

Our mission: "Bayer: Science For A Better Life"

Bayer is an inventor company with a long tradition of research. By applying science to the major global challenges, we deliver innovations that address unmet needs.

**K-Othrine® Polyzone - improving the quality of lives of communities affected by vector-borne diseases**

- Suspension concentrate formulation with polymer enhanced technology.
- Reduced risk of wash-off and environmental contamination.
- Up to 3 months residuality.
- Targeted residual spraying (e.g. walls on high-rise buildings, door & window frames, air ventilation holes, drain opening).

**Make K-Othrine® Polyzone part of your mosquito control program**

**Key steps for effective control**

- 1 Inspect property for natural and man-made conditions that allow water to collect and lay stagnant, providing an environment conducive to mosquito breeding. Notify home/building owner of such conditions and provide recommendations to reduce mosquito development.
- 2 Apply larvicides (where appropriate) to mosquito-breeding sites, stagnant water and/or to areas subject to periodic flooding that will allow immature mosquitoes to develop.
- 3 Report to the home/building owner any changes in property conditions that may provide mosquito harborage or developing sites.

**Bayer is committed to sustainable development**

**K-Othrine® Polyzone** is applied in a targeted manner to areas where mosquitoes are most likely to land and rest. This reduces the amount of product applied, whilst maximising effectiveness. This results in better protection of the community, the environment and makes it the genuine solution for sustainable vector management.



**Bayer**

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READ LABEL BEFORE USE.

JIRP:P/1017/572



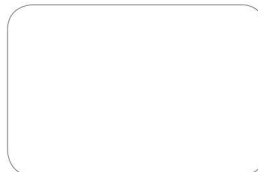
**K-Othrine®  
Polyzone**

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



Discover the latest  
**Polyzone Technology**  
from Bayer

For more information, please contact:



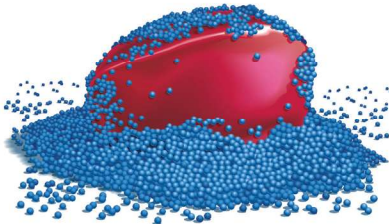


## Vector-borne diseases cause more than 1 million deaths annually worldwide<sup>1</sup>

Vector-borne diseases account for more than 17% of all infectious diseases, causing more than 1 million deaths annually. And mosquitoes are the best known disease vector; infecting over one billion people and killing more than one million worldwide each year - making them the deadliest animal in the world.<sup>1</sup>



For over 60 years, Bayer has been working with Mosquito Control Professionals to fight against mosquitoes that may carry diseases such as chikungunya, dengue, Eastern equine encephalitis (EEE), malaria, West Nile and Zika. We support worldwide mosquito control with ongoing research and innovation, training and education and global advocacy to raise awareness of issues surrounding mosquitoes. The same technology we use to combat mosquitoes worldwide can help protect your customers.

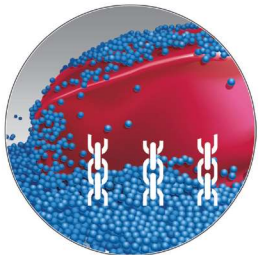


## Introducing K-Othrine® Polyzone

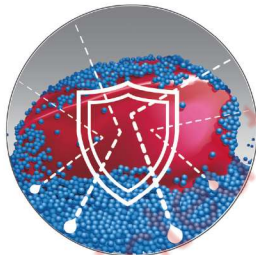
Developed by Bayer, K-Othrine® Polyzone is a polymer-enhanced suspension concentrate aqueous formulation. The proprietary polymer technology protects the active ingredient from weather, rainfall and mechanical abrasion. When applied correctly, the active ingredient remains available on treated surfaces to control adult mosquitoes up to 3 months.

## Long-lasting residually with polymer-enhanced technology

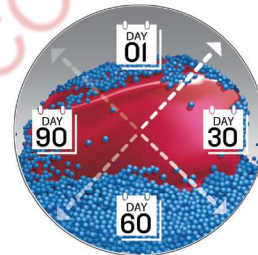
The polymer formulation in K-Othrine® Polyzone provides effective residual control even in harsh weather conditions.



K-Othrine® Polyzone polymer beads act like microscopic chains, locking the active ingredient (AI) particles in place.



The polymer is like a shield, protecting each active ingredient (AI) particle from rainfall, irrigation and abrasion.



The polymer layer also works as a gatekeeper, releasing the active ingredient (AI) over an extended period of time.

## Efficacy Data: Simulation rain wash study

Analysis of collected rainwater.

The Polyzone Technology significantly reduces (>30 fold) the amount of active ingredient that is washed off after rainfall. This leads to higher effectiveness after rainfall.

Efficacy After	Deltamethrin (without Polyzone Technology)				K-Othrine Polyzone SC-PE (Deltamethrin)				Control (Untreated)	
	REP1	REP2	REP3	REP4	REP1	REP2	REP3	REP4	REP1	REP2
Contact Bioassay - before rainfall	not tested									
30 minutes	10	10	20	30	0	0	0	0	0	0
1 hour										
4 hours	100	100	100	100	90	100	90	100	0	0
24 hours mortality	100	100	100	100	90	100	100	100	0	20
Contact Bioassay - after rainfall										
30 minutes	0	0	0	0	40	20	20	20	0	0
1 hour	10	10	10	0	100	40	70	20	0	0
4 hours	60	20	20	10	100	100	100	20	0	0
24 hours mortality	40	30	10	20	100	100	100	80	0	0
Average amount of active ingredient in the rain water										
Deltamethrin	355 µg				11 µg				-	
Total amount of active ingredient on tile	562.5 µg				562.5 µg				-	
Percent wash-off	63%				2%				-	

Efficacy (contact bioassay)  
■ 0 - 59% ■ 60 - 79% ■ 80 - 100%

Wash off percentage  
■ >5% ■ <5%

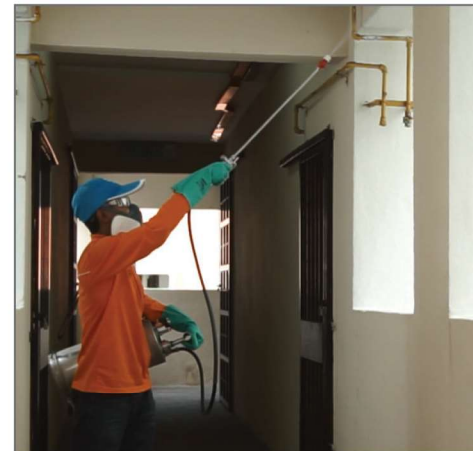
% knockdown and or mortality of mosquitoes (out of 10 per surface) after 30 minutes exposure on treated surfaces.

## Application Areas

Application should be targeted to areas where mosquitoes are likely to land or rest.

**Sheltered walls** should be treated with a full residual spray from ground level up to a maximum height of 3m to assure the desired nominal deposit.

**Walls exposed to rainfall** should be treated with a targeted residual spray. Only immediate areas such as around windows, doorframes and ventilation holes should be sprayed.



Contact a Bayer representative for more details on how to apply K-Othrine® Polyzone.

<sup>1</sup>Available at <http://www.who.int/mediacentre/factsheets/fs387/en/>