SAFETY DATA SHEET

Abamec X&M

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Name: Abamec X&M
Other identifier: Abamectin 18g/L EC
Pesticide Classification: Insecticide / Acaracide
Restrictions on use: Agriculture

Supplier
Enviro Bio-Chem (Pty) Ltd
Co. Reg. No.: 2013/194774/07
44 Kerk Street, Lichtenburg
North West, South Africa 2740

Registration Holder
Enviro Bio-Chem (Pty) Ltd
Co. Reg. No.: 2013/194774/07
44 Kerk Street, Lichtenburg
North West, South Africa 2740

Telephone: +27 12 006 0063
Fax: 086 541 7948
Website: www.envirobiochem.co.za

24 Hr Emergency Number: Spillage: 0861 000 366

In case of Poisoning:
Griffon Poison Information Centre: +27 82 446 8946
Tygerberg Hospital: (+27 21) 931 6129
Poison Emergency Enquiries: (+27 21) 689 5227

2. HAZARD IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008		
Hazard classes	**Hazard categories**	**Hazard statements**
Flammable liquid	Category 2	H225
Acute toxicity	Category 4	H302
Aspiration hazard	Category 1	H304
Skin irritation	Category 2	H315
Eye irritation	Category 2	H319
Acute toxicity	Category 4	H332
Reproductive toxicity	Category 2	H361d
STOT SE	Category 2	H371
STOT RE	Category 2	H373
Aquatic toxicity acute	Category 1	H400
Aquatic toxicity chronic	Category 1	H410

The most important adverse effects:
The most important adverse physiochemical effects: Highly flammable liquid and vapour.
The most important adverse human health effects: May be fatal if ingested and aspiration occurs. Harmful if swallowed. Causes serious eye and skin irritation. Suspected of damaging unborn child.

Label elements:

Signal word: Danger

Hazard statements:
H225: Highly flammable liquid and vapour.
H302: Harmful if swallowed.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H361d: Suspected of damaging unborn child.
H371: May cause damage to organs, eyes and Central Nervous system.
H373: May cause damage to organs through prolonged or repeated exposure.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements:
P102: Keep out of reach of children.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260: Do not breathe mist/spray.
P264: Wash hands, forearms, and face thoroughly after handling.
P270: Do not eat, drink, or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves and boots, protective clothing, eye protection and face protection.
P301+P 310: IF SWALLOWED: Immediately call a POISON CENTER, doctor or physician.
P302+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so – continue rinsing.
P308+P311: IF exposed or concerned: Call a POISON CENTER.
P331: Do NOT induce vomiting.
P332+P313: If skin irritation or rash occurs: Get medical advice or attention.
P362: Take off contaminated clothing and wash it before reuse.
P337+P313: If eye irritation persists: Get medical advice/attention.
P403+P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.
P391: Collect spillage.
P501: Dispose of contents/container in accordance with local/regional/ national/international regulation

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances/ Mixture: Mixture

Composition:

Chemical Name	CAS	Conc. (m/m%)	Classification EC 1272/2008
Abamectin (b1 content)	71751-41-2	2.0 %	Acute Toxicity Oral (Category 2) H300 Acute Toxicity Inhalation (Category 1) H330 STOT RE (Category 1) H372 Aquatic Acute (Category 1) H400 Aquatic Chronic (Category 1) H410

			Reproductive Toxicity (Category 2) H361d
Methanol	67-56-1	<50%	Flammable Liquid (Category 2) H225 Acute Toxicity Oral (Category 3) H301 Acute Toxicity Inhalation (Category 3) H331 Acute Toxicity Dermal (Category 3) H311 STOT SE (Category 1) H370
Calcium dodecylbenzenesulfonate	26264-06-2	<5 %	Acute Toxicity Oral (Category 4) H302 Skin Irritation (Category 2) H315 Eye Irritation (Category 2) H319 Aquatic Chronic (Category 4) H413
Xylene	1330-20-7	<50%	Flammable liquids (Category 3), H226 Acute toxicity, Inhalation (Category 4), H332 Acute toxicity, Dermal (Category 4), H312 Skin irritation (Category 2), H315 Eye irritation (Category 2), H319 STOT SE (Category 3), Respiratory system, H335 STOT RE (Category 2), H373 Aspiration hazard (Category 1), H304 Aquatic chronic (Category 3), H412

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure and consult a doctor / poison control centre.

Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention immediately if irritation persists or person feels unwell.

Skin: Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Obtain medical attention if irritation persists or person feels unwell.

Eyes: Flush eyes with clean water for at least 15 – 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Seek medical attention immediately.

Ingestion: Get medical attention immediately. Call a poison centre or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Anticipated acute effects: Causes skin irritation. Causes serious eye irritation. Hazardous in case of inhalation product is a lung irritant. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Over-exposure by inhalation may cause respiratory irritation. May be harmful if swallowed. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Anticipated delayed effects: May cause damage to organs through prolonged or repeated exposure. Suspected of damaging the unborn child.

Most important symptoms/effects: None known.

Advice to physician: Treat symptomatically and supportively. No specific antidote known.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Use carbon dioxide or dry chemical for small fires and water fog or foam for large fires.

Unsuitable Extinguishing Media: High volume water jet. Use a water jet only to cool heated containers.

Specific hazards: Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. Hazardous decomposition products in case of fire: Refer to Section 10: Stability and Reactivity.

Special Fire Fighting Procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Keep upwind. Avoid inhaling hazardous vapours and fumes from burning materials. Remove container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal. Contain fire control agents for later disposal. Avoid pollution of waterways by run-off from the site.

Personal protective equipment: Wear NIOSH/MSHA approved self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with eyes and skin. Do not breathe in spray mist or dust. Ventilate area of spill, especially in contained areas.

Protective equipment: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

Emergency procedures: Alert firefighting personnel, evacuate unprotected personnel and animals.

Environmental Precautions: Prevent spilled product from entering sewers, waterways or ground water. This product is classified as very toxic to aquatic organisms with long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges into watercourses should be reported immediately to the police and the Department of Water/Environmental Affairs.

Methods and Materials for Containment: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Methods and Materials for Clean-up: Contain spilled product by picking up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal. Do not create a powder cloud by using a brush or compressed air. Label containers with the contents and dispose of according to local regulations. Do not place spilled material back in original container. Do not re-use spilled material. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. Collect washings and add to the drums already collected. Do not flush spilled material or washings into drains or waterways. See section 13 for disposal considerations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

7. HANDLING AND STORAGE

Handling:

Precautions for safe handling: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition sources. Use explosion-proof electrical (ventilating, lighting, and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

General occupational hygiene: Handle in accordance with good industrial hygiene and safety practice. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures. Remove contaminated clothing and protective equipment before entering eating areas.

Storage:

Conditions for safe storage: Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Incompatible substances and mixtures: Refer to product label.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits:

Components	Exposure limits	Type of exposure limit	Source
Xylene	150 ppm	Short term STEL (15 minutes)	www.osha.gov

Exposure control: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. A Risk Assessment should be conducted before handling is to commence to determine specific exposure control.

Engineering Controls: It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OELs or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

Personal Protective Equipment:

Respiratory Protection: For most well-ventilated conditions, no respiratory protection should be needed. If used in a poorly ventilated area (airborne concentrations exceed exposure limits), use a NIOSH approved air-purifying respirator.

Hand Protection: The use of chemically protective gloves is recommended to prevent against skin contact. Examples of preferred glove barrier materials include Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, Polyvinyl alcohol, Polyvinyl chloride.

Eye Protection: The use of chemical safety goggles is recommended to prevent against eye contact. Contact lenses are not protective eye devices.

Skin and Body Protection: Employee must wear appropriate protective clothing; boots, hat and equipment to prevent repeated or prolonged skin contact with this substance.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this substance; the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

Environmental exposure controls: Prevent product from entry into sewers and water courses.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid
Colour	Light yellow to brown
Odour	No data available
Odour threshold	No data available
pH	4.5 – 7.0
Melting point / freezing point (° C)	No data available
Boiling point (° C)	No data available
Flash point (° C)	18 °C
Evaporation rate	No data available
Flammability	Combustible Liquid
Upper /lower flammability limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density (25°C)	0.881
Water solubility (g/l) at 20°C	Soluble in water
Partition coefficient: n-octanol/water partition coefficient	No data available
Auto-ignition temperature (° C)	No data available
Decomposition temperature (° C)	No data available
Viscosity, dynamic (mPa s)	No data available
Explosive properties	Can form an explosive mixture in air.
Oxidising properties	No data available
Exposure limits	No data available

10. STABILITY AND REACTIVITY

Chemical Stability: The product is stable for two years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50 °Preferably below 30 °C, and not for prolonged periods in direct sunlight.

Reactivity: None known.

Possibility of Hazardous Reactions: Will not occur.

Conditions to Avoid: Extreme heat or exposure to flames. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible Materials: Strong oxidizers, strong bases, strong reducing agents. Abamectin can be hydrolysed by strong caustic solutions.

Hazardous Decomposition Products: Alcohols. Carbon monoxide and carbon dioxide may form under burning conditions or with incomplete combustion.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to GHS:

Acute Oral LD_{50} (rat): > 840 mg/kg

Acute Dermal LD_{50} (rat): > 5050 mg/kg

Acute Inhalation LC_{50} (rat, 4 hr): > 2 mg/ℓ air.

Skin Irritation: Causes skin irritation.

Eye Damage/Irritation: Causes serious eye irritation.

Skin Sensitization: Not classified.

Respiratory Sensitization: Not classified.

Reproductive cell mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive toxicity: Suspected of damaging unborn child.

Specific target organ toxicity – single exposure: May causes damage to organs, eyes and Central Nervous system.

Specific target organ toxicity – repeated exposure: May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard: Harmful if inhaled. May be fatal if swallowed and enters airways.

Chronic Effects (other targets e.g. developmental): Not classified

12. ECOLOGICAL INFORMATION

The product is classified as a marine pollutant.

ECOTOXICITY DATA:

Active ingredient: Abamectin CAS No. 71751-41-2

Fish	
LC_{50} (96 hr)	0.007 mg/ℓ (rainbow trout); 0.0096 mg/ℓ (bluegill sunfish).
Daphnia	
EC_{50} (48 hr)	0.00012 mg/l
Algae	
Static test EC_{50} (72h)	>100 mg/l (*Pseudokirchneriella subcapitata*)
Birds	
Acute oral LD_{50}	26 mg/kg (mallard ducks); >2000 mg/kg (bobwhite quail)
Dietary LC_{50} 8 days	>383 mg/kg diet mallard ducks
Bees	
Toxicity to bees LD_{50} (oral)	0.004 µg/bee.
Toxicity to bees LD_{50} (contact)	0.001 µg/bee.
Worms	
LC_{50} (14d)	33 mg/kg soil (Earthworms)

Biodegradability: Binds tightly to soil, with rapid degradation by soil micro-organisms.

Bioaccumulation: Low bioaccumulation potential.

Mobility: Low mobility in the soil.

13. DISPOSAL CONSIDERATION

Pesticide Disposal: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product into public sewers or

where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Comply with local legislation applying to waste disposal. The product may be taken to a registered waste disposal site or incineration plant.

Package Product Wastes: Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is cleaned, reconditioned or destroyed. Thereafter, rinse the container three times with a volume of water equal to a minimum of one third of that of the container. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.

14. TRANSPORT INFORMATION

UN Number	3021
Road Transport ADR/IRD:	
Class:	3
Packaging group:	II
UN proper Shipping Name:	PESTICIDE, LIQUID, FLAMMABLE, TOXIC N.O.S flash pint less than 23°C (Abamectin 18 g/l)
Maritime Transport IMDG/IMO:	
Class:	3
Packaging group:	II
UN proper Shipping Name:	PESTICIDE, LIQUID, FLAMMABLE, TOXIC N.O.S flash pint less than 23°C (Abamectin 18 g/l)
Marine Pollutant (Y/N):	Yes
Air Transport IATA/ICAO:	
Class:	3
Packaging group:	II
UN proper Shipping Name:	PESTICIDE, LIQUID, FLAMMABLE, TOXIC N.O.S flash pint less than 23°C (Abamectin 18 g/l)

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation for the mixture:

Relevant information regarding authorization: Occupational Health and Safety Act 1993. Regulation for Hazardous Chemical Agents, 2021. UN Recommendations on the Transport of Dangerous Goods Model Regulations Rev. 21 (2019), Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Rev 8, 2019.

Relevant information regarding restrictions: None.

EU regulation: Regulation EC1272/2008 (EU-GHS/CLP)

Other national regulations: National Road Traffic Act, 1996 (ACT NO. 93 of 1996). SANS 10228:2012- The identification and classification of dangerous goods for transport by road and rail modes. National Environmental Management Waste Act 59 of 2008.Act 36 of 1947 of the Republic of South Africa. This product is registered under it is a violation of South African law to use this product in any manner inconsistent with its approved labelling. Read and follow all label directions

Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

Note: Read and understand all the information on the product label before using the product.

Other hazard statements, abbreviations and explanations:
H225: Highly flammable liquid and vapour.

H302: Harmful if swallowed.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H361d: Suspected of damaging unborn child.
H371: May cause damage to organs, eyes and Central Nervous system.
H373: May cause damage to organs through prolonged or repeated exposure.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

IATA: International Air Transport Association.
IBC: International Bulk Chemical.
ICAO: International Civil Aviation Organization.
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization.
LD50 value: The median lethal dose or the amount of a toxic agent that is sufficient to kill 50 percent of a population within a certain period of time.
OEL/RL: Occupational exposure limit-recommended limit.
TWA: Time-weighted average – The average exposure over a specified period, usually a nominal eight hours.
ST/STEL: Short-term exposure limits.

Disclaimer: The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product, nor where instructions or recommendations are not followed.
All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

END OF DOCUMENT

Compiled:	/
Reviewed:	July 2025
Next revision:	July 2030

For detailed information on revisions, contact the registration holder.