



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Formulator: Gowan Company
P.O. Box 5569
Yuma, Arizona 85366-5569
(928) 783-8844

Emergency Phone: (928) 783-3803
For 24-Hour Emergency Assistance (Spill, Leak, Fire, or Exposure), Call CHEMTREC®: Inside the U.S.: (800) 424-9300
Outside the U.S.: (703) 527-3887
(888) 478-0798

For Medical Emergency:

Product: Targa® Emulsifiable Concentrate

EPA Signal Word: Danger **EPA Registration No.:** 33906-9-81880

Active Ingredient: Quizalofop-P-Ethyl (10.3%) **CAS No.:** 100646-51-3

Chemical Name: Ethyl (R)-2-[4-(6-chloroquinoxalin-2-yl oxy)phenoxy] propionate

Chemical Class: Aryloxyphenoxypropionate

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER! Causes irreversible eye damage. Harmful if swallowed, inhaled, or absorbed through the skin. Avoid contact with eyes, skin, or clothing. Avoid breathing vapor or spray mist.

Physical Properties

Appearance: Dark amber liquid

Odor: Aromatic hydrocarbon

Symptoms of Acute Exposure (Naphthalene)

Symptoms from excessive prolonged inhalation exposure to naphthalene may include headache, dizziness and confusion. Ingestion of naphthalene may initially include jaundice, bloody urine, flank pain, anemia, red blood cell destruction, hemolysis and acute renal failure. Higher exposures may lead to lens opacity, temporary nervous system depression resulting in dizziness, headache, confusion, incoordination, loss of consciousness. Coma and fatality (gross overexposure) may also occur.

Symptoms of Chronic Exposure (N-methyl-2-pyrrolidone)

Prolonged exposure to n-methyl-2-pyrrolidone may include burning, redness, swelling, pain, blisters, cracking, or rash.

Primary Routes of Exposure

Oral, dermal, ingestion, inhalation

Unusual Fire, Explosion, and Reactivity Hazards

Combustible. Keep away from heat, sparks, and open flames. Keep container closed. Vapor forms explosive mixture with air. Heating can release vapors which can be ignited.

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	OSHA – PEL	ACGIH – TLV	OTHER	NTP/IARC/OSHA CARCINOGEN
Quizalofop-P-Ethyl (10.3%)	N/A	N/A	2 mg/m ³ (8 Hr. TWA, total dust)*	No
Napthalene (~11%) CAS#:91-20-3	10 ppm 50 mg/m ³ (8 hr. TWA)	10 ppm 52 mg/m ³ (8 hr. TWA)	0.1 ppm (8 & 12 Hr. TWA)*	2B
N-Methyl-2-Pyrrolidone (≤8%) CAS#: 872-50-4	N/A	N/A	5 ppm (8 & 12 Hr. TWA, Skin)*	No

* Acceptable exposure limit.

3. COMPOSITION/INFORMATION ON INGREDIENTS - continued

Only the identities of the active ingredient(s) and any *hazardous* inert ingredients are listed. Specific information on all of this product's ingredients can be obtained by the treating medical professional or spill emergency responder for the management of exposures, spills, or safety assessments.

4. FIRST AID MEASURES

- If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
- If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- If swallowed:** Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by poison control center or doctor. Do not give anything by mouth to an unconscious person.
- If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth, if possible. Call a poison control center or doctor for further advice.

FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL TOLL FREE: (888) 478-0798

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

5. FIRE FIGHTING MEASURES

Flashpoint (test method): 98.9°C (210°F) Setaflash

Appropriate Extinguishing Media

Water spray, foam, dry chemical, CO₂

Fire Fighting Guidance

Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Cool tank/container with water spray.

Unusual Fire, Explosion, and Reactivity Hazards

Vapor forms explosive mixture with air. Heating can release vapors which can be ignited.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spills or Leaks

Review FIRE FIGHTING MEASURES and HANDLING sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up. Keep unnecessary people away and isolate hazard area. Dike spill. Prevent material from entering sewers, waterways or low areas. Soak up with sawdust, sand, oil dry or other absorbent material. Shovel or sweep up and then place in a chemical waste container for disposal. If spill area is on ground near trees or other valuable plants remove top 2 inches of soil after initial cleanup Refer to Section 13 for disposal information and Section 15 for reportable quantity information.

7. HANDLING AND STORAGE

HANDLING

Do not get in eyes. Avoid breathing vapors or mist. Avoid contact with skin. Avoid contact with clothing. Wash thoroughly after handling. Wash clothing after use. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Precautions in storing

Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool dry place. Keep container closed. Keep away from heat, sparks and open flames.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use only with adequate ventilation. Keep container tightly closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION - continued

User Safety Recommendations

Users should remove clothing immediately if pesticide gets inside, then wash thoroughly and put on clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves, such as barrier laminate or Viton.
- Shoes plus socks.
- Protective eyewear.

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark amber liquid
Odor: Aromatic hydrocarbon
Specific Gravity: 1.02
pH: 5.6 (1% wt/wt in water)
Solubility in H₂O: Emulsifiable concentrate

10. STABILITY AND REACTIVITY

Stability: Stable at normal temperatures and storage conditions
Hazardous Polymerization: Polymerization will not occur
Hazardous Mixtures: None known
Conditions To Avoid: None known

11. TOXICOLOGICAL INFORMATION

Data indicated below refer to active ingredient: Quizalofop P-Ethyl

Acute Toxicity/Irritation Studies

Ingestion: Acute Oral LD₅₀: 5900 mg/kg (rats-male); 4100 mg/kg (rats-female)
Dermal: Acute Dermal LD₅₀: >2,000 mg/kg (rabbit)
Inhalation: 4 hour LC₅₀: 2.6 mg/L (rat-male); 4.4 mg/L (rat-female)
Eye Contact: Severe irritant
Skin Contact: Moderate irritant
Skin Absorption: Not considered a skin sensitizer

Mutagenic Potential

Negative results in the following tests: Ames and Chinese hamster ovary (CHO) test for gene mutations; CHO and mouse micronucleus tests from chromosomal aberrations; DNA repair assays in *B. subtilis* and rat liver cells; Sister Chromatid Exchange Assay in Chinese hamster cells.

Reproductive Hazard Potential

Tests ran at levels of 0, 25, 100, 400 ppm. Decreased body weights were observed for parents and offspring in the weights occurred at 100 and 400 ppm. NOEL was 25 ppm (approximately 1.25 mg/kg/day).

Teratogenicity

Dose levels were 0, 7, 15, 30 and 60 mg/kg/day. The active ingredient was not teratogenic or embryotoxic at any level.

Mutagenicity

Negative results in the following tests for the active ingredient: Ames and Chinese hamster ovary (CHO) test for gene mutations; CHO and mouse micronucleus tests for chromosomal aberrations; DNA repair assays in *B. subtilis* and rat liver cells; Sister Chromatid Exchange Assay in Chinese hamster cells.

Carcinogenicity

In animal testing, n-methyl-2-pyrrolidone did not cause carcinogenicity. This material is not considered a unique developmental hazard to conceptus or a unique reproductive hazard.

12. ECOLOGICAL INFORMATION

This chemical is toxic to fish. Do not apply directly to water, or to areas where water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters. Practically non-toxic to birds and bees.

Ecotoxicity data shown below is for the active ingredient.

96-hr LC₅₀ Bluegill sunfish: 0.46 – 2.9 mg/L; 96-hr LC₅₀ Rainbow trout: 10.7 mg/L.

13. DISPOSAL CONSIDERATION

Product Disposal:

Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal:

Triple rinse (or equivalent) container. Then offer the container for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Do not contaminate water when cleaning container or disposing of container wash waters.

14. TRANSPORT INFORMATION

DOT Classification

Non-Bulk: Not regulated

Bulk: UN 3082, RQ, Environmentally Hazardous Substance, Liquid, N.O.S. (10% Quizalofop P-Ethyl, naphthalene), 9, PG III, Marine Pollutant

International Maritime Organization

UN3082, RQ, Environmentally Hazardous Substance, Liquid, N.O.S. (10% Quizalofop P-Ethyl), 9, PG III, Marine Pollutant

International Civil Aviation Organization

Not regulated

15. REGULATORY INFORMATION

SARA Title III Classification

Section 302/304:

Not applicable

Section 311/312:

Immediate (acute) health hazard

Delayed (chronic) health hazard

Section 313 chemical(s):

Naphthalene (~11%) CAS#: 91-20-3

CA Proposition 65:

Naphthalene is a chemical known to the State of California to cause cancer.

CERCLA Reportable Quantity (RQ):

Naphthalene RQ=100 lbs (909 lbs product)

RCRA Classification:

Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA Status: Exempt

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 1

Flammability: 1

Reactivity: 0

0	Least
1	Slight
2	Moderate
3	High
4	Severe

Prepared By:

Gowan Company
(928) 783-8844

Notice: The information and recommendations contained herein are provided in good faith and are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information herein.