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Version: 4

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Name: Exponent® Insecticide Synergist

EPA Registration Number: 1021-1511

Other means of identification

Part Code: 2332B

Recommended use of the chemical and restrictions on use:

Recommended Use: Insecticide.

Details of the supplier of the safety data sheet

Manufacturer Address:

McLaughlin Gormley King Company
7325 Aspen Lane North
Minneapolis, MN 55428
USA

FAX #:

(763) 544-6437

Telephone Number: (800) 645-6466, or (763) 544-0341

e-Mail Address: mgk-sds@mgk.com

Emergency telephone numbers:

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

International: (703) 527-3887

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

Comments:

MGK® Hours of operation are 8:00 a.m. to 4:30 p.m. CST, 14:00 to 22:30 GMT.
For MEDICAL EMERGENCIES or PESTICIDE INCIDENTS, call 24 hours a day to
(888) 740-8712, or (952) 852-9509.

2. HAZARDS IDENTIFICATION

Classification:

OSHA Regulatory Status:

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 2B
Skin sensitization	Category 1
Flammable Liquids	Category 4

Label elements

Emergency Overview

WARNING

Hazard statements

- H332 - Harmful if inhaled
- H320 - Causes eye irritation
- H317 - May cause an allergic skin reaction
- H227 - Combustible liquid

**Appearance:** Clear , to light amber**Physical state:** Liquid**Odor** Slight - Solvent**Precautionary Statements - Prevention:**

- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P271 - Use only outdoors or in a well-ventilated area
 P272 - Contaminated work clothing should not be allowed out of the workplace
 P280 - Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response:

- P321 - Specific treatment (see Section 4/ First Aid).
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P337 + P313 - If eye irritation persists: Get medical advice/attention
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
 P363 - Wash contaminated clothing before reuse
 P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 P312 - Call a POISON CENTER or doctor/physician if you feel unwell
 P370 + P378 - In case of fire: Use CO₂, dry chemical, or foam for extinction

Precautionary Statements - Storage:

- P403 + P235 - Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal:

- P501 - Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC):

Not applicable

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Piperonyl Butoxide (PBO)	51-03-6	91.30

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

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

4. FIRST AID MEASURES

Aspiration pneumonia hazard: • Not applicable

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 eye. Call a poison control center or 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. 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 advice.

Self-protection of the First Responder: Use personal protective equipment as required.

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

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use. Dry chemical. Carbon dioxide (CO₂). Water spray (fog). Alcohol resistant foam.

Unsuitable extinguishing media:

Caution: Use of water spray when fighting fire may be inefficient.

Hazardous combustion products: Carbon monoxide, Carbon dioxide (CO₂).

Specific hazards arising from the chemical

Keep product and empty container away from heat and sources of ignition. Risk of ignition.

Explosion data

Sensitivity to Mechanical Impact: None.

Sensitivity to Static Discharge: None.

Protective equipment and precautions for firefighters:

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions: Use personal protective equipment as required. Remove all sources of ignition.

Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Pay attention to flashback. Take precautionary measures against static discharges.

Environmental precautions: Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment: Prevent further leakage or spillage if safe to do so.

Methods for cleaning up: Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers. Take precautionary measures against static discharges.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling: Use with local exhaust ventilation. All equipment used when handling the product must be grounded. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). For more information, see product label.

Conditions for safe storage, including any incompatibilities

Storage Conditions: Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Keep in properly labeled containers. For more information, see product label.

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

Appropriate engineering controls

Engineering Controls: Safety showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin and body protection: Wear protective gloves and protective clothing.

Respiratory protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations:

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties:**

Physical state: Liquid
Appearance: Clear , to light amber
Odor Slight - Solvent
Odor threshold: No information available
Color (Gardner Scale): 1

<u>Property:</u>	<u>Values:</u>	<u>Comment: • Method</u>
pH:	5.1	@ 5% in H ₂ O
Melting point / freezing point:	No information available	
Boiling point / boiling range:	No information available	
Flash point:	87.8 °C / 190.0 °F	Tag Closed Cup

Evaporation rate:	No information available	
Flammability (solid, gas):	No information available	
Upper flammability limit (UEL):	No information available	
Lower flammability limit (LEL):	No information available	
Vapor pressure:	No information available	
Vapor density:	No information available	
Specific Gravity:	1.052	@ 20.0 °C
Water solubility:	No information available	
Partition coefficient; n-Octanol/ Water:	No information available	
Autoignition temperature:	No information available	
Decomposition temperature:	No information available	
Kinematic viscosity:	No information available	
Dynamic viscosity:	39.2 cPs	@ 23.2 °C
Refractive Index:	1.4961	@ 25.0 °C

Other Information:

VOC Content (%): 2

Miscibility/ Solubility:

Water: Miscible
Alcohol: Miscible
Aromatic solvents: Miscible
Petroleum distillates: Miscible

10. STABILITY AND REACTIVITY**Reactivity**

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization: Hazardous polymerization does not occur.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials:

Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION

Numerical measures of toxicity - Product Information

Oral LD₅₀	3,129 mg/kg (rat)
Dermal LD₅₀	>5,000 mg/kg (rabbit)
Inhalation LC₅₀	>2.04 mg/L, (rat; 4 hours)
Eye contact:	Moderately irritating to the eyes. Irritation cleared within 7 days. (rabbit).
Skin Contact:	Slightly irritating. (rabbit).
Skin Irritation Index:	0.5
Sensitization:	Positive. (guinea pig).
Piperonyl Butoxide:	Marginally higher incidences of benign liver tumors in mice were observed following lifetime high dose exposures to PBO. The significance of these observations is questionable and under review. The doses at which tumors were observed for PBO greatly exceeded potential human exposure from labeled uses. Doses at which these effects were observed greatly exceeded anticipated human dietary intake. At anticipated dietary exposure levels, it is highly unlikely that this product will result in carcinogenic effects.
Carcinogenicity/ Oncogenicity:	
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive toxicity:	No information available.
Developmental Toxicity	No information available.
Teratogenicity:	No information available.
STOT - single exposure:	No information available.
STOT - repeated exposure:	No information available.
Chronic toxicity:	Avoid repeated exposure.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects: No information available

Environmental hazards (EPA):

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 to 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

Waste treatment methods

Disposal of wastes: Disposal should be in accordance with applicable regional, national and local laws and regulations. For more information, see product label.

Contaminated packaging: For more information, see product label.

14. TRANSPORT INFORMATION

DOT (Department of Transportation)

Proper Shipping Name: Insecticides, Insect or Animal Repellent, Liquid
Hazard Class: This material is not hazardous.

Other DOT 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 MGK® for the proper shipping description.

Air (IATA/ ICAO)

Proper Shipping Name: Insecticides, Insect or Animal Repellent, Liquid
Hazard Class: This material is not hazardous.

Vessel (IMO/ IMDG)

UN/ID Number: UN3082
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s
Hazard Class: 9
Packing Group: III

15. REGULATORY INFORMATION

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Piperonyl Butoxide (PBO) - 51-03-6	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

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

US State Regulations:**California Proposition 65:**

This product does not contain any intentionally added Proposition 65 chemicals

U.S. EPA Label Information:

EPA Registration Number: 1021-1511

Difference between SDS and EPA (FIFRA) Pesticide label:

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The pesticide label also includes other important information, including directions for use. The hazard information required on the pesticide label is reproduced below:

Signal word: **CAUTION**

Precautionary Statements:

- Harmful if swallowed.
- Harmful if absorbed through the skin.
- Causes moderate eye irritation.

International Inventories:

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Does not comply
KECL	Does not comply
PICCS	Does not comply
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION.

<u>NFPA</u>	Health hazards 2	Flammability 2	Instability 0	Physical and Chemical Properties
<u>HMIS</u>	Health hazards 2*	Flammability 2	Physical hazards 0	- Personal protection X

*Chronic Hazard Star Legend * = Chronic Health Hazard*

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Disclaimer:

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This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABEL (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom"). The product label provides information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products is regulated by the EPA under the authority of FIFRA through the product label. All necessary hazard classification and appropriate precautionary use, storage, and disposal information is set forth on that label or labeling accompanying the pesticide or to which reference is made on the label. It is a violation of federal law to use an EPA-registered pesticide product in any manner inconsistent with its labeling.

End of Safety Data Sheet.