



## MATERIAL SAFETY DATA SHEET

PRODUCT : Abamectin 1.8% EC

PRODUCT DESIGNATION : Insecticide

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### Section 1. Product & Company Identification

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Common Name : Abamectin

Grade : Formulation

Active Ingredient : Abamectin

Chemical Name of Active Ingredient (IUPAC) : (1'R,2R,3S,4'S,6S,8'R,10'E,12'S,13'S,14'E,16'E,20'R,21'R,24'S)-2-[(2S)-butan-2-yl]-21',24'-dihydroxy-12'-[(2R,4S,5S,6S)-5-[(2S,4S,5S,6S)-5-hydroxy-4-methoxy-6-methyloxan-2-yl]oxy-4-methoxy-6-methyloxan-2-yl]oxy-3,11',13',22'-tetramethylspiro[2,3-dihydropyran-6,6'-3,7,19-trioxatetracyclo[15.6.1.14,8.0.20,24]pentacos-10,14,16,22-tetraene]-2'-one

Chemical Family of A. I. : Glycoside Insecticide.

I.

Molecular Formula of A. I. : C<sub>48</sub>H<sub>72</sub>O<sub>14</sub>

A. I.

Molecular Mass of A. I. : 1732.1

Manufacturer & : **M/s PERFECT SOLUTIONS**

Supplier **Office Add:** B-371, Paschim Vihar, New Delhi - 110063 (India)

**Factory Add:** 15/1, 15/2, 15/3 Industrial Estate, Vidisha - 464001 (M.P)

Telephone Number : +91 8375844625

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### Section 2. Composition / Information on Ingredients

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Components	Composition
Abamectin	01.80 %w/w
Other components	98.20 % w/w
Total	100.00% w/w

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## Section 3. Hazards Identification

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**Symptoms of Acute Exposure** Harmful or fatal if swallowed. May be harmful if absorbed through the skin. Causes eye and skin irritation. Allergic skin reactions are possible. Vapours may cause drowsiness and dizziness. May be harmful if swallowed and enters airway

**Hazardous Decomposition Products** Can decompose at high temperatures forming toxic gases.

**Physical Properties Appearance:** Yellow to red-brown liquid. Odour: Not determined. Avoid breathing vapours.

**Unusual Fire, Explosion and Reactivity Hazards:** Combustible liquid. Can release vapours that form explosive mixtures at temperatures at or above the flash point. Heavy vapours can flow along surfaces to distant ignition sources and flash back. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

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## Section 4. First Aid Measures

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IF POISONING IS SUSPECTED, immediately contact the poison information centre, doctor or nearest hospital. Describe any symptoms and follow the advice given.

**EYE CONTACT:** Flush eyes with clean water, holding eyelids apart for a minimum of 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Obtain medical attention immediately if irritation persists.

**SKIN CONTACT:** Immediately remove contaminated clothing and wash skin, hair and fingernails thoroughly with soap and water. Flush skin with plenty of water for 15-20 minutes. a poison control centre or doctor for treatment advice.

**INHALATION:** Move victim to fresh air. If not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.

**INGESTION:** A poison control centre, doctor or nearest hospital for treatment advice. Do not induce vomiting unless directed by a physician or a poison control center. Do not give any liquid to the person.

**NOTES TO PHYSICIAN:** Contains petroleum distillate - vomiting may cause aspiration pneumonia.

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## Section 5. Fire Fighting Measures

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**Flash point and method:** 72 °C

**Upper and lower flammable (explosive) limits in air:** Not applicable.

**Auto-ignition temperature:** Not available.

**Flammability:** Combustible liquid. Class IIIA.

**Hazardous combustion products:** Toxic gases including carbon monoxide, carbon dioxide, oxides of nitrogen, and smoke.

**Conditions under which flammability could occur:** Temperatures above the flash point. Keep fire exposed containers cool by spraying with water. Heavy vapours can flow along surfaces to distant ignition sources and flash back.

**Extinguishing media:** For small fires, use foam, carbon dioxide, dry powder or halon extinguishant. For large fires, use foam or water-fog; avoid use of water jet. Water spray may be ineffective as an extinguishing medium but may be used to cool fire-exposed containers and to flush non-ignited spills or vapours away from sources of ignition. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. Contain run-off water with, for example, temporary earth barriers.

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## Section 6. Accidental Release Measures

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**Personal Precautions:** Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. A small spill can be handled routinely. Wear suitable protective equipment and clothing as described in Section 8 and/or the product label.

**Procedures for dealing with release or spill:** Control the spill at its source. Contain the spill to prevent material from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Sections 7 and 8. Pump or scoop large amounts of liquid into a disposable container. Absorb remaining liquid or smaller spills with clay, sand or vermiculite. Scoop or sweep up material and place into a disposal container. Wash area with detergent and water. Pick up wash liquid with additional absorbent and place into compatible disposal container. On soils, small amounts will naturally decompose. For large amounts, skim off the upper contaminated layer and collect for disposal. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposal. Spillages or uncontrolled discharges into watercourses must be reported to the appropriate regulatory authority.



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## Section 7. Handling & Storage

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**Handling practices:** KEEP OUT OF REACH OF CHILDREN and animals, and away from open flames or other sources of ignition. Avoid contact with eyes, skin or clothing and avoid breathing vapour or spray mist. Wear full protective clothing and equipment (see Section 8). After work, rinse gloves and remove protective equipment, and wash hands before eating, handling tobacco, drinking, applying cosmetics or using the toilet. Clean up spilled product immediately, and clean clothes and equipment after use. Wash contaminated clothing before re-use and separate from household laundry. Keep product, spray, wash or rinse water, and contaminated materials out of water, and away from access by animals, bees, and unauthorized people. Keep containers closed when not in use. Do not re-enter treated areas until residues have dried.

**Appropriate storage practices/requirements:** Store in original container only in a well-ventilated, cool, dry, secure area. Protect from heat, sparks and flame. Do not expose sealed containers to temperatures above 40 °C. Keep separate from other products, food, or feed to prevent cross contamination. Rotate stock. Clean up spilled material immediately.

**National Fire Code classification:** Class IIIA combustible liquid.

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## Section 8. Exposure Control, Personal Protection

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**Applicable control measures, including engineering controls:** Ensure work areas have ventilation, containment, and procedures sufficient to maintain airborne levels below the TLV. Warehouses, production area, parking lots and waste holding facilities must have adequate containment to prevent environmental contamination. Provide separate shower and eating facilities.

**Personal protective equipment for each exposure route:**

**General:** Avoid breathing vapours or aerosols. Avoid contact with eye, skin and clothing. Wash thoroughly after handling and before eating, drinking, applying cosmetics and using tobacco.

**INGESTION:** Do not eat, drink, handle tobacco, or apply cosmetics in areas where there is a potential for exposure to this material. Always wash thoroughly after handling.



**EYES:** To avoid eye contact, wear chemical goggles or a full-face shield. **SKIN:** Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

**INHALATION:** Use effective engineering controls to comply with occupational exposure limits. In case of emergency spills, use a NIOSH approved respirator with any N, R, P or HE filter. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection

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## Section 9. Physical and Chemical Properties

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Appearance / state	: Yellow to brown liquid
Colour	: Yellow to brown
Odour	: Characteristic Odour
Flash Point	: 45°C
Melting Point	: Not applicable
PH	: 3.0 – 6.0 (1% w/v solution).
Viscosity	: 16.1 mPas (or cps) @ 21 o C
Density	: 0.90 g/mL @ 20°C
Water Solubility	: Miscible with water

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## Section 10. Stability & Reactivity

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**Chemical stability:** Stable at room temperature.

**Conditions to avoid:** High temperatures, sparks, open flames. Keep away from sources of ignition. **Incompatibility with other materials:** Strong caustic solutions, strong acid solutions, oxidizing agents. **Hazardous decomposition products:** Can decompose at high temperatures forming toxic gases.

**Hazardous polymerization:** Will not occur.

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## Section 11. Toxicological Information

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<b>Acute Oral Toxicity- LD<sub>50</sub></b>	Rat: 300 mg/kg body weight
<b>Acute Dermal Toxicity- LD<sub>50</sub></b>	Rat: > 1,800 mg/kg body weight
<b>Acute Inhalation - LD<sub>50</sub></b>	Rat: 3.5 mg/L air - 4 hours



<b>Eye irritation</b>	Moderately Irritating (Rabbit)
<b>Skin Irritation</b>	Moderately Irritating (Rabbit)
<b>Skin Sensitization</b>	Sensitizing (Guinea Pig)

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## Section 12. Ecological Information

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<b>Toxicity to Fishes</b>	Fish (Rainbow Trout) 96-hour LC50 3.6 ppb
<b>Toxicity to daphnia</b>	toxic to daphnia
<b>Toxicity to Bees</b>	0.075 to 1.00 µg /bee
<b>Toxicity to Birds</b>	Bobwhite quail LC50 > 2000 mg/kg

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## Section 13. Disposal Consideration

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Waste disposal information: Do not reuse empty containers unless they are specifically designed to be re-used. Empty container retains product residue. Triple rinse, or equivalent, empty container, return rinse water to dilution mixture. Dispose of dilution mixtures and other residues according to local regulations if it cannot be disposed of by use according to label instructions. Dispose of empty containers in accordance with local regulations. Consult provincial environment ministry for advice on waste disposal. Industrial/commercial waste may be handled at licensed facilities only. Waste shipments must be securely packaged and properly labelled. Only licensed carriers may be used, and proper documents must accompany the shipment.

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## Section 14. Transport Information

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### IMDG Classification

Shipping name	: Pesticide, liquid, toxic, N.O.S. (Abamectin)
Class	: 6.1
Packing group	: III
UN number	: 2902
Marine pollutant	: Yes

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## Section 15. Regulatory Information

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Other regulations; restrictions and prohibitions Pest Control Products (PCP) Act Registration  
No. 24485

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## **Section 16. Other Information**

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All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are resented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS. Accordingly, no guarantee or warrantee expressed or implied is made by PERFECT SOLUTIONS, as to the results to be obtained based upon the user's use of the information, nor does PERFECT SOLUTIONS, assume any liability arising out of user's use of the information.

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