

MATERIAL SAFETY DATA SHEET

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Revision No: 3

MGK® PBO-8E

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MGK® PBO-8E
PRODUCT DESCRIPTION: An emulsifiable insecticide synergist concentrate
PRODUCT CODE: 002332, EPA REG. NO.: 1021-1511

MANUFACTURER

McLaughlin Gormley King Co.®
 8810 10th Ave. N
 Minneapolis, MN 55427
Product Stewardship: (763) 544-0341
Customer Service: (800) 645-6466

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC U.S. and CANADA: (800) 424-9300
CHEMTREC All Other Areas: (703) 527-3887
Emergency Phone: (888) 740-8712

COMMENTS: MGK's Hours of operation are 8:00 am to 4:30 pm CST, 14:30 to 22:30 GMT.

For information regarding MEDICAL EMERGENCIES or PESTICIDE INCIDENTS, call the INTERNATIONAL POISON CENTER 24 hours a day at 1-888-740-8712 .

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt.%</u>	<u>CAS#</u>	<u>EINECS #</u>
Piperonyl Butoxide	91.3	000051-03-6	200-076-7
Methanol	0.77	000067-56-1	200-659-6
Glycol Ethers	3.65	000112-34-5	203-961-6

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

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: CAUTION. COMBUSTIBLE LIQUID. Harmful if swallowed. Avoid breathing vapors or spray mists of this product. Wear a respirator if product will be confined to indoor use. Avoid contact with skin, eyes, and clothing. Do not use or store near heat, open flame, or any ignition source.

POTENTIAL HEALTH EFFECTS

EYES: Causes temporary irritation, tearing, and blurred vision.

SKIN: Can cause mild skin irritation. Can cause a burning or prickling sensation on more sensitive areas (face, eyes, mouth).

SKIN ABSORPTION: Can be harmful if absorbed through skin.

INGESTION: Can cause stomach irritation, resulting in nausea, cramps and vomiting. Can cause nervous system disorders, such as fatigue, dizziness, headaches, lack of coordination, tremors and unconsciousness.

INHALATION: Excessive inhalation can cause nasal and respiratory irritation, nausea and nervous system disorders, such as fatigue, dizziness, headaches, lack of coordination, tremors and unconsciousness.

CHRONIC: Not established

4. FIRST AID MEASURES

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.

SKIN: 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, call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or a 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 advise.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: 65.6°C (150°F)TAG Closed Cup

FLAMMABLE CLASS: OSHA Combustible liquid.

EXTINGUISHING MEDIA: Foam, carbon dioxide or dry chemical.

HAZARDOUS COMBUSTION PRODUCTS: Under fire conditions this product will support combustion and may decompose to give off toxic gases such as carbon monoxide, carbon dioxide and nitrogen oxides.

FIRE FIGHTING PROCEDURES: Treat as an oil fire. Use a full-faced self-contained breathing apparatus along with full protective gear. Keep nearby containers and equipment cool with a water stream.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Shut off ignition sources. Stop release, if possible without risk. Dike or contain release, if possible, and if immediate response can prevent further damage or danger. Isolate and control access to the release area. Take actions to reduce vapors. Absorb with appropriate absorbent. Clean spill area of residues and absorbent.

LARGE SPILL: Shut off ignition sources. Stop release, if possible without risk. Dike or contain release, if possible, and if immediate response can prevent further damage or danger. Isolate and control access to the release area. Take actions to reduce vapors. Collect product into drums, etc. via drains, pumps, etc. Absorb with appropriate absorbent. Clean spill area of residues and absorbent.

GENERAL PROCEDURES: Contaminated absorbent and wash water should be disposed of according to local state/provincial and federal/national regulations.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Do not use near heat, open flame, or any other ignition source.

HANDLING: Wear chemically impervious gloves such as neoprene or nitrile. Wear a long-sleeved shirt, long pants, shoes and socks. Mechanical ventilation should be used when handling this product in enclosed spaces. Wearing a respirator is not normally required when handling this product, but recommended in the absence of proper mechanical ventilation. Do not contaminate water, feed or food by storage, handling or disposal. Read and observe all precautions and instructions on the label.

STORAGE: Store in a cool, dry place. Keep container closed. Keep away from heat, ignition sources and strong acids, bases, and oxidizers. Emptied containers may retain product residues.

KEEP OUT OF REACH OF CHILDREN.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

EXPOSURE LIMITS

		<u>OSHA PEL</u>		<u>ACGIH TLV</u>		<u>Supplier OEL</u>	
		<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>
Piperonyl Butoxide	TWA	None		None		None	
Methanol	TWA	200	260	200	262		
	STEL	250	325	250	328		
Glycol Ethers	TWA	None		None		None	

ENGINEERING CONTROLS: Mechanical ventilation should be used when handling this product in enclosed spaces. Local exhaust ventilation may be necessary.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Take prudent precautions to avoid contact with eyes.

SKIN: Wear chemically impervious gloves such as Neoprene or Nitrile and protective clothing.

RESPIRATORY: Wearing a respirator is not normally required when handling this product. Use in well ventilated areas. Take prudent precautions to avoid breathing vapors and/ or mists of this product.

WORK HYGIENIC PRACTICES: DO NOT SMOKE, EAT, OR DRINK, OR APPLY COSMETICS IN WORK AREA!

Wash promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking, or using the toilet.

OTHER USE PRECAUTIONS: AGRICULTURAL USE REQUIREMENTS:

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR, Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and green houses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on the label about personal protective equipment (PPE), and restricted-entry interval. The requirements listed below only apply to uses of this product that are covered by the Worker Protection Standard. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. PPE required for early entry to treated areas that is permitted under Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Coveralls; Chemical-resistant gloves, such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber, or Viton; Shoes plus socks.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Mild characteristic odor.

APPEARANCE: Clear amber liquid.

pH: 6.4@ 97% Water

VAPOR PRESSURE: Not Available

VAPOR DENSITY: Not Available.

BOILING POINT: Not Available

FREEZING POINT: Not Available

MELTING POINT: Not Applicable

SOLUBILITY IN WATER: Miscible in water

SPECIFIC GRAVITY: 1.052 (water=1) Hydrometer @ 20°C (68°F)

VISCOSITY: 35CPS at 25°C (77°F) Brookfield

(VOC): <2 %

10. STABILITY AND REACTIVITY

STABLE: YES

HAZARDOUS POLYMERIZATION: NO

CONDITIONS TO AVOID: Not compatible with strong acids or bases. Not compatible with strong oxidizers.

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD₅₀: >2.0 gm/kg

Albino rabbit.

ORAL LD₅₀: 5.22 gm/kg

Albino rat.

INHALATION LC₅₀: >2.38 mg / L

Rats exposed for 4 hours to test atmosphere.

EYE EFFECTS: Produced conjunctival irritation in 6/6 albino rabbit eyes, clearing by 7 days. Corneal opacity was visible for 2/6 animals but was not visible by day 4. No iritis was observed during study.

SKIN EFFECTS: Produced a primary skin irritation index of 0.08 in albino rabbits.

SENSITIZATION: When applied dermally to albino guinea pigs, this product appears to be a dermal sensitizer.

COMMENTS: None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as being carcinogens.

Marginally higher incidences of benign liver tumors in mice were observed following lifetime high dose exposures to PBO. The significance of this observation is questionable and under review. The doses at which tumors were observed for PBO greatly exceeded potential human exposure from labeled uses.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Environmental data not available for this product.

ECOTOXICOLOGICAL INFORMATION: This product is toxic to fish. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters, unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

EMPTY CONTAINER: Triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by other approved State and Local procedures. Do not reuse empty container.

RCRA/EPA WASTE INFORMATION: None of the ingredients in this product appear on the RCRA lists (40 CFR 261.24, 40CFR 251.33) or CERCLA Hazardous Substance list (40 CFR Part 302 Table 302.4)

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Insecticides, Insect or Animal Repellent, Liquid, N.O.S.

PRIMARY HAZARD CLASS/DIVISION: Not Applicable

AIR (ICAO/IATA)

PROPER SHIPPING NAME: Insecticides, Insect or Animal Repellent, Liquid, N.O.S.

PRIMARY HAZARD CLASS/DIVISION: Not Applicable

VESSEL (IMO/IMDG)

PROPER SHIPPING NAME: Insecticides, Insect or Animal Repellent, Liquid, N.O.S.

PRIMARY HAZARD CLASS/DIVISION: Not Applicable

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES:

FIRE: YES **PRESSURE GENERATING:** NO **REACTIVITY:** NO **ACUTE:** YES

313 REPORTABLE INGREDIENTS:

COMPONENT, CAS#, Max %

Glycol Ethers, 000112-34-5, 3.65

Piperonyl Butoxide, 000051-03-6, 91.30

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: There are no SARA Title III Section 302 extremely hazardous substances present in this formulation. (40 CFR 355).

See Section 13 of this MSDS for the components that are subject to emergency requirements under CERCLA Section 103(a)(40 CFR 302.4).

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: All chemical substances found in this product comply with the Toxic Substances Control Act's inventory reporting requirements.

16. OTHER INFORMATION

REVISION SUMMARY Revision #: 3 This MSDS replaces the March 30, 1999 MSDS. Any changes in information are as follows: In Section 1 Product Code Prepared By In Section 4 Firstaid - Skin Firstaid - Ingestion Firstaid - Inhalation In Section 5 Flash Point °F (From) Flash Point °C (From) In Section 7 Handling Storage In Section 8 Eyes-Face Protection Respiratory Protection Other Use Precautions Clothing Protection In Section 9 (pH) (From) (pH) VOC (Unit) Specific Gravity Method (Group Field) for Viscosity Viscosity (From) Viscosity (Unit) Viscosity Method Viscosity °F Viscosity °C Percent Volatile (VOC) (wt%) (Operator) VOC (From) In Section 11 Section 11 Footnotes In Section 12 Environmental Data Ecotoxicological Information Ecological In Section 16 Section 16 Footnotes

HMIS RATING

HEALTH:	1
FLAMMABILITY:	2
PHYSICAL HAZARD:	1
PERSONAL PROTECTION:	

HMIS RATINGS NOTES: We assign HMIS ratings to this product based on the hazards of its ingredients(s). Since the customer is most aware of the applications and conditions of use, he or she must ensure that the proper Personal Protective Equipment is provided, consistent with the information contained in Section's 7 and 8 of this MSDS.

COMMENTS: The data contained herein is based on information currently available to MGK Company, and believed to be factual and the opinions expressed to be those of qualified experts; however, this data is not to be taken as a warranty or representation for which MGK Company assumes legal responsibility.

MSDS Prepared by T. Azzivitto.