

## QUAKE™ HERBICIDE

Date: 03/21/2018  
 Replaces: 01/28/2015

### 1. PRODUCT IDENTIFICATION

Product identifier on label: **Quake™HERBICIDE**  
 Product No.: A14972F  
 Use: Herbicide  
 Manufacturer: Tenkoz, Inc.  
 1725 Windward Concourse, Suite 410  
 Alpharetta, GA 30005  
 Manufacturer Phone: 1-770-343-8509  
**Emergency Phone: 1-800-424-9300**

### 2. HAZARDS IDENTIFICATION

Classifications: Eye Damage/Irritation: Category 2A  
 Signal Word (OSHA): Warning  
 Hazard Statements: Causes serious eye irritation

Hazard Symbols:



Precautionary Statements: Wash hands and face thoroughly after handling.  
 Wear eye 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 advice.

Other Hazard Statements: None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
Glycerin	Glycerin	56-81-5	Trade Secret
Other ingredients	Other ingredients	Trade Secret	43.4%
5-[2-chloro-5-(trifluoromethyl)phenoxy]-N-(methylsulphonyl)-2-nitrobenzamide	Fomesafen	72178-02-0	10.2%
Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)-,(S)	S-Metolachlor	87392-12-9	46.4%

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Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

### 4. FIRST AID MEASURES

Have the product container, label or Safety Data Sheet with you when calling Chemtrec (800-424-9300), a poison control center or doctor, or going for treatment.

**Ingestion:** If swallowed: Call Chemtrec (800-424-9300), a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 800-424-9300 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**Eye Contact:** If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Chemtrec (800-424-9300), a poison control center or doctor for treatment advice.

**Skin Contact:** If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Chemtrec (800-424-9300), a poison control center or doctor for treatment advice.

**Inhalation:** 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 Chemtrec (800-424-9300), a poison control center or doctor for further treatment advice.

Most important symptoms/effects: Eye irritation

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.

Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific Hazards:

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Special protective equipment and precautions for firefighters:

Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion.

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

Follow exposure controls/personal protection outlined in Section 8.

Methods and materials for containment and cleaning up:

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, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

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### 7. HANDLING AND STORAGE

Precautions for safe handling:

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products 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 water after handling.

Conditions for safe storage, including any incompatibilities:

Not Applicable

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.**

**FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.**

Occupational Exposure Limits:

Chemical Name	OSHA PEL	ACGIH TLV	Other	Source
Glycerin	15 mg/m <sup>3</sup> TWA (total); 5 mg/m <sup>3</sup> TWA (respirable)	Not Established	Not Established	Not Applicable
Other ingredients	Not Established	Not Established	Not Established	Not Applicable
Fomesafen	Not Established	Not Established	2 mg/m <sup>3</sup> TWA	Syngenta
S-Metolachlor	Not Established	Not Established	5 mg/m <sup>3</sup> TWA	Syngenta

Appropriate engineering controls:

Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures:

**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.

**Eye Contact:**

Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**Skin Contact:**

Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.

**Inhalation:**

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

In case of emergency spills, use a NIOSH certified respirator with any N, R, P or HE filter.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Transparent, slightly amber liquid

Odor: Paint

Odor Threshold: Not Available

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pH: 7.01 (1% solution in deionized H<sub>2</sub>O @ 77°F [25°C])  
Melting point/freezing point: Not Applicable  
Initial boiling point and boiling range: Not Available  
Flash Point (Test Method): > 216°F (Pensky-Martens CC)  
Flammable Limits (% in Air): Not Available  
Flammability: Not Applicable  
Vapor Pressure: Fomesafen < 3.0 x 10<sup>-8</sup> mmHg @ 68°F (20°C)  
S-Metolachlor 2.8 x 10<sup>-5</sup> mmHg @ 77°F (25°C)  
Vapor Density: Not Available  
Relative Density: 1.1170 g/cm<sup>3</sup> @ 68°F (20°C)  
Solubility (ies): Fomesafen Insoluble 50 mg/l (dry powder)  
S-Metolachlor 0.48 g/l @ 77°F (25°C)  
Partition coefficient: n-octanol/water: Not Available  
Autoignition Temperature: 788°F  
Decomposition Temperature: Not Available  
Viscosity: Not Available  
Other: None

### 10. STABILITY AND REACTIVITY

Reactivity: Not reactive.  
Chemical stability: Stable under normal use and storage conditions.  
Possibility of hazardous reactions: Will not occur.  
Conditions to Avoid: None known.  
Incompatible materials: None known.  
Hazardous Decomposition Products: None known.

### 11. TOXICOLOGICAL INFORMATION

#### Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation

Delayed, immediate and chronic effects of exposure: Eye irritation

#### Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

Ingestion:	Oral (LD50 Female Rat) :	5000 mg/kg body weight
Dermal:	Dermal (LD50 Rabbit) :	> 5050 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 2.58 mg/l air - 4 hours
Eye Contact:	Severely Irritating (Rabbit)	

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Skin Contact: Practically Non-Irritating (Rabbit)  
Skin Sensitization: Not a Sensitizer (Guinea Pig)

### Reproductive/Developmental Effects

Fomesafen : Non-genotoxic in in vitro and in vivo assays.  
Hepatic changes and a small effect on reproductive performance seen in a 3-generation rat study at the 1000 ppm dose level.  
S-Metolachlor: Did not show reproductive effects in animal experiments.

### Chronic/Subchronic Toxicity Studies

Fomesafen : Liver effects seen at 10 ppm and 100 ppm in 90-day rat feeding studies and in 6-month dog studies at 25 mg/kg/d.  
No evidence of neurotoxicity from subacute or longer-term studies in mammals.  
S-Metolachlor: No adverse effect has been observed in chronic toxicity tests.

### Carcinogenicity

Fomesafen : Increased rates of malignant liver tumors in a 2-yr mouse feeding study (1000 ppm), but the results are not considered relevant to man. Genotoxicity Studies: Bacterial Gene Mutation - Negative. Mouse Micronucleus Test - Negative.  
S-Metolachlor: Did not show carcinogenic effects in animal experiments.

Chemical Name	NTP/IARC/OSHA Carcinogen
Glycerin	No
Other ingredients	No
5-[2-chloro-5-(trifluoromethyl)phenoxy]-N-(methylsulphonyl)-2-nitrobenzamide	No
Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)-, (S)	No

### Other Toxicity Information

None

### Toxicity of Other Components

Glycerin  
Repeated or prolonged exposure to concentrated solutions may result in dermatitis.  
Other ingredients  
Not Established

### Target Organs

#### Active Ingredients

Fomesafen : Liver  
S-Metolachlor: Liver

#### Inert Ingredients

Glycerin: Skin  
Other ingredients: Not Established

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### 12. ECOLOGICAL INFORMATION

#### Eco-Acute Toxicity

##### Fomesafen :

Fish (Rainbow Trout) 96-hour LC50 680 ppm

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 294 ppm

Bird (Mallard Duck) 14-day LD50 > 5000 mg/kg

##### S-Metolachlor:

Fish (Rainbow Trout) 96-hour LC50 1.23 mg/l

Green Algae 96-hour ErC50 0.077 mg/l

Invertebrate (Water Flea) 48-hour EC50 11.24 mg/l

#### Environmental Fate

##### Fomesafen :

The information presented here is for the active ingredient, fomesafen.

Persistent in soil. Stable in water. Highly mobile in soil. Will leach. Sinks in water (after 24 h).

##### S-Metolachlor:

The information presented here is for the active ingredient, S-Metolachlor.

Low bioaccumulation potential. Not persistent in soil. Stable in water. Sinks in water (after 24 h).

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### 13. DISPOSAL CONSIDERATIONS

#### Disposal:

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

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### 14. TRANSPORT INFORMATION

#### DOT Classification

Ground Transport - NAFTA

Not regulated

#### Comments

Water Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (s-Metolachlor), Marine Pollutant

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

Air Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (s-Metolachlor)

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

Note: This product is currently not regulated for airfreight within the NAFTA region. However, effective 01/01/2011 the above classification must be used.

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### 15. REGULATORY INFORMATION

**Pesticide Registration:**

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:

Warning: Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear such as goggles, face shield, or safety glasses. Harmful if swallowed. 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.

**EPA Registration Number(s):**

100-1268-55467

**EPCRA SARA Title III Classification:**

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Fomesafen 10.2% (CAS No. 72178-02-0)

**CERCLA/SARA 304 Reportable Quantity (RQ):**

Not Applicable

**RCRA Hazardous Waste Classification (40 CFR 261):**

Not Applicable

**TSCA Status:**

Exempt from TSCA, subject to FIFRA

### 16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 2  
 Flammability: 1  
 Instability: 0

HMIS Hazard Ratings

Health: 2  
 Flammability: 1  
 Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme
*	Chronic

Manufacturer Hazard Category: C,S

For non-emergency questions about this product call:

1-770-343-8509

Original Issued Date: 4/7/2006

Revision Date: 03/21/2018

Replaces: 1/28/2015

Section(s) Revised: 1-16

The information and recommendations contained herein 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 contained herein.