

Material Safety Data Sheet

SECTION 1 IDENTIFICATION

Product Name: Abamectin 5% EC

Chemical name: 5-O-demethylavermectin A1a; (i) mixture with
5-O-demethyl-25-de(1-methylpropyl)-25-(1-methylethyl)avermectin A1a (ii)

Other Means of identification: /

Recommended use of the chemical and restrictions on use: This material is a kind of pesticide.

Company / Undertaking Identification

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SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Acute Toxicity (Mouth) Category 3.

Acute Toxicity (Inhalation) Category 1.

Skin Corrosion/Irritation Category 2.

Serious Eye Damage/Eye Irritation Category 2A.

Hazardous to the Aquatic Environment - Acute Hazard Category 1.

Hazardous to the Aquatic Environment - Long Term Hazard Category 1.

GHS Label elements, including precautionary statements



Signal word: Danger.

Hazard statement(s): Combustible liquid. Harmful in contact with skin. Harmful if inhaled. Causes skin irritation. Causes serious eye damage. Causes damage to organs (nervous system). May cause damage to organs through prolonged or repeated exposure (blood system, duodenum, liver). Very toxic to aquatic life with long lasting effects.

Precautionary statement(s):

Prevention: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Wear protective

gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Do not breathe dust/fume/gas/mist/ vapors / spray. Do not eat, drink or smoke when using this product. Avoid release to the environment.

Response:

In case of fire: Use foam, dry chemical powder, water spray to extinguish.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor/if you feel unwell. IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor/if you feel unwell. Specific treatment (see next). Take off contaminated clothing. And wash it before reuse. If skin irritation occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. IF exposed or concerned: Call a POISONCENTER/doctor. Specific treatment (see next). Get medical advice/attention if you feel unwell. Collect spillage.

Storage: Store in well-ventilated place. Keep cool. Store locked up.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification: /

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Component	Concentration	CAS No.
Abamectin	5%	71751-41-2

SECTION 4 FIRST AID MEASURES

Description of necessary first aid measures

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms/effects, acute and delayed: /

Indication of immediate medical attention and special treatment needed, if necessary: /

SECTION 5 FIREFIGHTING MEASURES

Suitable extinguishing media: Foam. Dry chemical powder. Carbon dioxide. Water spray or fog
- Large fires only.

Special hazards arising from the chemical: Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO). May emit acrid smoke. Mists containing combustible materials may be explosive.

Special protective actions for fire-fighters: Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area. Avoid spraying water onto liquid pools. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

Environmental precautions: Stop leak if safe to do so. Prevent, by any means available, spillage from entering drains or water course.

Methods and materials for containment and cleaning up: Minor Spills: Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Major Spills: Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling: Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers.

Conditions for safe storage, including any incompatibilities: Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters:** /**Appropriate engineering controls:** Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances.**Individual protection measures****Eye/face protection:** Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.**Skin protection:** Wear chemical protective gloves, eg. PVC. Wear safety footwear or safety gumboots, eg. Rubber. Impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.**Respiratory protection:** Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant.**Thermal hazards:** /**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Appearance (physical state, colour etc)	Light brown liquid, stable homogeneous liquid, no visible suspended matter and precipitate
pH	4.5-7.0
Melting point/freezing point	N/A
Initial boiling point and boiling range	N/A
Flash point	N/A
Relative vapor density (air =1)	0.998 ⁽³⁾
explosive limits	N/A
Relative water density(water=1)	0.998 ⁽³⁾
Density(g/L)	998
Solubility in water	(7-10) *10 ⁻⁶ ⁽³⁾
Solubility(ies)	Slightly soluble in water, easily soluble in organic solvents
Flammability	Combustible

SECTION 10 STABILITY AND REACTIVITY**Reactivity:** /

Chemical stability: Product is considered stable.

Possibility of hazardous reactions: Avoid reaction with oxidising agents.

Conditions to avoid: Heat, flames and sparks.

Incompatible materials: Oxidizing agents.

Hazardous decomposition products: Carbon monoxide (CO), carbon dioxide (CO₂), hydrogen chloride, phosgene, nitrogen oxides (NO_x), other pyrolysis products typical of burning organic material.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity: Acute transoral LD50 in rats was 108mg/kg for both male and female; Acute percutaneous LD50 in rats was greater than 2150mg/kg in both male and female animals.

Skin irritation and corrosion: No irritating effect on rabbit skin.

Eye irritation and corrosion: Slight irritation to rabbit eyes.

Germ cell mutagenicity: No mutagenicity was observed under laboratory conditions.

Teratogenicity: No teratogenicity has been observed under laboratory conditions.

Carcinogenicity: No carcinogenic effect has been observed under laboratory conditions.

Specific target organ system toxicity - one exposure: No data

Specific target organ system toxicity - repeated exposure: No data

The symptoms of poisoning: Vomiting, dilated pupils, muscle bundle tremor and dyskinesia.

SECTION 12 ECOLOGICAL INFORMATION

Toxicity:

Fish (zebrafish) : LC₅₀ (96 h) = 0.0241 mg/L.

Daphnia: EC₅₀ (48 h) = 0.000174 mg/L.

Persistence and degradability: When released into the soil, soil particles can absorb abamectin, which is decomposed by microorganisms, and alkaline hydrolysis can decompose abamectin.

Bioaccumulative potential: /

Mobility in soil: /

SECTION 13 DISPOSAL CONSIDERATIONS

Nature of waste: hazardous waste

Disposal methods of waste products: Before disposal, relevant national and local regulations should be referred to. Incineration is recommended for disposal. It's mixed with fuel and then burned. The gas discharged from the incinerator is removed through a scrubber. Chemical decomposition, soil injection or sanitary landfill treatment.

Waste container disposal method: Before disposal, please refer to the relevant national and local

regulations, or return the packaging container to the factory for processing.

Waste disposal precautions: Do not dispose of waste chemicals by discharging them into the sewer. Refer to Section 8 for safety protection of handlers.

SECTION 14 TRANSPORT INFORMATION

UN Number: 2902.

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es) : 6.1.

Packing group, if applicable: III.

Environmental hazards: /

Special precautions for shipping: The sealing of the packaging drum is locked, the bottom of the pallet is added, and the packaging drum is fixed between the pallet; Avoid mixing with strong oxidants, strong acids and alkali; Loading and unloading of goods with tools that are prone to spark are prohibited; The exhaust pipe of the vehicle for loading and unloading the articles must be equipped with fire retardant devices such as fire caps; The means of transport shall be equipped with fire control facilities of corresponding varieties and quantities; Have appropriate materials and measures to collect leaks; Summer should be early, late transport, to prevent sunlight exposure; Transport according to the prescribed route, away from fire sources and high temperature areas.

SECTION 15 REGULATORY INFORMATION

Regulations:

Chemical classification, warning label and warning specification series standards (GB20576-2006 ~GB20602-2006);

List of dangerous goods: included, divided into class 6.1 toxic goods;

GB19337-2003 National standard for avermectin cream

List of Hazardous Chemicals (2012 edition) : Included, classified as 6.1 toxic products

List of Hazardous Chemicals (2015 edition) : Included, classified as 6.1 poisons

Production Safety Law of the People's Republic of China (effective December 1, 2014);

Regulations on the Management of Hazardous Chemicals (1 December 2011);

Regulations on work safety Licenses (January 13, 2004);

United Nations Dangerous Goods Code: listed as 2588, 2902, 2903, 3021

SECTION 16 OTHER INFORMATION

References	<p>(1)GBZ2-2007 Exposure limits for hazardous factors in industrial sites</p> <p>(2) GB19337-2003 National standard for avermectin cream</p> <p>(3) Pesticide registration information</p> <p>(4) Shandong Institute of Occupational Health and Occupational Disease Prevention Test report No. 2007D1642</p> <p>(5) Pesticide Environmental Test Report (Institute of Quality Standards for Agricultural Products, Zhejiang Academy of Agricultural Sciences) ET-2010-359</p>
Abbreviations and acronyms:	<p>MAC: maximum allowable concentration refers to the allowable concentration of harmful substances in the environment adopted by China, the Soviet Union and other countries, which shall not be exceeded after repeated representative sampling and determination.</p> <p>PC-TWA (Permissible concentration-Time Weighted Average) : Permissible concentration-time weighted average (Permissible concentration-time weighted Average) is the permissible concentration-time weighted average (permissible concentration-time weighted average) calculated over a normal 8-hour working day or a 40-hour working week.</p> <p>PC-STEL: Pmissible concentration-Short Term Exposure Limit (Pmissible concentration-Short Term Exposure Limit), refers to the permissible exposure level of 15 minutes time weighted average within a working day.</p>
Disclaimer:	<p>The information in this SDS applies only to the specified products and, unless otherwise specified, does not apply to mixtures of this product with other substances. This SDS is intended only to provide information on the safety of the product to those who are professionally trained to use the product. The user of this SDS must make an independent judgment of the suitability of the SDS under special conditions of use. In the case of special use, the author of this SDS will not be liable for any harm caused by the use of this SDS.</p>

Note 1: When products contain two or more hazardous substances, Safety Data Sheets should be prepared based on the risk of the mixture.

Note 2: Manufacturer / supplier should ensure the correctness of the information contained in the safety data sheets, and updated in a timely manner.

Note 3: As a result of product features without the existence of certain information or no data available (such as boiling point does not exist for the solid) in the table with "/" logo.