

SAFETY DATA SHEET

Date: 8 September 2022
Serial No.: AGZ10002C3b_00

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME **Milbeknock 1EC**
SYNONYMS MILBEKNOCK EC, MILBEKNOCK 1 EC, MILBEKNOCK 1%EC, Milbemectin 1%EC, Milbemectin 1EC, MILBEKNOCK, Milbeknock, MILBEKNOCK 1% Emulsifiable Concentrate, Milbemectin 1% Emulsifiable Concentrate, Milbemectin 0.93% EC, MILBEKNOCK 0.93EC, Benknock 1EC, Koromite, Ultiflora

USE OF PRODUCT Research sample only and not for sale

COMPANY IDENTIFICATION

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2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Flammable liquid	Category 3
Specific target organ toxicity Single exposure	Category 3 (respiratory tract irritation, narcotic effects)
Aspiration hazard	Category 1
Aquatic hazard Acute	Category 1
Chronic	Category 1

GHS LABEL ELEMENTS

Hazard Pictograms



Signal Word **Danger**

Hazard Statements

H226: Flammable liquid and vapor
H304: May be fatal if swallowed and enters airways
H335: May cause respiratory irritation
H336: May cause drowsiness or dizziness
H400: Very toxic to aquatic life
H410: Very toxic to aquatic life with long lasting effects

Precautionary Statements

Prevention

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
-No smoking.
P233: Keep container tightly closed.

- P240: Ground and bond container and receiving equipment.
 P241: Use explosion-proof electrical/ventilating/lighting equipment.
 P242: Use non-sparking tools.
 P243: Take action to prevent static discharges.
 P261: Avoid breathing mist/vapors/spray.
 P271: Use only outdoors or in a well-ventilated area.
 P273: Avoid release to the environment.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301+P310+P331:

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

P303+P361+P353:

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P370+P378:

In case of fire: Use Water fog/dry chemical/foam/CO₂/sand to extinguish.

P391: Collect spillage.

Storage

P403+P405+P233+P235:

Store locked up in a well-ventilated place. Keep container tightly closed. Keep cool.

Disposal

P501: Dispose of contents or container in accordance with local, regional, national and international regulations.

OTHER HAZARDS

Toxic to bees and silkworms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	% w/w	CAS RN®	International GHS Classification
Milbemectin (*)	1	51570-36-6	Aquatic Toxicity Acute, Category 1. Aquatic Toxicity Chronic, Category 1. (M Factor = 100)
Hydrocarbons, C9, aromatics	10-30	64742-95-6	Flammable Liquids, Category 3. STOT SE, Category 3 - Respiratory and Narcotics Effect (Central Nervous System). Aspiration Hazard, Category 1 Aquatic Toxicity Chronic, Category 2.
White mineral oil (petroleum)	10-30	8042-47-5	Aspiration Hazard, Category 1.
Cyclohexanone	10-30	108-94-1	Flammable Liquids, Category 3.
Other ingredients		-	

* A mixture of Milbemycine A3 (M.A₃) and Milbemycine A4 (M.A₄) in the ratio of 3 to 7.

M.A₃: (10E,14E,16E,22Z)-(1R,4S,5'S,6R,6'R,8R,13R,20R,21R,24S)-21,24-dihydroxy-5',6',11,13,22-pentamethyl-3,7,19-trioxatetracyclo[15.6.1.1^{4,8}.0^{20,24}]pentacosa-10,14,16,22-tetraene-6-spiro-2'-tetrahydropyran-2-one

M.A₄: (10E,14E,16E,22Z)-(1R,4S,5'S,6R,6'R,8R,13R,20R,21R,24S)-6'-ethyl-21,24-dihydroxy-5',11,13,22-tetramethyl-3,7,19-trioxatetracyclo[15.6.1.1^{4,8}.0^{20,24}]pentacosa-10,14,16,22-tetraene-6-spiro-2'-tetrahydropyran-2-one

CAS RN®: M.A₃; 51596-10-2, M.A₄; 51596-11-3

Occupational exposure limits are, if available, listed in Section 8.

4. FIRST AID MEASURES

INGESTION

Rinse mouth with water. Call a physician immediately. Do not induce vomiting. If vomiting occurs, have person lean forward. Never give anything by mouth to an unconscious or convulsing person.

INHALATION

If you feel unwell, move to fresh air immediately. Call a physician. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

SKIN CONTACT

Immediately remove contaminated clothing and shoes. Flush skin and clean off with large amounts of water. Get medical attention if symptoms develop.

EYE CONTACT

Immediately flush eyes with plenty of water. Part eyelids with fingers to assure complete flushing. Check for and remove contact lenses if easily possible. Get medical attention if irritation persists.

5. FIREFIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA

Foam, dry chemical, CO₂, water fog, sand.

UNSUITABLE EXTINGUISHING MEDIA

Water jet.

GENERAL HAZARD

Flammable liquid at temperatures above its flashpoint may form explosive vapor-air mixtures. The vapor is heavier than air and may travel along the ground; distant ignition possible. Emits toxic fumes in fire condition.

HAZARDOUS COMBUSTION PRODUCTS

None identified.

FIREFIGHTING INSTRUCTIONS

Keep unnecessary and unprotected personnel away. Shut off supply if possible. Remove containers to safe place if possible. Keep containers and surroundings cool by spraying with water. Fight fire from an upwind position.

FIREFIGHTING EQUIPMENT

Respiratory and eye protection is required for firefighting personnel. Full protective equipment and self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS AND EMERGENCY PROCEDURES

Warn and evacuate in the neighborhood as necessary. Keep unnecessary and unprotected personnel away. Wear appropriate personal protective equipment as specified in Section 8. Remove all sources of ignition. Stop leak if possible without personal risk.

ENVIRONMENTAL PRECAUTIONS

Do not let this product enter the environment.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Use non-sparking tools and equipment.

Absorb or cover with dry earth, sand or other non-combustible material and transfer to sealable containers. Large spills: Dike far ahead of liquid spill for later disposal.
Collect the water-insoluble material spilled onto the water surface using the absorbent.

7. HANDLING AND STORAGE

HANDLING

Technical Measures

Use only with adequate ventilation.

Where there may be potential of fire or explosion hazard, use explosion-proof electrical equipment and take precautions against build-up of electrostatic charges.

Wear appropriate personal protective equipment as specified in Section 8. Keep away from heat, sparks, open flames, hot surfaces and all sources of ignition.

Precautions

Handle with care. Do not breathe mist. Avoid contact with eyes, skin and clothing.

Take precautionary measures against static discharge.

Advice on general occupational hygiene

Provide hand and eye wash station near work area. Wash hands thoroughly after use. Take off contaminated protective equipment before entering rest areas. Do not eat, drink or smoke when using this product.

STORAGE

Storage Conditions

Keep away from heat, flame and all sources of ignition. Store in a cool, dark and well-ventilated area. Keep container tightly closed and sealed until ready for use.

Do not contaminate other pesticides, fertilizers, water, foodstuffs or feed by storage and disposal.

Packaging Materials

Metal or plastic containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMIT VALUES

[Cyclohexanone]

ACGIH TLV: 20ppm (TWA)

: 50ppm (STEL)

BEIs: 80 mg/L (ESW), 8 mg/L (EOS)

[Aromatic hydrocarbons]

ACGIH: 5 mg/m³ (TWA, as mineral oil mist)

ENGINEERING CONTROLS

Provide general ventilation. Using closed system or local exhaust ventilation is recommended.

Provide safety shower and eye wash station near work area.

PERSONAL PROTECTION

Eye/face protection:

Safety glasses, goggles, face shield.

Skin Protection:

Hand protection:

Chemical resistant (impermeability) gloves.

Body Protection:

Safety helmet, protective clothing, safety boots.

Respiratory protection:

Chemical cartridge respirator (Organic vapour).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Yellowish tint clear liquid

Odor:

Estery odor (80 sweetness)

pH:

3.7 (23.5°C, 1%)

Initial boiling point and boiling range:

Not available

Flash point (733.7 mmHg):	47°C [Category 3]
Evaporation rate:	Not available
Density:	0.93 g/mL (20°C)
Solubilities:	Not available
Viscosity:	7.5 cps (20.0°C), 5.3 cps (40.0°C)
Auto-ignition temperature:	355°C
Explosive property:	Not explosive
Minimum Ignition energy:	Not available
Oxidizing properties:	Not an oxidizer

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY

Stable under normal conditions.

HAZARDOUS REACTIONS

Hazardous polymerization will not occur.

CONDITIONS TO AVOID

Exposure to heat, ignition sources.

INCOMPATIBLE MATERIALS

Strong alkali.

HAZARDOUS DECOMPOSITION PRODUCTS

None identified.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Oral:	Rat (male)	LD ₅₀	5200 mg/kg
	Rat (female)	LD ₅₀	5300 mg/kg
Dermal:	Rat	LD ₅₀	>2000 mg/kg
Inhalation:	Rat	LC ₅₀	>6.75 mg/L (4H)

Skin Corrosion/Irritation

Rabbit Slight irritant

Serious Eye Damage/Irritation

Rabbit Mild irritant

Respiratory Sensitization

No data for the product are available.

Skin Sensitization

Guinea pig Not a skin sensitizer.

Germ Cell Mutagenicity

No data for the product are available.

Carcinogenicity

No data for the product are available.

Reproductive Toxicity

No data for the product are available.

Specific Target Organ Toxicity

Single Exposure: Contains Aromatic hydrocarbons (category 3 respiratory tract irritation, narcotic effects). [Category 3]

Repeated Exposure: No data for the product are available.

Aspiration Hazard

Contains Organic solvent (category 1, >10%) and the calculated kinetic viscosity of this product is less than 20.5 mm²/s at 40°C. [Category 1]

12. ECOLOGICAL INFORMATION**HAZARDOUS TO THE AQUATIC ENVIRONMENT**

Acute: Classified as category 1 based on the EC₅₀ for *Daphnia magna*. [Category 1]
 Chronic: Contains Milbemectin (Category 1, M=100) [Category 1]

Ecotoxicity

Rainbow trout	LC ₅₀ (96H)	0.45 mg/L
	NOEC	0.18 mg/L
<i>Daphnia magna</i>	EC ₅₀ (48H)	0.42 mg/L
	NOEC	0.17 mg/L
Algae	ErC ₅₀ (120H)	>89 mg/L
	NOEC	5.7 mg/L

[Milbemectin]

<i>Daphnia magna</i>	EC ₅₀ (48H)	0.01 mg/L
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HAZARDOUS TO THE OZONE LAYER

This product does not contain $\geq 0.1\%$ of at least one ingredient listed in the Annexes to the Montreal Protocol.

OTHER HAZARDS

Toxic to bees and silkworms.

13. DISPOSAL CONSIDERATIONS**WASTE FROM RESIDUES**

Waste must be disposed of in accordance with federal, state, local, national and international regulations.

CONTAMINATED PACKAGING

Empty the container completely before disposal.

14. TRANSPORT INFORMATION**UN**

Hazard Class:	3
UN Number:	UN1993
Shipping Name:	FLAMMABLE LIQUID, N.O.S. (Cyclohexanone and Aromatic hydrocarbons mixture)
Packing Group:	III
Marine Pollutant:	Yes

SPECIAL PRECAUTIONS FOR TRANSPORT

Make sure that the containers have no puncture or leakage. Avoid rough handling and dropping. Prevent collapse of cargo piles.

15. REGULATORY INFORMATION

This product can be used solely for Research & Development.

Responsibility for compliance with applicable laws and regulations is with the user.

16. OTHER INFORMATION

References: In-house data

To the best of our knowledge, the information contained herein is accurate.

However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.