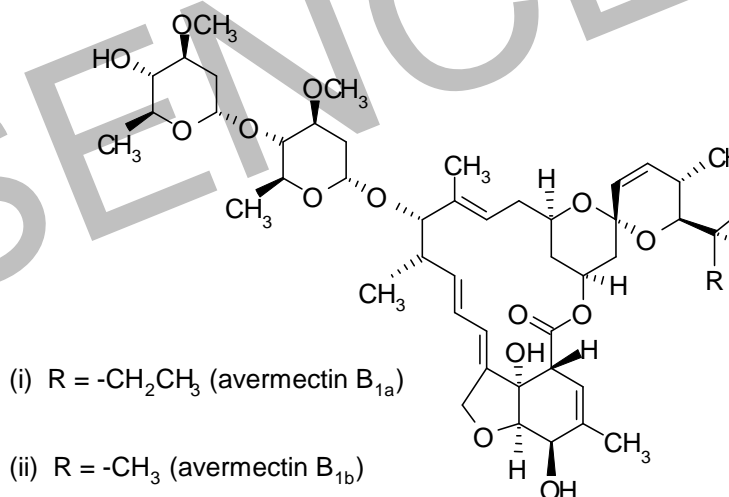


Material Safety Data Sheet

1. Product Name: Abamectin 1.8%EC

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name:	Abamectin 1.8%EC
CAS:	65195-56-4 & 65195-55-3
Molecular Weight:	873.1 (avermectin B1a); 860.1(avermectin B1b)
Chemical Name:	5-O-demethylavermectin A1a(i) mixture with 5-O-demethyl-25-de
Chemical Formulation:	(1-methylpropyl)-25-(1-methylethyl)avermectin A1a (ii)
Chemical Structure:	C ₄₈ H ₇₂ O ₁₄ (avermectin B1a); C ₄₇ H ₇₀ O ₁₄ (avermectin B1b)



Uses: Control of motile stages of mites, leaf miners, suckers, Colorado beetles, etc. on ornamentals, cotton, citrus fruit, pome fruit, nut crops, vegetables, potatoes, and other crops.

Manufacturer: Nanjing Essence Fine-Chemical Co., Ltd

Address: 5th Floor, Suoye Road 18#, Nanjing, China

Telephone Number: +86 25 86465997
+86 25 86466001

Fax Number: +86 25 86455985

Website: www.essencechem.com

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average by Weight</u>
Abamectin	65195-56-4 & 65195-55-3	1.8%

SECTION 3. HAZARDS IDENTIFICATION

Eye Contact:	Causes eye and skin irritation.
Skin Contact:	Abamectin is not readily absorbed through the skin. It is however mildly irritation to the skin. It does not cause allergic reaction to the skin.
Inhalation:	Harmful by inhalation and may be irritation to the respiratory system.
Swallowing:	Harmful if swallowed.

SECTION 4. FIRST AID MEASURES

Eye Contact:	If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin Contact:	If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Inhalation:	If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center.
Swallowing:	If swallowed: Call a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

SECTION 5. FIRE FIGHTING MEASURES

Fire Fighting Instructions:	Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes products of
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combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water can cause environmental damage. If water is used to fight fire, dike and collect runoff.

Extinguish Media:

Extinguish fires with water, carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used for cooling of unaffected stock, but avoid high-pressure hose, which may spread the product from the broken containers. This will increase the contamination hazard.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Safety:

Avoid contact with skin and eyes. Do not breathe in fumes. For personal protection see Section 8.

Clean-up Procedure:

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal.

SECTION 7. HANDLING AND STORAGE

Handling:

Avoid contact with eyes, prolonged contact with skin, and inhalation of dust and mist.

Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material.

Wash thoroughly with soap and water after handling.

Store below 30°C.

Storage:

Store the material in a well-ventilated, secure area out of reach of children and domestic animals.

Do not store food, beverages or tobacco products in the storage area. Store this product away from heat, sparks and other sources of ignitions.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: It is essential to provide adequate ventilation. Ensure that control systems are properly designed and maintained. Only spark-resistant equipment should be used. Comply with occupational safety, environmental, fire and other applicable regulations.

Personal Protection: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. 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.

A combination particulate/ organic vapor respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with an HE prefilter. 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	A light yellow to brownish liquid
Content:	1.8%
Flammability:	Flammable liquid
Flash Point:	50-60°C
PH:	6.6
Relative Density:	0.96g/l
Storage Stability:	Stable for 2 years under normal storage.

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable for 2 years under normal storage; stable to hydrolysis in aqueous suspensions at pH5-9(25°C), but hydrolyze by strong

acidic and strong alkaline conditions; degrades by UV radiation to the 8,9-Z-isomer, then to unidentified decomposition products.

Incompatibility:

Should not be applied in combination with strong acidic and strong alkaline conditions. Abamectin can be hydrolyzed by strong caustic solutions.

Hazardous Decomposition:

Toxic materials are formed during exposure to high temperatures (may include but not limited to carbon monoxide, and carbon dioxide).

SECTION 11. TOXICOLOGICAL INFORMATION

Oral: Acute oral LD50 for rats :300 mg/kg
Dermal: Acute dermal LD50 for rabbits:>1800mg/kg
Inhalation: Acute inhalation LC50 for rats:3.5mg/l
Other Effects: Non-carcinogenic
Non-mutagenic
Teratogenic
Cause reproductive effects at high enough doses.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity: LC50 for Trout :0.0036ppm
(Active Ingredient) LC50 for Bluegill :0.0096ppm
LC50 for Water flea:0.00037ppm
Terrestrial Toxicity: LC50 (8d) dietary for Bobwhite Quail:3102ppm
(Active Ingredient) LC50 (8d) dietary for Mallard Duck:383ppm
LC50 for bees:0.002ug/bee
Environmental Fate: Low bioaccumulation potential. Not persistent in soil. Stable in water. Low mobility in soil. Mixes in water (after 24h).

SECTION 13. DISPOSAL CONSIDERATIONS

Product Disposal: Contaminate absorbents, used containers, surplus product, should be burnt at>1000°C in an incinerator, preferably designed for pesticide disposal, or buried in an approved landfill. Small quantities can be sprayed onto crops. Hydrolysis using caustic solution is a suitable method to dispose of small quantities of the product. After hydrolysis, dilute and dispose of in pits or landfill. Comply with local

legislation applying to waste disposal.

Container Disposal:

Emptied containers retain product residues. Do not reuse product containers. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed. Combustible containers should be disposed of in pesticide incinerators or buried in an approved landfill. Non-combustible containers must first be triple-rinsed with water. Container that are not to be used should be punctured and transported to a scrap metal facility for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

Substant name: Pesticide liquid, toxic, flammable, n.o.s.(Abamectin solution)

UN: 2903

PG:III

Class: 6.1

Marine Pollutant: Yes

SECTION 15. REGULATORY INFORMATION

Symbol: Xn

Indication of dangerous: Harmful

R10: Flammable

R20/21/22: Harmful by inhalation, in contact with skin and swallowed

R36/38: Irritation to eyes and skin.

S2: Keep out the reach of children

S36/37: Wear suitable protective clothing and gloves.

SECTION 16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct.

However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.