



# SAFETY DATA SHEET

## ABATE® 2-BG

Effective Date: 27 August 2015

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

#### 1.1 Product Identifier

Formulation Identifier(s): "ABATE ® 2-BG" and "ABATE® 2-BG for use only in California"

EPA Registration Number(s): 8329-16, 8329-71

Chemical Name: Temephos 2% granule

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

Relevant identified uses: Pesticide, Insecticide for control of mosquito larvae

Uses advised against: Keep out of public waterways except as permitted by applicable government authorities.  
Keep out of the reach of children. See product label for use restrictions.

#### 1.3 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

#### 1.4 Emergency Telephone Number

Medical Emergency: POISON CONTROL (800) 214 – 7753

Transportation Emergency: INFOTRAC (800) 535 – 5053

### SECTION 2. Hazards identification

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

#### 2.1 Classification of the Substance or Mixture

##### Classification

Acute toxicity – dermal, Category 4

Acute toxicity – inhalation, Category 4

Eye irritation – Category 2B

Carcinogenicity, Category 2

Toxic to Reproduction, Category 1B

STOT, Single Exposure, Category 1

STOT, Repeat Exposure, Category 1

##### Hazard Statements

Harmful in contact with skin

Harmful if inhaled

Causes eye irritation

Suspected of causing cancer

May damage fertility or the unborn child

Causes damage to organs

Causes damage to organs through prolonged or repeated exposure

Pictograms:



Signal Word:

DANGER



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### Precautionary Statements:

**PREVENTION:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust. Use only outdoors or in a well ventilated area. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

**RESPONSE:** If on skin: Wash with plenty of soap and water. Call a poison center/doctor if you feel unwell. For specific treatment, see section 4.3. Take off contaminated clothing and wash it before reuse.

If inhaled: Remove victim to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

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/attention.

If exposed or concerned: call poison center/doctor. For medical treatment information, contact the poison control hotline at 1-800-214-7753. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

Specific treatment: see section 4.3.

Get medical advice/attention if you feel unwell.

**STORAGE:** Store locked up, in a well-ventilated place. Keep container tightly closed.

**DISPOSAL:** Dispose of contents and container in accordance with local/regional/national regulations.

### 2.2 Other Hazards Not Classifiable Under OSHA 2012 HCS

See product label for any additional hazards

## SECTION 3. Composition/Information on Ingredients

### 3.1 Components

Substance Name	CAS No.	Concentration % w/w	Classification OSHA 2012 HCS 1910.1200
Temephos	3383-96-8	2.0	STOT RE: 1, Acute (Inhal): 4, Acute (Dermal): 4
Anionic/nonionic blend	Proprietary	<= 1.8	Carc: 2, Repro: 1B, STOT SE: 1

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

### 4.1 Description of First Aid Measures

**Skin contact:** Wash thoroughly with soap and water. Rinse skin with plenty of water for 15-20 minutes. Remove clothing. Wash clothing separately and clean shoes before reuse.

**Inhalation:** Keep patient calm, remove to fresh air, seek medical attention.

**Eye contact:** Immediately flush eyes with water. Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

**Ingestion:** Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Have person sip a glass of water if able to swallow. Obtain emergency medical attention.



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### 4.2 Most Important Symptoms and Effects, Both Acute and Delayed.

Risk of decrease in cholinesterase activity. If poisoning is probable, treat the patient immediately. See also section 2 and/or section 11.

### 4.3 Indication of Immediate Medical Attention and Special Treatment

Treatment (Note to Physician):

Pralidoxime chloride (2-PAM, PROTOPAM chloride) may be effective as an adjunct to atropine. Use according to label directions. Before administering pralidoxime chloride, obtain a blood sample for cholinesterase analysis. Adjusting for age and weight, pralidoxime may be administered as a continuous infusion after a loading dose or using a bolus method. Clear airway and provide oxygen before administering atropine. Give atropine intramuscularly or intravenously, depending on severity of poisoning. Atropine may be administered through an alternative route such as an endotracheal tube. The dosage for atropine is as follows: 1 to 2 mg/kg initially IV in adults (or 0.05 mg/kg in children under 12 years) then give appropriate doses every 5 minutes until excessive secretions and sweating have been controlled. Use soap (preferably Tincture Green Soap) and water or dilute hypochlorite solution for decontaminating skin. Avoid opiates, parasymphomimetic agents (e.g. succinylcholine), theophylline, reserpine and or phenothiazines. Suction oral secretions and emesis to avoid aspiration. Artificial respiration or oxygen administration may be necessary. If not contraindicated, gastric emptying by lavage may be considered after ingestion of a potentially life-threatening amount if it can be performed soon after ingestion (within an hour). A slurry of activated charcoal may be medically warranted at an oral dose appropriate for adult, child or infant. For seizures, give benzodiazepine intravenously. Observe patient continuously for a least 72 hours. Allow no further exposure until cholinesterase generation has taken place as determined by blood tests.

## SECTION 5. Fire-Fighting Measures

### 5.1 Extinguishing Media

Suitable Extinguishing Media: Carbon Dioxide (CO<sub>2</sub>), Dry Chemical, Foam

Unsuitable Extinguishing Media: Water jet may cause pesticide run-off. If water is used, use spray or fog, solid stream may cause spreading.

### 5.2 Special Hazards Arising From the Substance or Mixture

Specific Hazards: Carbon monoxide, carbon dioxide, sulfur oxides, phosphorous oxides can be released in case of fire.

### 5.3 Special Protective Equipment and Precautions for Fire-Fighters

Protection Against Fire: Wear positive pressure, self-contained breathing apparatus and protective firefighting clothing (includes fire-fighting helmet, coat, pants, boots, and gloves).

Special Procedures: Collect contaminated extinguishing water, do not allow to reach sewage or effluent systems. Do not scatter spilled material with high-pressure water streams. Dike for later disposal. Use extinguishing agents appropriate for surrounding fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. In case of fire and/or explosion, do not breathe fumes. Keep containers cool by spraying with water if exposed to fire.

## SECTION 6. Accidental Release Measures

### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures



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General Precautions: Avoid dust formation. Use personal protective clothing. Avoid contact with the skin, eyes and clothing. Information regarding exposure controls/personal protection can be found in section 8.

Environmental Precautions: Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

### 6.2 Methods and Material for Containment and Cleaning Up

Clean Up Methods: For small amounts: Contain with dust binding material and dispose of.

For large amounts: Sweep/shovel up.

Avoid raising dust. Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

Information regarding disposal considerations can be found in section 13.

## SECTION 7. Handling and Storage

### 7.1 Precautions for Safe Handling

Handling: Keep out of reach of children. Ensure thorough ventilation of stores and work areas. When using, do not eat, drink or smoke.

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.

Protection against fire: Avoid dust formation. Dust can form an explosive mixture with air. Prevent electrostatic charge – sources of ignition should be kept well clear – fire extinguishers should be kept handy.

### 7.2 Conditions for Safe Storage, Including Any Incompatibilities

Storage: Store in compliance with local regulations. Keep out of reach of children. Segregate from foods and animal feeds.

Keep away from heat. Protect against moisture. Protect from direct sunlight.

## SECTION 8. Exposure Controls / Personal Protection

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

### 8.1 Control Parameters

Component Name	CAS No.	List/Source	Type	Value
Temephos	338396-8	ACGIH	TLV	1 mg/m <sup>3</sup> inhalable fraction (TWA)
		OSHA	PEL	5 mg/m <sup>3</sup> respirable fraction 15 mg/m <sup>3</sup> total dust
		OSHA	TWA	5 mg/m <sup>3</sup> respirable fraction 10 mg/m <sup>3</sup> total dust

### 8.2 Exposure controls

Engineering Controls: Whenever possible, engineering controls should be used to minimize the need for personal protection equipment.



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Individual Protection Measures, such as Personal Protection Equipment:

Eye Protection:	Wear safety Glasses with side shields, tightly fitting safety goggles (chemical goggles), or glasses with face shield.
Skin Protection:	Wear suitable protective clothing including long-sleeve shirt, long pants, shoes and socks. Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, coveralls.
Hand Protection:	Wear suitable protective chemical resistant gloves. Protective glove selection must be based on the user's assessment of the workplace hazards.
Respiratory Protection:	In case of insufficient ventilation, wear suitable respiratory equipment. Not usually required. However, mixers/loaders and applicators supporting aerial application must wear a dust/mist filtering respirator with MSHA/NIOSH Approval Number prefix TC-21C or a NIOSH-approved respirator with any N, R, P, or HE pre-filter.

### SECTION 9. Physical and Chemical Properties

#### 9.1 Information on Basic Physical and Chemical Properties

Appearance:	Free flowing granule
Color:	Grey
Odor:	Mercaptan, typical
Odor Threshold:	Not Determined
pH:	The product has not been tested
Melting Point:	The product has not been tested
Freezing Point:	Not Applicable
Initial Boiling Point:	Not Applicable
Flash Point:	Will not flash
Evaporation Rate:	Not Applicable
Flammability:	Not Flammable
Explosion limits [U/L]:	The product has not been tested
Vapor Pressure:	The product has not been tested
Vapor Density:	Not Determined
Density/Bulk Density:	40.0 lb/cu ft
Solubility:	<i>Temephos, in water:</i> 0.03 mg/L @ 25°C
Partition Coefficient:	<i>Temephos, n-octanol/water (log Kow):</i> 4.9
Auto-Ignition Temperature:	Based on its structural properties the product is not classified as self-igniting
Viscosity:	Not Applicable
Decomposition Temperature:	Not Determined
Explosive Properties:	Not Determined
Oxidizing Properties:	Not Determined

### SECTION 10. Stability and Reactivity

#### 10.1 Reactivity



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No hazardous reactions if stored and handled as prescribed/indicated.

### 10.2 Chemical Stability

Stable under normal conditions

### 10.3 Possibility of Hazardous Reactions

Hazardous Reactions: None under normal conditions

Hazardous Polymerization: Not known to occur

### 10.4 Conditions to avoid

See Section 7 – Handling and Storage.

### 10.5 Incompatible materials

Substances to avoid: strong acids, strong bases, strong oxidizing agents

### 10.6 Hazardous decomposition products

None known under normal conditions of storage and use

## SECTION 11. Toxicological information

### 11.1 Information on Likely Routes of Exposure

Routes of entry for solids are ingestion and inhalation, but may include eye or skin contact.

### 11.2 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, Male Rat LD <sub>50</sub>	> 4,204 mg/kg-bw
Dermal, Rat LD <sub>50</sub>	> 2 000 mg/kg-bw
Inhalation, Rat LC <sub>50</sub>	> 4.79 mg/L
Skin Corrosion/Irritation:	Not irritating to the skin
Serious Eye Damage/Irritation:	Causes temporary minor eye injury
Skin Sensitization:	Not a skin sensitizer.
STOT Single Exposure:	This product has not been tested. The statement has been derived from the properties of the individual components: Proprietary anionic/nonionic surfactant blend: STOT-SE, category 1

#### Chronic Toxicity/Effects

Assessment of repeated dose toxicity: Causes signs of neurotoxicity through prolonged or repeated exposure.

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. For temephos, no mutagenic effect was found in various tests with microorganisms and mammalian cell culture.



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Carcinogenicity	<p>The product has not been tested. The statement has been derived from the properties of the individual components:</p> <p>Proprietary anionic/nonionic surfactant blend: Category 2 Carcinogenicity</p> <p>For temephos: in long-term studies in rats in which substance was given by feed, a carcinogenic effect was not observed.</p>
Reproductive Effects:	<p>The product has not been tested. The statement has been derived from the properties of individual components. The product contains:</p> <p>Proprietary anionic/nonionic surfactant blend: Cat.1B Reproductive Toxicity</p> <p>For temephos: the results of animal studies gave no indication of a fertility impairing effect. No indications of a developmental toxic / teratogenic effect were seen in animal studies.</p>
STOT – Repeated exposure	<p>The product has not been tested. The statement has been derived from the properties of individual components. The product contains.</p> <p>Temephos: STOT-RE Category 2</p> <p>Proprietary anionic/nonionic surfactant blend: STOT-RE Category 1</p>

### SECTION 12. Ecological Information

#### 12.1 Ecotoxicity

Product specific data is not available. Data referenced is in relation to the active ingredient, Temephos.

Acutely harmful for fish. Very toxic (acute effect) to aquatic invertebrates. Acutely harmful to terrestrial organisms.

Toxicity to Fish: 96-hr Acute LC<sub>50</sub> 9.6 mg/L, *Oncorhynchus mykiss*

Toxicity to Aquatic Invertebrates: 48-hr EC<sub>50</sub> 0.011 ppb, *Daphnia magna*

Toxicity to Aquatic Plants: Not determined

Toxicity to (terrestrial) mammals: Stated in Section 11

Toxicity to (terrestrial) non-mammals: 5-d LC<sub>50</sub> 1,200 mg/kg, *Anas platyrhynchos*

Toxicity to microorganisms: Not determined

#### 12.1 Persistence and Degradability

Product specific data not available. Data referenced is in relation to the active ingredient, Temephos.

Biodegradability: Not readily biodegradable (by OECD criteria)

Bioaccumulation: Bioconcentration (BCF) 2,300 (28 d), *Lepomis macrochirus*

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is possible

Mobility in Soil: Following exposure to soil, adsorption to solid particles is probable, therefore contamination of groundwater is not expected.

### SECTION 13. Disposal Considerations

#### 13.1 Waste Treatment and Disposal methods



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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 the Federal law. If these wastes cannot be disposed of 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. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

### SECTION 14. Transport Information

#### 14.1 DOT

UN Number: UN3077  
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Temephos)  
Hazard Class: 9  
Packing Group: III  
Environmental Hazard: Yes

#### 14.2 IMDG (Vessel)

UN Number: UN3077  
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Temephos)  
Hazard Class: 9  
Packing Group: III  
Environmental Hazard: Yes  
Marine Pollutant: Yes

#### 14.3 ICAO/IATA (Air transport)

UN Number: UN3077  
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Temephos)  
Hazard Class: 9  
Packing Group: III  
Environmental Hazard: Yes  
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 CHILDREN

FIRST AID	
Have product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergency information, call the International Poison Control Center at 1-800-214-7753.	
IF SWALLOWED:	Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control center or doctor. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	Remove contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact





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	lenses, if present, after the first 5 minutes, then continue rinsing the eye. Call a poison control center or doctor for treatment advice.
IF INHALED:	Move person to fresh air. If the 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.
Note to physicians: This product may cause cholinesterase inhibition. Atropine is antidotal. Pralidoxime chloride (2-PAM; PROTOPAM chloride) may be effective as an adjunct to atropine. Probable mucosal damage may contraindicate the use of gastric lavage.	

### PRECAUTIONARY STATEMENTS: HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Avoid breathing dust. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Do not contaminate food or feed products.

**Personal Protective Equipment (PPE):** Loaders and applicators and other handlers involved in ground applications, loaders and applicators involved in backpack blower applications must wear long-sleeved shirt and long pants, shoes and socks, chemical-resistant gloves, and protective eyewear, such as goggles, or safety glasses. Aerial applicators and flaggers must wear long-sleeved shirt, long pants, shoes plus socks. Flaggers must wear chemical-resistant headgear and protective eyewear. All other loaders, applicators and handlers must wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, chemical-resistant footwear plus socks, protective eyewear, such as goggles or safety glasses, and chemical-resistant headgear (if overhead exposure). Loaders supporting aerial applications must wear a dust-mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any M,R,P, or HE filter. In addition, loaders and cleaners of equipment must wear a chemical-resistant apron.

**Engineering Controls:** Pilots must use an enclosed cockpit and must wear chemical resistant gloves when entering or leaving an aircraft contaminated by pesticide residues. Used gloves must be stored in a closed chemical resistant container, such as a plastic bag, to prevent contamination of the inside of the cockpit.

**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 materials that have been drenched or heavily contaminated with this product. 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. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### **Other federal regulations**

EPCRA 311/312 (Hazard Categories):	Immediate Hazard, Delayed Hazard		
EPCRA 313 (TRI Reporting)	CAS Number	Chemical name	% by wt.
	3383-96-8	Temephos	2.0
CERCLA RQ	None		

### **U.S. California Proposition 65**

WARNING: This product may contain a chemical known to the state of California to cause cancer and/or birth defects or other reproductive harm:

Toluene (CAS 108-88-23)

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.



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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.

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