



SAFETY DATA SHEET

AQUADUET™ Water-based Adulticide

Effective Date: 1 June 2015

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SECTION 1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Identifier

Formulation Identifier: AQUADUET™ Water-based Adulticide

EPA Registration Number: 1021-2562-8329

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant identified uses: Insecticide for control of adult mosquitoes.

Uses advised against: See product label for use restrictions

Details of the Supplier

Clarke Mosquito Control Products, Inc.
675 Sidwell Court
St. Charles, IL 60174 U.S.A.
+1 (630) 894-2000
Email: Clarke@clarke.com

Emergency Telephone Number

24 Hour MEDICAL Emergency: SafetyCall@: (888) 740-8712 or (952) 852-9509

24 Hour TRANSPORTATION Emergency: CHEMTREC@: (800)-424-9300

International: (703) 527-3887

SECTION 2. Hazards identification

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

Classification of the Substance or Mixture

Acute Toxicity – Inhalation (dusts/Mists): Category 4

Pictogram:



Signal Word: Warning

Hazard Statements: Harmful if inhaled

Precautionary Statements:

PREVENTION: Avoid breathing mist/vapors/spray
Use only outdoors or in a well ventilated area

RESPONSE: IF INHALED: Remove victim to fresh air and keep at rest in a position for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.

STORAGE: Store in a well-ventilated place. Keep cool.

DISPOSAL: Dispose of contents/container to an approved waste disposal plant.

Other Hazards Not Classifiable Under OSHA 2012 HCS - Not applicable

Comments: This material is considered hazardous by the 2012 OSHA Hazard Communication Standard [29 CFR 1910.1200(a)(1), and the GHS



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SECTION 3. Composition/Information on Ingredients

Components

Substance Name	CAS No.	Concentration % w/w
ETOC® (Prallethrin)	23031-36-9	1.0
SUMITHRIN® (d-Phenothrin)	26002-80-2	5.0
Piperonyl Butoxide	51-03-6	5.0

Ingredients not identified are non-hazardous and/or are not required to be disclosed pursuant to 29 CFR 1910.1200 (2012), and are withheld as trade secret.

SECTION 4. First Aid Measures

Description of First Aid Measures

- Eye contact:** 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. Call a poison control center/doctor for treatment advice.
- Skin Contact:** 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.
- Ingestion:** If swallowed, IMMEDIATELY call a poison control center or doctor for treatment advice. DO NOT give any liquid to the person. Do not induce vomiting unless told to do so by a poison control center or doctor. Never give anything by mouth to an unconscious person.
- Inhalation:** Remove affected 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 treatment advice.

Indication of Immediate Medical Attention and Special Treatment

Note to Physician: For skin effects, a highly efficient therapeutic agent for Pyrethrin/Pyrethroid exposure is topical application of Tocopherol Acetate (Vitamin E).

SECTION 5. Fire-Fighting Measures

Extinguishing Media

Suitable Extinguishing Media: Water Fog, Carbon Dioxide (CO₂), Dry Chemical, foam

Unsuitable Extinguishing Media: Do not use water jet.

Special Hazards Arising From the Substance or Mixture

Specific Hazards: No information available.

Explosion data:

Sensitivity to Mechanical Impact: None

Sensitivity to static discharge: None

Special Protective Equipment and Precautions for Fire-Fighters

Protection against fire: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Special Procedures: Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Dike for later disposal. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.



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SECTION 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

General Precautions: Use appropriate protection (see section 8). Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment as required.

Environmental Precautions: Prevent product from entering into drains and waterways. Collect and dispose of this material and its container in accordance with national and regional regulations. If the product has contaminated surface water, inform the appropriate authorities.

Methods and Material for Containment and Cleaning Up

Methods for containment: Prevent further leakage of spillage if safe to do so. Move containers from spill area.

Small spill: Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Large Spill: Prevent entry into sewers, water courses, basements or confined areas. Dam up and soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7. Handling and Storage

Precautions for Safe Handling

Protective measures: Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. For more information, see product label.

Hygiene Measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. For more information, see product label. Keep out of reach of children.

SECTION 8. Exposure Controls / Personal Protection

Control Parameters

Exposure Guidelines: This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Individual Protection Measures, such as Personal Protection Equipment:

Eye Protection: Tight sealing safety goggles or face shield.

Skin Protection: Wear a long-sleeved shirt, long pants, socks and shoes.

Hand Protection: It is good industrial hygiene practice to minimize skin contact. If required or preferred, use suitable protective chemical resistant gloves such as latex, nitrile, or neoprene.

Respiratory Protection: None required. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

SECTION 9. Physical and Chemical Properties



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Information on Basic Physical and Chemical Properties

Appearance:	Liquid
Color:	Milky white
Odor:	Sweet
Odor Threshold:	No information available
pH:	5.3 @ 5% in H ₂ O
Melting Point:	No information available
Freezing Point:	No information available
Initial Boiling Point:	No information available
Flash Point:	>93.3°C (>200°F) (Tag Closed Cup)
Evaporation Rate:	No information available
Flammability:	No information available
Explosion limits [U/L]:	No information available
Vapor Pressure:	No information available
Vapor Density (Air =1):	Heavier than air
Relative Density:	No information available
Specific Gravity (Water = 1)	No information available
Density:	1.012 g/cm ³ @ 20° C
Solubility:	No information available
Partition Coefficient:	No information available
Auto-Ignition Temperature:	No information available
Dynamic Viscosity:	11.2 cPs @ 22.8° C Brookfield
Decomposition Temperature:	No information available
Explosive Properties:	No information available
Oxidizing Properties:	No information available
VOC Content (%):	10%

SECTION 10. Stability and Reactivity

Reactivity

No data available

Chemical Stability

Stable under recommended normal storage conditions

Possibility of Hazardous Reactions

Hazardous Reactions: None under normal conditions

Hazardous Polymerization: Hazardous polymerization does not occur

Conditions to avoid

Extremes of temperature and direct sunlight

Incompatible materials

Not compatible with strong acids and bases. Not compatible with oxidizing agents.

Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂)

SECTION 11. Toxicological information

Information on Likely Routes of Exposure

Routes of entry: Oral, Dermal, Inhalation



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Information on Toxicological Effects

Acute Toxicity / Effects

Assessment of acute toxicity: Slightly toxic after ingestion. Slightly toxic after short-term inhalation. Slightly toxic after short term skin contact.

Oral, (Rat) LD ₅₀	> 5,000 mg/kg
Dermal, (Rabbit) LD ₅₀	> 5,000 mg/kg
Inhalation, Rat LC ₅₀	> 2.09 mg/l (four hours)
Skin Corrosion/Irritation:	Slight irritation at 72 hours - Irritation Index = 0.9
Serious Eye Damage/Irritation:	Irritation clearing in 24 hours
Skin Sensitization:	Negative – (guinea pig)

Chronic Toxicity / Effects

Assessment of repeated dose toxicity: No significant signs or symptoms indicative of any adverse health effects are expected to occur.

Germ Cell Mutagenicity	This product has not been tested. The statement has been derived from the properties of the individual components. No data is available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not carcinogenic. This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP. Marginally higher incidences of benign liver tumors in mice were observed following lifetime high dose exposures to PBO. The significance of these observations is undetermined and under review. The doses at which tumors were observed for PBO greatly exceeded potential exposure from labeled uses.
Reproductive Effects:	This product has not been tested. The statement has been derived from the properties of the individual components. No data is available to indicate product or any components present at greater than 0.1% produce a fertility impairing effect. No indication of a developmental toxic / teratogenic effect.
STOT – Single exposure	Not classified
STOT – Repeated exposure	Not classified

SECTION 12. Ecological Information

Ecotoxicity:

Product specific data is not available. Data referenced is in relation to active ingredients, d-Phenothrin and PBO

Toxicity to Fish:	d-Phenothrin 96-hr Acute LC ₅₀ 16.7 µg/L (rainbow trout), 15.8 µg/L (bluegill sunfish) PBO: 96-hour Acute LC ₅₀ 6/12 ppm (rainbow trout) Prallethrin LC50 0.012 mg/L (rainbow trout)
Toxicity to Aquatic Invertebrates:	d-Phenothrin 48-hr LC ₅₀ 4.4 µg/L <i>Daphnia magna</i> d-Phenothrin 48-hr LC ₅₀ 0.025 µg/L <i>Mysidopsis bahia</i> PBO: 96-hr LC ₅₀ 0.49 ppm, <i>Americamysis bahia</i> Prallethrin 48-hr EC ₅₀ 0.0062 mg/L <i>Daphnia</i>
Toxicity to Plants:	No data available

Persistence and Degradability

Product specific data not available. Data referenced is in relation to the active ingredients, d-Phenothrin and PBO

Biodegradability:	Not readily biodegradable (by OECD criteria)
Bioconcentration Factor:	d-Phenothrin: 592 (edible), 4,000 (non-edible) PBO: 2, 175 Prallethrin: no data available



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Log Kow:	d-Phenothrin: 6 PBO: 4.95 Prallethrin: 4.49
Depuration:	d-Phenothrin, PBO: 2-4 days
Mobility in Soil:	d-Phenothrin has low water solubility and binds tightly to soil. Based on these properties, d-phenothrin is relatively immobile in soil and its potential to contaminate groundwater is low. PBO is not very soluble in water and adheres moderately to soil with organic matter. Prallethrin is not very water soluble and adheres moderately with organic material. The hazard for prallethrin to move off the site of application with rain or irrigation is rated moderate.

SECTION 13. Disposal Considerations

Waste Treatment and Disposal methods

Pesticide wastes are regulated. Consult product label for chemical substance and container disposal instructions. Avoid release to the environment. Improper disposal of excess product or rinsate is a violation of Federal law. If these wastes cannot be disposed or by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA regional office for guidance.

Container disposal: Rinse thoroughly in accordance with label instructions.

SECTION 14. Transport Information

DOT (US)

PROPER SHIPPING NAME: Insecticides, Insect or Animal Repellent, Liquid

PRIMARY HAZARD CLASS/DIVISION: Non-Hazardous

OTHER SHIPPING INFORMATION: This material is not regulated by the DOT as a hazardous material when shipped in Non-Bulk quantities (i.e., less than 119 Gallons / 450 Liters).

When shipping in Bulk-quantities (i.e., more than 119 Gallons / 450 Liters), please contact Clarke for the proper shipping description.

IMDG (Vessel)

SHIPPING NAME: Not Available

ICAO/IATA (Air transport)

SHIPPING NAME: Insecticides, Insect or Animal Repellent, Liquid

PRIMARY HAZARD CLASS/DIVISION: Non-Hazardous

SECTION 15. Regulatory Information

FIFRA Information: This chemical is a pesticide product regulated 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 for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Signal Word: CAUTION

Precautionary Statements: Hazards to Humans and Domestic Animals: CAUTION. 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.

Personal Protective Equipment (PPE): Mixers, loaders, applicators and other handlers must wear the following: long-sleeve shirt, long pants, shoes and socks. See engineering controls for additional requirements.

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



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User Safety Recommendations: Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Engineering Controls: Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

FIRST AID

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information regarding medical emergencies of pesticide incidents, call 1-888-740-8712.

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.

Other Federal Regulations

SARA TITLE III CLASSIFICATION

Section 302: None

Section 311/312: None

Section 313: This product contains the following chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

CAS Number	Chemical Name	% by wt.
26002-80-2	d-phenothrin	5.0
51-03-6	piperonyl butoxide	5.0

CERCLA RQ:

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

U.S. California Proposition 65: This product does not contain any Proposition 65 chemicals

STATE RIGHT-TO-KNOW : National, state, provincial or local emergency planning, community right-to-know or other laws, regulations or ordinances may be applicable--consult applicable national, state, provincial or local laws.

SECTION 16. Other Information

DISCLAIMER OF LIABILITY: The information in this SDS was obtained from sources we believe to be reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared as is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

NFPA	Health Hazards 2	Flammability 1	Instability 0	Physical and Chemical Properties –
HMIS	Health Hazards 1	Flammability 1	Physical Hazards 0	Personal Protection X

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