



MATERIAL SAFETY DATA SHEET

Product:



Ultiflora™

Miticide

Formulator: Gowan Company
P.O. Box 5569
Yuma, Arizona 85366-5569
(928) 783-8844

Emergency Phone: (928) 783-3803
For 24-Hour Emergency Assistance (Spill, Leak, Fire, or Exposure), Call CHEMTREC®:

Inside the U.S.: (800) 424-9300
Outside the U.S.: (703) 527-3887
(888) 478-0798

For Medical Emergency:

1. CHEMICAL IDENTIFICATION

Product: Ultiflora
EPA Signal Word: CAUTION
Active Ingredient: Milbemectin (1 % w/w)
Chemical Name: M.A₃ and M.A₄ (M.A₃ ≤ 30%, M.A₄ ≥ 70%)
Chemical Class: Miticide/Insecticide

EPA Registration No.: 10163-280
CAS No.: 51596-10-2 and 51596-11-3

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	OSHA – PEL	ACGIH – TLV	OTHER	NTP/IARC/OSHA CARCINOGEN
Milbemectin (1%)	None Established	None Established	None	No
Cyclohexanone CAS# 10894-1	200 mg/m ³	100mg/m ³	100 mg/m ³ (NIOSH)	No
Aromatic hydrocarbons	None Established	None Established	None	NTP Group 2*

* NTP Group 2 is defined by the National Toxicology Program (NTP) as being a substance that “may reasonably be anticipated to be carcinogens.”

“Reasonably be anticipated to be carcinogens” is further defined as having “limited evidence of carcinogenicity in humans and/or sufficient evidence of carcinogenicity in experimental animals.”

3. HAZARDS IDENTIFICATION

Physical Properties

Appearance: Nonviscous liquid at 25°C

Odor: Estery (80 sweetness) at 25°C

Color: Clear with a yellowish tint

Primary Routes of Exposure

Mist inhalation and skin contact

Medical Conditions Likely to be Aggravated by Exposure

None known

Hazardous Decomposition Products

None known

Unusual Fire, Explosion, and Reactivity Hazards

Flammable

4. FIRST AID MEASURES

If swallowed:	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice.• Do not induce vomiting unless told to do so by the poison control center or doctor.• Do not give any liquid to the person.• Do not give anything by mouth to an unconscious person.
If in eyes:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice.
If inhaled:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.• Call a poison control center or doctor for further treatment advice.
If on skin or clothing:	<ul style="list-style-type: none">• 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.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also **contact 1-888-478-0798 for emergency medical treatment information.**

NOTE TO PHYSICIAN

Contains petroleum distillate – vomiting may cause aspiration pneumonia. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flashpoint (test method): 43°C (Closed cup)

Flammability: Ultiflora is a flammable liquid. Major flammable constituents are cyclohexanone and aromatic hydrocarbons.

Appropriate Extinguishing Media

CO₂, dry chemical, foam, water

Fire Fighting Guidance

Move containers from fire area if it can be done without risk. Isolate hazard area; avoid inhalation of smoke and fumes. Contain runoff by diking to prevent entry into sewers or waterways.

Unusual Fire, Explosion, and Reactivity Hazards

None known

6. ACCIDENTAL RELEASE MEASURES

In Case of Spills or Leaks

Use proper protective equipment to minimize personal exposure during cleanup. Insure that the disposal is in compliance with relevant laws and regulations.

Keep material out of streams and sewers. Dike to confine spill and absorb with an absorbent such as clay, sand or soil. Vacuum, shovel or pump wastes into a drum for later disposal. Wash area with water and detergent thoroughly and collect washwaters into a drum for later disposal.

7. HANDLING AND STORAGE

Handling

Do not get in eyes, on skin, or in clothing. Avoid breathing vapors or spray mist. Wash hands before eating, drinking, chewing gum, using tobacco, or using toilet. Wash contaminated clothing before re-use. This product is toxic to fish. Do not apply directly to water. Drift or runoff from treated area may be hazardous to aquatic organisms in neighboring aquatic site. Do not contaminate water when disposing of equipment washwaters.

Storage

Do not use or store near heat or open flame. Store in original container and keep closed. Store in a cool, dark place. Do not contaminate other pesticides, fertilizers, water, foodstuffs, or feed by storage and disposal.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category **F** on an EPA chemical resistance category selection chart.

Mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate, butyl or nitrile rubber or Viton
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Nonviscous liquid at 25°C
Odor:	Estery (80 sweetness) at 25°C
Color:	Clear with a yellowish tint
Specific Gravity/ Density:	Approximately 930 g/l

10. STABILITY AND REACTIVITY

Stability:	Stable at normal temperature and storage conditions
Hazardous Polymerization:	Polymerization will not occur
Decomposition Products:	Decomposition will not occur
Hazardous Mixtures:	Incompatible with strong alkali
Conditions To Avoid:	None known

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies

Eye Effects:	May cause slight eye irritation	
Skin Effects:	Dermal LD ₅₀ (Rat)	>5,000 mg/kg
Acute Oral:	Oral LD ₅₀ (Rat)	5,200 (M), 5,300 (F) mg/kg
Acute Inhalation:	LC ₅₀ (Rat, 4-hr exposure)	>6.75mg/l*
Skin Contact:	Not a dermal irritant	
Skin Sensitizer:	Not a skin sensitizer	

The following data were developed with Milbemectin Technical, the active ingredient:

Mutagenic Potential

Not mutagenic in both bacterial reverse mutation test and *in vitro* cytogenetic studies

Carcinogenic Potential

No carcinogenic effects were observed in the studies

12. ECOLOGICAL INFORMATION

Environmental Hazards

This product is toxic to fish. Do not apply directly water, or to areas where surface water is present. Drift and run off from treated area may be hazardous to fish in adjacent sites. Do not contaminate water by cleaning of equipment or disposal of wastes.

Aquatic toxicity		
	96 hr LC ₅₀ (Rainbow trout):	4.5 µ g/l
	48 hr LC ₅₀ (<i>Daphnia</i>):	10 µ g/l
Bird toxicity		
	LD ₅₀ (Bobwhite quail):	>2,000 mg/kg

13. DISPOSAL CONSIDERATION

Do not contaminate water, foodstuff or feed by disposal. Open dumping or burning of this product or its packaging is prohibited. Burning in an incinerator can be made in accordance with local relevant laws and regulations. However, the appropriate regulatory agencies should be contacted prior to disposal, because acceptable methods of disposal may vary by location, and regulatory requirements may change.

Pesticide Disposal

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

14. TRANSPORT INFORMATION

DOT Classification

Flammable liquid, n.o.s. (contains cyclohexanone and aromatic hydrocarbons), 3, UN 1993, PGIII

International Maritime Organization

Flammable liquid, n.o.s. (contains cyclohexanone and aromatic hydrocarbons), 3, UN 1993, PGIII, Marine Pollutant

International Civil Aviation Organization

Flammable liquid, n.o.s. (contains cyclohexanone and aromatic hydrocarbons), 3, UN 1993, PGIII

15. REGULATORY INFORMATION

SARA Title III Classification

Section 302/304:	Not applicable
Section 311/312:	Immediate (acute) health hazard Delayed (chronic) health hazard
Section 313 chemical(s):	Not applicable

Proposition 65

Not applicable

CERCLA Reportable Quantity (RQ)

Cyclohexanone 5,000 lbs.

RCRA Classification

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA Status

Exempt

16. OTHER INFORMATION

NFPA Hazard Ratings

Health:	1	0	Least
Flammability:	2	1	Slight
Reactivity:	0	2	Moderate
		3	High
		4	Severe

Prepared By:

Gowan Company
(928) 783-8844

Notice: The information and recommendations contained herein are provided in good faith and 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 herein.

TM: Ultiflora™ is a trademark of Sankyo LLC.