

Material Safety Data Sheet

Atlas – אטלס

Revised: 20.06.10

1. IDENTIFICATION OF SUBSTANCE AND COMPANY

Common name: Atlas

Use: Insecticide

Formulation Type: EC

Chemical family: Pyrethroid

Manufacturer: Tapazol Chemical works Ltd.

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS no.	Quantity (g/l)
Bifenthrin ((2-methyl[1,1'-biphenyl]-3-yl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate; IUPAC: 2-methylbiphenyl-3-ylmethyl (Z)-(1RS)-cis-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate)	82657-04-3	100

3. HAZARDS IDENTIFICATION

Human hazards: Atlas is harmful by ingestion and in contact with skin and may cause moderate eye and skin irritation. Atlas may also cause skin sensitization.

The active ingredient Bifenthrin is classified by EPA as a "possible human carcinogen".

Environmental hazards: Atlas is very highly toxic to fish and aquatic organisms. Keep out of drains and water courses.

4. FIRST AID MEASURES

Eyes: Flush with plenty of water. Get medical attention if irritation occurs and persists.

Skin: Remove contaminated cloths and wash with plenty of soap and water. If irritation persists, seek medical advice.

Ingestion: Drink 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Contact a medical doctor.

Inhalation: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, contact a medical doctor.

Note to physician: Treat symptomatically, no specific antidote.

5. FIRE-FIGHTING MEASURES

Flash point: >100°C

Flammable properties: Slightly combustible. This material may support combustion at elevated temperatures.

Extinguishing media: Foam, CO2 or dry chemical. Soft stream water fog only if necessary. Contain all runoff.

Procedure and protective equipment: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapors generated.

Hazardous products of combustion may include: Carbon monoxide, carbon dioxide, chlorine, fluorine, hydrogen chloride and hydrogen fluoride.

6. ACCIDENTAL RELEASE MEASURES

Personal protection: Wear protective clothing and personal protective equipment as prescribed in Section 8, "Exposure Controls/Personal Protection".

Environmental Protection: Keep material out of lakes, streams, ponds and sewer drains.

Procedure: Isolate spill area. Keep unprotected persons and animals out of the area. Dike to confine spill and absorb with a non-combustible absorbent such as clay, sand or soil. Vacuum, shovel or pump waste into a drum and label "contents for disposal". To clean and neutralize spill area, tools and equipment, wash with a suitable solution of caustic or soda ash, and an appropriate alcohol (i.e., methanol, ethanol or isopropanol). Follow this by washing with a strong soap and water solution. Absorb, as above, any excess liquid and add to the drums of waste already collected. Repeat if necessary. Dispose of drummed waste according to the method outlined in Section 13, "Disposal Considerations".

7. HANDLING AND STORAGE

Store in a cool, dry, well-ventilated place. Do not use or store near heat, open flame or hot surfaces. Store in original containers only. Keep out of reach of children and animals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

Wash skin prior to eating, drinking or using tobacco. Shower at the end of the workday.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering controls: Use local exhaust at all process locations where vapor or mist may be emitted. Ventilate all transport vehicles prior to unloading.

Clean water should be available for washing in case of eye or skin contamination.

Eye/ Face protection: Wear chemical protective goggles or a face shield.

Skin/Body protection: Wear coveralls or long-sleeved uniform and head covering.

For larger exposures as in the case of spills, wear full body cover barrier suit, such as PVC suit. Leather items - such as shoes, belts and watchbands - that become contaminated should be removed and destroyed. Launder all work clothing before reuse (separately from household laundry).

Respiratory protection: For splash, mist or spray exposure wear, as a minimum, a properly fitted air-purifying respirator with an organic vapor cartridge (OV) or canister with any R, P or HE prefilter (approved by U.S. NIOSH/MSHA, EU CEN or comparable certification organization). Respirator use and selection must be based on airborne concentrations.

Hand: Wear chemical protective gloves made of materials such as rubber, neoprene, or PVC. Thoroughly wash the outside of gloves with soap and water prior to removal.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Beige liquid.

Odor: Bland

pH: 6.7

Water solubility: Disperses

Specific gravity: 1.024 (20°C)



10. STABILITY AND REACTIVITY

Chemical stability: Stable under ordinary conditions of use and storage.

Conditions to avoid: Heat, flame, ignition sources, dusting and incompatibles such as oxidizing agents.

Hazardous decomposition products: Complete combustion will emit carbon dioxide and water when heated to decomposition. Incomplete combustion gives addition carbon monoxide and oxidation products, including organic acids, aldehydes and alcohol.

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral: LD50 for rat: 500 mg/kg.

Dermal: LD50 for rat: >2000 mg/kg.

Inhalation: LC50 for rat (3h): 1.2 mg/l. (for Bifentrin)

Skin irritation: Moderate Irritant (rabbit).

Eye irritation: Moderate Irritant (rabbit).

Skin sensitization: Sensitizer (mouse).

Acute effects from overexposure: Large doses of Bifenthrin ingested by laboratory animals produced signs of toxicity including convulsions, tremors and bloody nasal discharge. Bifenthrin does not cause acute delayed neurotoxicity. Experience to date indicates that contact with Bifenthrin may occasionally produce skin sensations such as rashes, numbing, burning or tingling. These sensations are reversible and usually subside within 12 hours.

Chronic toxicity:

Chronic effects: In studies with laboratory animals, Bifenthrin did not cause reproductive toxicity or teratogenicity. Tremors were associated with repeated exposure of laboratory animals to bifenthrin. In lifetime feeding studies conducted with rodents, a slight increase in the incidence of urinary bladder tumors at the highest dose in male mice was considered to be an equivocal response, not evidence of a clear compound-related effect. The overall absence of genotoxicity has been demonstrated in mutagenicity tests with bifenthrin.

Carcinogenicity: EPA has classified Bifenthrin as a possible human carcinogen (group c).

12. ECOLOGICAL INFORMATION

For AI Bifenthrin:

Fish: LC50 (96h) for bluegill sunfish: 0.35 microgram/l, for rainbow trout: 0.15 microgram/l.

Daphnia: LC50 (48h): 0.16 microgram/l.

Bifenthrin has low solubility in water and high affinity for soil, so under field conditions it has little impact on aquatic systems.

Birds: Oral LD50 for Bobwhite quail: 1800 mg/kg, for mallard ducks: 2150 mg/kg.

Dietary LC50 (8d) for Bobwhite quail: 4450 mg/kg diet, for mallard ducks: 1280 mg/kg diet.

Bees: LD50 (oral): 0.1 microgram/bee, LD50 (contact): 0.015 microgram/bee.

13. DISPOSAL CONSIDERATIONS

Non-returnable containers which held this material should be cleaned prior to disposal by triple rinsing.

Dispose of according to local regulations. Avoid entry of product into sewer system or water surfaces.

14. TRANSPORT INFORMATION

UN no.: 3082 (Environmentally hazardous substance, liquid, n.o.s)

Class: 9

Packaging group: III

15. REGULATORY INFORMATION

R phrases:

R21/22: Harmful in contact with skin and if swallowed

R36/38: Irritating to eyes and skin

R40: Limited evidence of a carcinogenic effect

R50/53: Very toxic to aquatic organisms, May cause long-term adverse effects in the aquatic environment

R57: Toxic to bees

S phrases:

S3/7/9: Keep container tightly closed in a cool, well-ventilated place

S29/56: Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection

16. OTHER INFORMATION

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