillage.

P403: Store in a well-ventilated place.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification: /

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
Quisalofop-P-ethyl	100646-51-3	200G/L
Other		Up to 1L

4. FIRST AID MEASURES

Description of necessary first aid measures

Inhalation:

Remove from exposure. If vapour has been inhaled, lie patient down comfortably and keep warm. Monitor closely and seek medical attention if effects persist.

Skin contact:

Remove contaminated clothing. Wash skin thoroughly with soap and water.

Eye contact:

Rinse eye(s) with clean running water for 15 mins. Get medical attention.

Ingestion:

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Advice on treatment:

Consult a physician. Show this material safety data sheet to the doctor in attendance.

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed:

No data available

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the chemical:

Carbon oxides

Nitrogen oxides (NO_x)

Hydrogen chloride gas

Advice for firefighters

Evacuate personnel to safe area. Keep personnel removed and upwind of fire. Wear full protective clothing and self-contained breathing apparatus. If water spray is used to fight fire, dike and collect runoff. Prevent the use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage.

Further information

Not available.

6. ACCIDENTAL RELEASE MEASURES

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Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

For personal protection see section 8.

Environmental precautions:

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. If spill is on ground near trees or other valuable plants, remove top 2 inches of soil after initial clean up.

Methods and materials for containment and cleaning up:

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling:

Advice on safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities:

Keep away from heat, sparks, and open flames. Store the material in a cool, dry, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco product in the storage area. Prevent eating, drinking tobacco use and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and after handling.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Appropriate engineering controls:

Use only with adequate ventilation. Keep container tightly closed.

Personal protective equipment:

INGESTION: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

SKIN PROTECTION: Long-sleeved shirt, long pants, shoes plus socks. Chemical resistant footwear and overalls. Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile, neoprene rubber, polyvinyl chloride (PVC), or Viton. For overhead exposure, wear chemical resistant headgear.

INHALATION: A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color etc.):	Yellow to brownish-yellow transparent liquid
Odor:	Pungent
Odor threshold:	Not available.
pH:	5.0-7.0
Melting point/freezing point:	75°C
Initial boiling point and boiling range:	Not available.

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Flash point:	>61°C
Evaporation rate:	Not available.
Flammability (solid, gas):	Not flammable.
Upper/lower flammability or explosive limits:	Not available.
Vapor pressure:	1.10×10^{-04}
Vapor density:	Not available.
Relative density:	About 1.025g/ml
Solubility(ies):	insoluble
Partition coefficient: n-octanol/water:	$L_{op}=4.61$
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.

10. STABILITY AND REACTIVITY

Reactivity:

No data available

Chemical stability:

Stable under recommended storage conditions.

Possibility of hazardous reactions:

No data available

Conditions to avoid:

Very high or low temperatures.

Incompatible materials:

Strong oxidizing agents

Hazardous decomposition products:

Oxides of nitrogen and chlorine. Burning with limited oxygen may produce carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Acute health effects:

Quizalofop-P-ethyl had low acute oral, dermal and inhalation toxicity. Neither dermal or inhalation routes of exposure required the test material to be classified on the basis of its acute toxicity.

Numerical measures of toxicity:

Acute oral LD50:	300-2000mg/kg
Acute dermal LD50:	> 2000 mg/kg bw in the rat.
Acute inhalation LC50:	> 5.79 mg/L in the rat.
Skin irritation	No irritation
Eye irritation	Slightly irritating
Skin sensitization	Not sensitizing

Chronic health effects:

In a 1-year feeding study on dogs, doses of up to 10 mg/kg/day (the highest dose tested in that study) caused no observed effects. In a 90-day feeding study in rats, doses of 6.4 mg/kg/day and higher produced liver lesions and increased liver weight. In a 2-year study of rats, doses of 5 mg/kg/day produced no observed effects.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

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Birds - Acute LD50 (mg kg ⁻¹)	>2000
Honeybees-Contact acute LD50 (worst case from 24, 48 and 72hour values - µg bee ⁻¹)	>76.2
Honeybees- Oral acute LD50 (worst case from 24, 48 and 72hour values - µg bee ⁻¹)	>67.4
Fish - Acute 96hour LC50 (mg l ⁻¹)	5.1
Fish - Chronic 21-day NOEC(mg l ⁻¹)	0.044
Daphnia magna - Acute 48hour EC50 (mg l ⁻¹)	6.2
Daphnia magna - Chronic 21-day NOEC (mg l ⁻¹)	0.023
Algae - Acute 72hour EC50, growth (mg l ⁻¹)	48.5
Earthworms - Acute 14 day LC50 (mg kg ⁻¹)	>500

Persistence and degradability:

Quizalofop-p-ethyl is moderatel. oils, with a reported half-life of 60 days. It may be more rapidly broken down in soil with high microbial activity.

Bioaccumulative potential:

BCF (Bio-concentration factor) = 380. Quizalofop-p-ethyl has potential to bio-concentration.

Mobility in the soil:

Quizalofop-p-ethyl is moderately to strongly sorbed to soils, and studies indicate very low soil mobility. It should not leach significantly into water.

Other adverse effects:

Not available.

13. DISPOSAL CONSIDERATIONS

Safe handling of waste residues and disposal methods:

Dispose of discarded product according to local and state health and environmental regulations. Do not reuse container without the permission of company.

14. TRANSPORT INFORMATION

UN Number: 3082

Road Transport ADR/IRD:

Class:9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID.N.O.S

Maritime Transport IMDG/IMO:

Class:9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID.N.O.S

Marine Pollutant (Y/N): Yes

Air transport IATA/ICAO:

Class:9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID.N.O.S

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Special/Environmental Precautions: None known.

15. REGULATORY INFORMATION

The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given.

Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with local laws.

16. OTHER INFORMATION

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

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