

1. IDENTIFICATION

Product name: **Guthion® 50 WSB (PCP Reg. No. 21374)**
 Chemical name of active ingredient(s): Azinphos-methyl: O,O-Dimethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl) methyl]phosphorodithioate
 Manufacturer: Makhteshim Agan of North America, Inc.
 4515 Falls of Neuse Road, Suite 300
 Raleigh, NC 27609, U.S.A.
 Phone: 919-256-9300
 For fire, spill, and/or leak emergencies, contact Infotrac: Phone: 1-800-535-5053
 For medical emergencies and health and safety inquiries, contact Prozar: Phone: 1-877-250-9291

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	%	OSHA/PEL	ACGIH/TLV	OTHER	NTP/IARC/OSHA (Carcinogen)
Azinphos-methyl	86-50-0	50	0.2 mg/m ³ (TWA)	0.2 mg/m ³ (TWA)	0.2 mg/m ³ *	NA

NA=Not Applicable

* US CA OEL TWA/PEL

3. HAZARDS IDENTIFICATION**PHYSICAL PROPERTIES :**

Appearance: Tan powder

Odor: Sulfur-like

EMERGENCY OVERVIEW: DANGER Poisonous if swallowed, inhaled, or absorbed through the skin. Do not get in eyes or on skin. Do not breathe fumes or spray mist. Spray operator should work to windward to stay out of drift or mist. Keep all unprotected persons out of the operating area or vicinity where there may be danger of drift. Do not contaminate feed or foodstuffs. Keep out of reach of children and domestic animals.

ROUTES OF ENTRY: Ingestion, inhalation, eye contact, skin absorption

SYMPTOMS OF POISONING: Typical symptoms of overexposure to cholinesterase inhibitors include headache, nausea, dizziness, sweating, salivation, runny nose and eyes. This may progress to muscle twitching, weakness, tremor, and incoordination, a sense of "tightness" in the chest, sweating, contracted pupils, vomiting, abdominal cramps and diarrhea in more serious poisonings. A life-threatening poisoning is signified by loss of consciousness, incontinence, convulsions and respiratory depression with a secondary cardiovascular component.

HAZARDOUS DECOMPOSITION PRODUCTS: In case of fire hazardous decomposition products may be produced such as: hydrogen sulfide, dimethyl sulphide, sulfur dioxide and carbon monoxide.

PHYSICAL AND CHEMICAL HAZARDS: Keep away from open flame. Do not heat.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: No specific medical conditions are known which may be aggravated by exposure to this product. Any disease, medication or prior exposure which reduces normal cholinesterase activity may increase susceptibility to the toxic effects of the active ingredient.

4. FIRST AID

IF SWALLOWED- Call a poison control centre 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 centre or doctor. 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 centre or doctor for treatment advice.

IF IN 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 centre or doctor for treatment advice.

Take the container label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION: Azinphos-methyl is a cholinesterase inhibitor resulting in stimulation of the central nervous system, the parasympathetic nervous system, and the somatic motor nerves. Do not give morphine. Watch for pulmonary oedema, which may develop in serious cases of poisoning even after 12 hours. At first sign of pulmonary oedema, the patient should be placed in an oxygen tent and treated symptomatically.

ANTIDOTE: Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate degree of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Administer atropine sulfate in large therapeutic doses. Repeat as necessary to the point of tolerance. Oximes, such as pralidoxime chloride, may be therapeutic if used early; however, use only in conjunction with atropine. In cases of severe acute poisoning, use antidotes immediately after establishing an open airway and respiration. With oral exposure, the decision of whether to induce vomiting or not should be made by an attending physician.

5. FIRE FIGHTING MEASURES

FLASHPOINT: Not Applicable.

FLAMMABLE LIMITS (% in air): Not Applicable.

AUTOIGNITION TEMPERATURE: Not Applicable.

FIRE FIGHTING PROCEDURES: Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Dike area to prevent runoff and contamination of water sources. Equipment or materials involved in pesticide fires may become contaminated. Firefighter should wear NIOSH approved self contained breathing apparatus and full protective clothing.

UNUSUAL FIRE, EXPOSURE AND REACTIVITY HAZARDS: Accumulation of fine dust may entail the risk of a dust explosion in the presence of air. Heating or fire can release toxic gas.

SUITABLE EXTINGUISHING MEDIA: Water, foam, dry chemical, carbon dioxide (CO₂).

HAZARDOUS DECOMPOSITION PRODUCTS: In case of fire hazardous decomposition products may be produced such as: hydrogen sulfide, dimethyl sulphide, sulfur dioxide and carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

ACTION TO TAKE FOR SPILLS/LEAKS: If the container is leaking or material is spilled for any reason or cause, carefully sweep material into a pile. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Dispose of pesticide as directed in Section 13. In spill or leak incidents, keep unauthorized people away. IN CASE OF SPILLS AND/OR LEAK, TELEPHONE EMERGENCY RESPONSE NUMBER at 1 800 535-5053 (24 HOURS A DAY). Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

ADDITIONAL ADVISE: Use personal protective equipment. Do not allow product to enter streams, sewers or other waterways. Do not allow product to contact vegetation.

7. HANDLING AND STORAGE

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food and feed. Do not store below freezing (0°C). Exposure to moisture or excessive handling of water soluble packets may cause breakage. Store packets in original container and out of reach of children, preferably in a locked storage area.

PRECAUTIONS TO BE TAKEN IN HANDLING: Handle and open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, carefully sweep material into a pile. Refer to Precautionary Statements on label for hazards associated with the handling of this material.

STORAGE TEMPERATURE (MIN/MAX): Do not transport or store below 0°C (32°F). 30 day average temperature not to exceed 37.8°C (100°F).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATION AND ON-FARM APPLICATIONS, CONSULT THE PRODUCT LABEL.

- Coveralls over long-sleeved shirt and long-legged pants
- Chemical-resistant gloves, such as barrier laminate or viton
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant apron when mixing or loading
- Chemical-resistant headgear
- For exposures in enclosed areas, a respirator with either an organic vapour-removing cartridge with a pre-filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G). For exposures outdoors, dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-23C)

GENERAL PROTECTIVE MEASURES: Follow all label instructions. Train employees in safe use of the product. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:

Users should

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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.

EXPOSURE GUIDELINES: Refer to Section 2.

ENGINEERING CONTROLS: Refer to product label.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Tan powder

ODOR: Sulfur-like

pH: 5.3 (10%)

BULK DENSITY: 12-16 lb./cu. ft. (Fluffed); 21-25 lb./cu. ft. (Packed)

BOIL POINT: The substance decomposes before reaching the boiling point

10. STABILITY AND REACTIVITY

GENERAL: Stable under normal use and storage conditions.

CONDITIONS TO AVOID: Sustained temperatures above 37.8°C (100°F).

INCOMPATIBLE MATERIALS: Strong oxidizing agents and bases.

HAZARDOUS DECOMPOSITION: In case of fire hazardous decomposition products may be produced such as: hydrogen sulfide, dimethyl sulphide, sulfur dioxide and carbon monoxide.

HAZARDOUS POLYMERIZATION: Not Applicable.

11. TOXICOLOGICAL INFORMATION**ACUTE TOXICITY:**

Oral	LD ₅₀ : 12.3 mg/kg (male rat); 24.7 mg/kg (female rat)
Dermal	LD ₅₀ : > 2000 mg/kg (rat)
Inhalation	LC ₅₀ : 0.166 mg/L (male rat); 0.146 mg/L (female rat) (4-hr determined in the form of dust) (actual)
Eye Irritation	Mild irritation (rabbit)
Dermal Irritation	Moderate skin irritation (rabbit)
Dermal Sensitization	Not a skin sensitizer (guinea pig)

CHRONIC TOXICITY: Major effects in rats and dogs from long-term exposure to azinphos-methyl included alopecia, diarrhea, reduced body weight gains, elevated liver enzymes and/or cholinesterase inhibition.

REPRODUCTIVE & DEVELOPMENTAL TOXICITY: Reproduction: Azinphos-methyl was not a primary reproductive toxicant in a two-generation study in rats. Reproductive effects observed occurred only in conjunction with maternal toxicity. **Developmental Toxicity:** Azinphos-methyl did not produce any developmental, embryonic or teratogenic effects in developmental toxicity studies in rats and rabbits.

NEUROTOXICITY: There was no evidence of delayed neurotoxicity in hens treated by oral gavage with azinphos-methyl.

Azinphos-methyl produced clinical signs of toxicity, cholinesterase inhibition and neurobehavioral effects in acute and subchronic neurotoxicity screening studies in rats. All of these effects were ascribed to cholinergic toxicity. There were no correlative micropathologic findings within the skeletal muscles or neural tissues.

Azinphos-methyl caused a dose-related increase in cholinesterase inhibition in dams in a developmental neurotoxicity screening study in rats. There was no detectable effect on the offspring, including cholinesterase inhibition.

MUTAGENICITY: Several positive in vitro mutagenicity studies have been reported on azinphos-methyl, however, negative results have been obtained in all in vivo studies conducted on azinphos-methyl.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: This pesticide is extremely toxic to fish and wildlife. Do not apply directly to water, or to areas where surface water is present or to inter-tidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment and container or disposing of waste. Drift and runoff from treated areas are hazardous to aquatic organisms in neighboring areas.

This product is highly toxic to bees exposed to direct treatment, drift, or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

Protective information may be obtained from your local government extension specialist. When treating fruit during the bloom period, bee keepers should be warned well in advance to remove hives a safe distance from orchards to be treated.

Drift resulting from applications of azinphos-methyl is a hazard to aquatic ecosystems. Aquatic ecosystems consist of any permanent body of water, such as, but not limited to lakes, ponds, streams, rivers, creeks, sloughs, canals, coulees, prairie potholes, reservoirs, marshes or wetlands. For details on required buffer zones, refer to Spray Drift Management for Ground Applications.

13. DISPOSAL CONSIDERATIONS

END USERS MUST DISPOSE OF ANY PRODUCT AS PER THE LABEL RECOMMENDATIONS.

PESTICIDE DISPOSAL: For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency.

CONTAINER DISPOSAL: Make outer bag unsuitable for further use. Do not reuse outer bag for any purpose. Dispose of outer bag in accordance with provincial requirements.

14. TRANSPORT INFORMATION

DOT CLASSIFICATION:

UN 2783, Organophosphorus Pesticides, Solid, Toxic (Azinphos-methyl), 6.1, PGII, RQ
(For vessel or bulk shipments add: *Marine Pollutant*)

INTERNATIONAL TRANSPORTATION

IMO (vessel): UN 2783, Organophosphorus Pesticides, Solid, Toxic (Azinphos-methyl), 6.1, PGII, RQ,
Marine pollutant

IATA (air): UN 2783, Organophosphorus Pesticides, Solid, Toxic (Azinphos-methyl), 6.1, PGII, RQ

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

MATERIAL SAFETY DATA SHEET

Guthion® 50 WSB

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SARA TITLE III CLASSIFICATION:

Section 302/304: Azinphos-methyl (CAS # 86-50-0)

Section 311/312: Immediate (Acute) Health Hazard

Delayed (Chronic) Health Hazard

Section 313 chemical(s): Not Applicable

CA PROPOSITION 65: Not applicable.

CERCLA REPORTABLE QUANTITY (RQ): Azinphos-methyl RQ= 1 lb.

RCRA CLASSIFICATION: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA STATUS: The ingredients of this product are listed on the TSCA inventory or are exempt.

16. OTHER INFORMATION

HAZARD RATINGS:	NFPA	0 LEAST
HEALTH:	3	1 SLIGHT
FLAMMABILITY:	2	2 MODERATE
REACTIVITY:	2	3 HIGH
		4 SEVERE
	HMIS	0 MINIMAL
HEALTH:	3	1 SLIGHT
FLAMMABILITY:	2	2 MODERATE
PHYSICAL:	1	3 SERIOUS
		4 SEVERE

MSDS DATE: 12-28-09. Supersedes version dated 10-22-07. Changes made to sections 1, 4, 14 and 15.

The information contained herein is given in good faith and is believed to be correct, but no warrant, express or implied, is made. Consult Makhteshim Agan of North America, Inc. for further information.