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

Product Identifier

Formulation Identifier: ANVIL® 10+10 ULV
EPA Registration Number: 1021-1688-8329

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 (2012)

Classification of the Substance or Mixture

Acute Toxicity (Inhalation): Category 4
Aspiration Toxicity: Category 1

Pictogram:



Signal Word: DANGER

Hazard Statements: Harmful if inhaled
May be fatal if swallowed and enters airways.

Precautionary Statements:

PREVENTION: Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in 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 container tightly closed.

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

Other Hazards Not Classifiable Under OSHA 2012 HCS - Not applicable

SECTION 3. Composition/Information on Ingredients

Components

Substance Name	CAS No.	Concentration % w/w
SUMITHRIN® (d-Phenothrin)	26002-80-2	10.0
Piperonyl Butoxide (PBO)	51-03-6	10.0
Petroleum distillates, hydrotreated light	64742-47-8	5 – 10 *
White mineral oil	8042-47-5	50 – 75 *

* The exact percentage (concentration) of composition has been withheld as trade secret.
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.

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

Most Important Symptoms and Effects, both Acute and Delayed
The most important known symptoms and effects are described in section 2 and/or in section 11.

Indication of Immediate Medical Attention and Special Treatment
No data available.

SECTION 5. Fire-Fighting Measures

Extinguishing Media

Suitable Extinguishing Media: Water Fog, Carbon Dioxide (CO_2), 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: Treat as oil fire. 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.

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

Advice on safe handling: Use with local exhaust ventilation. Use personal protective equipment as required. Avoid breathing mist/vapors/spray.

Handling: Keep out of reach of children. Do not take internally. Avoid contact with skin and eyes.

Hygiene Measures: Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove soiled clothing immediately and clean thoroughly before using again.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in accordance with local regulations. Keep containers tightly closed in a cool, well-ventilated place. Protect from excessive heat and cold. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilizers. Keep in properly labeled containers.

SECTION 8. Exposure Controls / Personal Protection

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

Control Parameters

Component Name	CAS No.	List	Type	Value
Petroleum Distillates	64742-47-8	ACGIH	TLV/TWA (skin exposure)	200 mg/m³
Mineral Oil	8042-47-5	OSHA & ACGIH	PEL / TLV, TWA (oil mist)	5 mg/m³

Exposure controls

Engineering Controls: Use with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Wash hands thoroughly after handling. Wash clothing before re-using.

Individual Protection Measures, such as Personal Protection Equipment:

Eye Protection: Safety Glasses, Goggles or Face Shield

Skin Protection: Wear suitable protective gloves and clothing.

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

Information on Basic Physical and Chemical Properties

Appearance:	Clear, Liquid
Color:	Colorless (1.0 Gardner Scale)
Odor:	Solvent, mineral oil
Odor Threshold:	No information available
pH:	No information available, immiscible in water
Melting Point:	No information available
Freezing Point:	No information available
Initial Boiling Point:	No information available
Flash Point:	>93.3ºC (>200ºF), 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
Density:	0.887 g/cm3 @ 20 °C
Solubility:	Immiscible in water
Partition Coefficient:	No information available
Auto-Ignition Temperature:	No information available
Dynamic Viscosity:	25 cPs @ 24.0ºC (Brookfield)
Refractive Index:	1.4769 @ 25 °C
Decomposition Temperature:	No information available
Explosive Properties:	No information available
Oxidizing Properties:	No information available
VOC Content (%):	0.4

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 (CO_2)

SECTION 11. Toxicological information

Information on Likely Routes of Exposure
Routes of entry: Oral, Dermal and Inhalation
May be fatal if swallowed and enters airways due to petroleum distillate. Vomiting may cause aspiration pneumonia.

Information on Toxicological Effects

Acute Toxicity / Effects
Assessment of acute toxicity: Slightly toxic after ingestion. Relatively non-toxic after short-term inhalation. Moderately toxic after short term skin contact.

Oral, (Rat) LD_{50}	> 5,000 mg/kg
Dermal, (Rabbit) LD_{50}	> 2,000 mg/kg
Inhalation, Rat LC_{50}	> 3.76 mg/l (4 hours)
Skin Corrosion/Irritation:	Irritation cleared in 72 hours, skin irritation index 0.04
Serious Eye Damage/Irritation:	Minor irritation clearing in 48 hours
Skin Sensitization:	Not a sensitizer (Buehler, Guinea Pig)
Conditions aggravated by exposure:	None known

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)
Toxicity to Aquatic Invertebrates:	d-Phenothrin 48-hr LC_{50} 4.4 µg/L *Daphnia magna* d-Phenothrin 48-hr LC_{50} 0.025 µg/L *Mysidopsis bahia* PBO: 96-hr LC_{50} 0.49 ppm, *Americamysis bahia*
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
Log Kow:	d-Phenothrin: 6 PBO: 4.95
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.

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) Not regulated in non-bulk packagings [packagings which have a maximum capacity of 450 L (119 gallons) or less].

When transported in bulk packagings [exceeding 119 gallons capacity]:

UN Number: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (d-PHENOTHRIN)
Hazard Class: 9
Packing Group: III
Marine Pollutant: Yes

IMDG (Vessel)

UN Number: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (d-PHENOTHRIN)
Hazard Class: 9
Packing Group: III
Marine Pollutant: Yes

ICAO/IATA (Air transport)
UN Number: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (d-PHENOTHRIN)
Hazard Class: 9
Packing Group: III
Marine Pollutant: Yes

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
KEEP OUT OF REACH OF CHILDEN

PRECAUTIONARY STATEMENTS: HAZARDS TO HUMANS AND DOMESTIC ANIMALS: CAUTION. Harmful if absorbed through the skin. Avoid contact with skin, eyes and clothing. In case of contact, flush with plenty of water. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE): Some materials that are chemical-resistant to this product are: barrier laminate, nitrile rubber, neoprene rubber or Viton. Mixers, loaders, applicators, and other handlers must wear long-sleeve shirt, long pants, shoes and socks. In addition, all handlers except for applicators using motorized ground equipment, pilots, and flaggers, must wear chemical-resistant gloves. 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.

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. 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 applications is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

FIRST AID

If swallowed:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or a doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
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.
Note to physician:	Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

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 or pesticide incidents call 1-888-740-8712.

Other Federal regulations

SARA TITLE III CLASSIFICATION

Section 302: None

Section 311/312: Immediate (acute) health hazard

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	10.0
51-03-6	piperonyl butoxide	10.0

CERCLA RQ: None

US California Proposition 65: Not listed

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.

OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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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