



Aqua K-Othrine[®] EW

THIS IS A PESTICIDE ADVERTISEMENT
TO BE HANDLED BY TRAINED PERSONNEL ONLY.

Space spray insecticide, water-based and water-dilutable, effective against mosquitoes and houseflies.

Aqua K-Othrine EW is a pyrethroid based concentrate specially formulated for dilution with WATER ONLY and application as an ultra low volume (ULV) aerosol or thermal fog according to the following table:

DIRECTIONS FOR RESTRICTED USE: Off-label use is an offence.

PESTS	APPLICATION TECHNIQUE	DILUTION RATE	REMARKS
Flies (<i>Musca domestica</i>)	ULV -Outdoor	100 ml/ 1 litre water (1:10)	Spray in the early evening 500 ml / hectare
	ULV -Indoor	1 ml/ 10 ml water (1:10)	50 ml mixed solution for 1000 m ² .
	Thermal fogging -Indoors	10 ml/ 1 litre water (1:100)	100-200 ml every house or 1 litre every 2000 m ² .
Mosquitoes (<i>Aedes aegypti</i> , <i>Culex quinque-fasciatus</i>)	ULV -Outdoor	100 ml/ 1 litre water (1:10)	Spray in the early evening 500 ml / hectare
	ULV -Indoor	1 ml/ 10 ml water (1:10)	50 ml mixed solution for 1000 m ² .
	Thermal fogging -Outdoor	10 ml/ 1 litre water (1:100)	5 Litre solution for one hectare.
	Thermal fogging -Indoor	10 ml/ 1 litre water (1:100)	100-200 ml every house or 1 litre every 2000 m ² .



Note: For ULV application in areas where spray penetration is restricted, the usage must be added to a maximum of 2 liter application per hectare. Empty buildings during spraying or fogging.

Aqua K-Othrine EW is a space spray concentrate containing 2% deltamethrin. Deltamethrin is a active pyrethroid insecticide which will effectively flush insects out of their hiding places and kill through direct contact. Due to the activity of deltamethrin Aqua K-Othrine EW can be applied at low dose rates of 0.5 - 1.0 g/ha of active ingredient to control flies and mosquitoes. Aqua K-Othrine EW utilises a patented anti-evaporant technology which makes it easy and convenient to use.



For more information please contact:

Bayer Co. (Malaysia) Sdn Bhd (7563 M)
B-19-1 & B-19-2, The Ascent Paradigm,
No. 1, Jalan SS 7/26A, Kelana Jaya,
47301 Petaling Jaya, Selangor, Malaysia.
Tel.: 03-7801 3121 Fax: 03-7886 3993
Email: es.malaysia@bayer.com

READ THE LABEL BEFORE USE

JIRP. E/0217/067

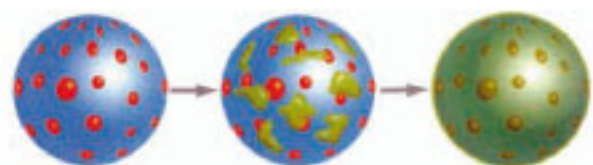


Space spray insecticide, water-based and water-dilutable, effective against mosquitoes and houseflies.

Patented Aqua technology

Aqua K-Othrine EW formulation is based on water and this highlights the specific benefits of the formulation. The Film Forming Aqueous Spray Technology (FFAST) is a unique patented formulation system which allows the use of water as the diluent without the normal drawbacks of evaporation.

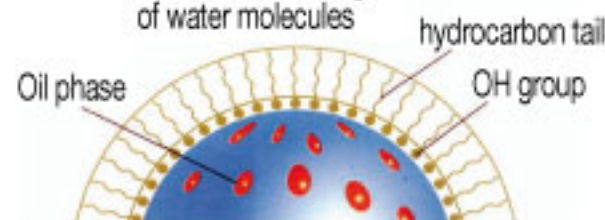
Stages in the formation of a stable "Aqua" droplet



Droplet emerges from spray nozzle Anti-evaporant comes out of solution Anti-evaporant forms protective "skin" around droplet

Representation of a stabilised "Aqua" droplet

Surface film comprising closely packed long chain alcohol molecules hindering the diffusion of water molecules



The principle behind FFAST is simple yet effective. As each droplet is formed, long chain alcohol molecules rapidly migrate to the surface where they align to form a protective skin. This gives a sealed package of water-based insecticide, thereby retarding evaporation and greatly extending the effective range of the spray.

The key result of this is that Aqua K-Othrine EW provides durable effective droplets in all climatic conditions and is as effective as oil/diesel diluted space spray concentrates when sprayed at equivalent active ingredient rates.

Water - the natural diluent

Water is the natural choice for the diluent of space sprays, particularly in the light of increased concern about the use of diesel.

By using water as the main solvent, as well as the diluent, Aqua K-Othrine EW can offer a number of specific benefits to the user. Aqua K-Othrine EW easy to handle concentrate which is completely acceptable in use.

The water-based formulation reduces paint spotting and staining. Water is the natural choice for the diluent because it is readily available to the user compare with oil or diesel diluents.

Method of use

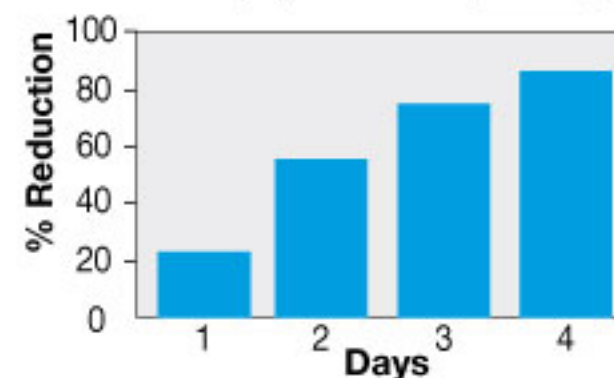
Aqua K-Othrine EW can be used as ULV and thermal fogging. Primarily, it has been designed for Ultra Low Volume (ULV) use but is also ideal for thermal fogging Aqua K-Othrine EW can be used for large scale conventional outdoor spraying as well as for indoor use.

For outdoor ULV spraying Aqua K-Othrine EW should be diluted with water and applied using any ULV machine capable of producing droplets with a volume median diameter (VMD) in the range of 15-25 microns.

The product may also be applied through hand held thermal foggers for control of mosquitoes.

In case of indoor treatments, no person should be in the room, remove all pets and foodstuffs from the room and cover all surfaces used for food preparation. Turn off the electricity and extinguish all naked flames.

Reduction in population of *Culex pipiens*



Indoor ULV with handheld ULV machine.



Outdoor ULV with truck mounted ULV machine.

Toxicity

Aqua K-Othrine EW

Oral (rat)	LD50 (mg/kg bw)	304 - 500
Dermal (rat)	LD50 (mg/kg bw)	> 5 000
Inhalation (rat)	LC50 (mg/l)	> 5.8
Skin irritation (rabbit)		Slight irritant effect
Eye irritation (rabbit)		Slight irritant effect
Skin sensitization (guinea pig)		Non sensitizing

Environmental protection

- Prepare only the amount of product required for immediate usage. Do not store diluted material.
- Do not dispose of any excess diluted product and rinsings of dip containers into waterways, ponds, streams etc. Can be landfilled or incinerated in compliance with local regulations.

Soil

• Persistence and degradation

Deltamethrin is rapidly degraded in most soils with DT50 values of approximately 3 weeks.

• Mobility:

Deltamethrin is absorbed onto soil particles very rapidly and with high adsorption constants. The desorption is very low, therefore the risk of leaching of the parent compound into deep soil layers can be excluded.

Ecotoxicity of the active ingredient:

Trout (96h)	LC ₅₀ (µg/l)	= 0.91
Daphnia (48h)	EC ₅₀ (µg/l)	= 0.56
Quail	LD ₅₀ (mg/Kg)	> 2 250
Duck	LD ₅₀ (mg/Kg)	> 4 640
Earthworm (14d)	LC ₅₀ (mg/Kg)	> 1290

Ecotoxicity Aqua K-Othrine EW:

Fish (96h) Rainbow trout	LC ₅₀ (mg/L)	0.324
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Our deltamethrin has been evaluated by the World Health Organization and complies with the WHO/SIT/24.R2 specifications, providing the user with maximum security of product quality.

AQUA K-OTHRINE EW has the following advantages:

- Good knockdown of mosquitoes and houseflies.
- Effective kill of flies and mosquitoes.
- Diluted with water.
- Anti-evaporant formulation maintaining droplet size in the effective spectrum.
- Diluent cost savings.
- Reduced flammability.



Water-based fogging with Thermal Fogging machine.