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MATERIAL SAFETY DATA SHEET
STARBAR® GOLDEN MALRIN® FLY BAIT

Manufacturer: Wellmark International
Address: 1100 East Woodfield Road, Suite 500 Schaumburg, IL 60173
Emergency Phone: 1-800-347-8272
Transportation Emergency Phone: CHEMTREC: 1-800-424-9300

1. CHEMICAL PRODUCT INFORMATION

Product Name: Starbar® Golden Malrin® Fly Bait
Chemical Name/Synonym: Methomyl; S-methyl N-[(methylcarbamoyl)oxy]thioacetimidate
Chemical Family: Carbamate
Formula: C5 H10 N2 O2 S
EPA Registration No.: 2724-274
RF Number: 128E

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component (chemical, common name)</u>	<u>CAS Number</u>	<u>Weight</u>	<u>Tolerance</u>
Methomyl: (S-Methyl N-[(methylcarbamoyl)oxy] thioacetimidate	16752-77-5	1.1%	2.5 mg/m3 (OSHA & ACGIH)
(Z)-9 Tricosene	27519-02-4	0.049%	Not established
Inert ingredients (non-hazardous and/or trade secret)		98.851	Not established

3. HAZARD INFORMATION

PRECAUTIONARY STATEMENT
KEEP OUT OF THE REACH OF CHILDREN

CAUTION: HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH THE SKIN. AVOID BREATHING DUST. AVOID CONTACT WITH SKIN, EYES OR CLOTHING. DO NOT ALLOW CHILDREN INTO TREATED AREAS. PRODUCT NOT TO BE USED INSIDE OR AROUND HOMES, OR ANY OTHER PLACE WHERE CHILDREN ARE LIKELY TO BE PRESENT. ALWAYS WASH HANDS, FACE, AND ARMS WITH SOAP AND WATER BEFORE USING TOBACCO PRODUCTS, EATING, DRINKING, OR TOILETING. USE PRODUCT ONLY WHEN WEARING THE FOLLOWING PERSONAL PROTECTIVE CLOTHING DURING LOADING, APPLICATION, REPAIRING AND CLEANING OF APPLICATION EQUIPMENT, AND DISPOSAL OF THE PESTICIDE: LONG SLEEVE SHIRT; LONG-LEGGED PANTS; SHOES AND SOCKS; GLOVES.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Active ingredient is a cholinesterase inhibitor: may cause sweating, salivation, nausea, headaches, diarrhea, pin-point pupils, ataxia, tightness in chest, vomiting, cyanosis, pulmonary edema.

PRIMARY ROUTE OF ENTRY Dermal/Eye: No Oral: Yes Inhalation: Yes

ACUTE TOXICITY

Oral: LD50 (rat): 3,106 mg/kg

Dermal: LD50 (rabbit): >2,100 mg/kg (highest dose level tested)

Inhalation: Unknown

OTHER TOXICOLOGICAL INFORMATION

- Skin Irritation:** Non-irritating (rabbit)
Eye Irritation: Very minimal (rabbit)
Sensitizer: Not considered a sensitizer

4. FIRST AID MEASURES

- Eye:** Immediately flush eyes with plenty of water. Call a physician.
- Skin:** Wash with soap and water. If irritation persists, get medical attention.
- Ingestion:** If swallowed – Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not give anything by mouth or induce vomiting to an unconscious person. This product contains Bitrex®, a bittering agent intended to discourage ingestion.
- Inhalation:** Remove to clear air area.
- Note to Physician:** Methomyl is a cholinesterase inhibitor. Atropine is antidotal. Where symptoms are visible, atropine I.V. to effect is suggested.

5. FIRE FIGHTING MEASURES

- NFPA Rating:** **Health: 1** **Fire: 0** **Reactivity: 0**
- Flammability Class:** Combustible solid
- Flash Point:** Does not flash
- Explosive Limits (% of Volume):** N/A
- Extinguishing Media:** Water, foam, dry chemical, CO2
- Special Protective Equipment:** Fire fighters should wear full protective clothing including self-contained breathing apparatus.
- Fire Fighting Procedures:** Normal procedures. Do not allow fire fighting water to escape into waterways or sewers.
- Combustion Products:** Carbon monoxide
- Unusual Fire/Explosion Hazards:** Will ignite if exposed to intense heat or open flame. Fire or intense heat may rupture container

6. ACCIDENTAL RELEASE MEASURES

- Steps to be taken:** Small amounts may be swept up and spread in planned use areas as directed on label or placed in container for disposal.
- Absorbents:** If in liquid form, use clay granules, sawdust, dirt or equivalent.
- Incompatibles:** Reactive metals, strong oxidizers

7. HANDLING AND STORAGE

- Handling:** Avoid breathing dust, avoid contact with skin, eyes or clothing. Wear the following personal protective clothing during loading, application, repairing, and cleaning of application equipment., and disposal of the pesticide: Long-legged pants; shoes and socks; gloves.
- Storage:** Do not store near water, food, or feed. Keep out of reach of children and animals.

8. EXPOSURE CONTROL / PERSONAL MEASURES

- Exposure Limits:** Methomyl = 2.5 mg/m³ (OSHA PEL & ACGIH TLV)
- Ventilation:** Ventilate to keep airborne exposures below recommended limits
- Personal Protective Equipment:** If excessive exposure is anticipated, it is recommended for handlers to wear a MSHA/NIOSH approved organic respirator with a dust prefilter, impervious gloves, goggles with side shields, and other appropriate clothing to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance and Odor:** Solid blue granules with characteristic sulfurous odor.
- Boiling Point:** N/A
- Melting Point:** N/A
- Vapor Pressure (mm Hg):** N/A
- Vapor Density (Air = 1):** N/A
- Specific Gravity:** >1
- Bulk Density:** 0.84 g/ml (0.80 - 0.90)
- Solubility:** Soluble in water
- Evaporation Rate:** N/A
- pH:** N/A

10. STABILITY AND REACTIVITY

- Stability:** Stable
- Reactivity:** Nonreactive
- Incompatibility w/ Other Materials:** Reactive metals, strong oxidizers
- Decomposition Products:** Oxides of nitrogen, carbon monoxide, carbon dioxide
- Hazardous Polymerization:** Will not occur

11. TOXICOLOGICAL INFORMATION

CHRONIC TOXICITY [Specific to Active Ingredient(s)]

In a 2 year feeding study in rats at feeding levels, 0, 50, 100, 200 and 400 ppm; the no effect level (NOEL) was 100 ppm based on slight hemolytic anemia and/or body weight effects observed at the higher dietary concentrations. No compound related neoplastic lesions were observed. In a 2 year feeding study in mice at feeding levels, 0, 50, 75, and 200 ppm; no compound related neoplastic or non-neoplastic histologic effects were found at any level. The NOEL was considered to be 50 ppm based on transient hemolytic anemia and increased mortality at the higher dietary concentrations. In a 2 year feeding study in dogs at feeding levels 0, 50, 100, 400, and 1,000 ppm the NOEL of 100 ppm was based on hemolytic anemia and non-neoplastic changes within the kidney and spleen at the higher dietary concentrations. There were no neoplastic effects at any dose

DEVELOPMENTAL/REPRODUCTIVE TOXICITY [Specific to Active Ingredient(s)]

A 3-generation rat reproduction study at rates of 50 and 100 ppm showed no adverse effect upon fertility, and no compound related histologic effect. A 2-generation rat study conducted at 75, 600, and 1,200 ppm in the diet showed similar results. In rats, no embryotoxic or teratogenic effects were observed at levels up to 400 ppm (highest level fed). In rabbits, the highest dietary dose level (100 mg/kg) did not cause any observed compound related abnormalities.

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MUTAGENICITY [Specific to Active Ingredient(s)]

Methomyl was negative in numerous assays to evaluate mutagenicity and genotoxicity, including Ames test, Reverse Mutation Assay, Recessive Lethal Assay, three DNA damage studies, an unscheduled DNA Synthesis Assay, and in vitro and in vivo cytogenic assays. Methomyl is not listed as a carcinogen by the IARC, NTP, OSHA and ACGIH.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE [Active Ingredients Only]

Hydrolysis: N/A
Photolysis: N/A
Soil half life: N/A
Water solubility: Soluble in water

ECOTOXICITY [Active Ingredients Only]

Acute Toxicity: fish:LC50 (rainbow trout): 3.4 ppm (96 hour study), (bluegill sunfish): 0.72 mg/L (96 hour study); aquatic invertebrates:LC50 (daphnia magna): 31.7 ppb (48 hour study)

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food or feed by disposal. Waste resulting from the use of this product may be disposed of on site or an approved waste disposal facility. **Plastic Container Disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or by other approved state and local procedures. **Container Disposal (Drum):** Completely empty by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of in a sanitary landfill or by incineration if allowed by state and local authorities.

14. TRANSPORT INFORMATION

DOT49CFR Description: Not applicable
Freight Classification: Insecticides, Animal, NOI, O/T Poison NMFC I-102120 Class 60

15. REGULATORY INFORMATION

CERCLA (Superfund): Reportable Quantity (RQ) = Methomyl 100 lbs. If a spill exceeds the RQ contact the National Response Center at (800)424-8802
RCRA: Methomyl (PO66)

SARA 311/312 HAZARD CATEGORIES

Immediate Health: Yes (irritant)
Delayed Health: Yes
Fire: No
Sudden Pressure: No
Reactivity: No

The information presented herein, while not guaranteed, was prepared by technically knowledgeable personnel and to the best of our knowledge is true and accurate. It is not intended to be all inclusive and the manner and conditions of use and handling may involve other or additional considerations.

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