# Mural Bio-od-22x

## Insecticide-miticide paint



DanLogic-Hygreen SRL Nilovital Products - maintenance, cleaners, sanitizers and bio-insecticides

## **Anti-insect paint**

Mural Bio-od-22x is a premium quality next-generation water-based paint that kills mosquitoes, flies, cockroaches, mites, and other disease-causing insects on contact. This product is for indoor use only, for a matte finish. Its insecticidal effect can last up to 3 years.

- Ready to use
- No organophosphates
- No emission
- Safe for humans and house pets
- · The best solution for health and well-being





## Disease prevention

Insecticide paint for interior use is an effective and passive means for preventing various insecttransmitted diseases, such as:

- Malaria
- Dengue
- Chikungunya
- La Crosse encephalitis
- Zika virus
- Eastern Equine Encephalitis



Main disease vectors: cockroaches, flies and tsetse flies, mosquitoes of genera Anopheles and Aedes.

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#### A natural born insect-killer

Mural Bio-od-22x is a combination of protective additives, pyrethroids, and a natural synergist. This product was designed to overcome strains of mosquitoes resistant to habitual repellents. When an insect lands on a surface covered by the product, the active molecule enters its body through the legs and attacks its nervous system, killing it within moments.

Pyrethrins are natural insecticides produced by flowers of the chrysanthemum type.

Mural Bio-od-22x contains deltamethrin, a compound of the pyrethroid family, molecules derived from pyrethrins, chemically enhanced for better resistance to environmental damage.

Pyrethroids act on the insect's nervous system by opening the sodium channels, allowing sodium and potassium ions to constantly enter the cells of the central nervous system, causing lethal over-excitement to the insect.



The addition of a natural synergist (based on tannins and oxidase inhibiting enzymes) further overcomes insecticide resistance and improves slaughter rates. This synergist is released slowly thanks to the exclusive binders formulated in the paint.

Additives also protect the insecticide contained in the paint, slowing its degradation over time. The product thus retains its effect for about 18 to 36 months.

Mural Bio-od-22x is applied like a regular paint, on interior surfaces (walls and ceiling) of a house or building.

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#### **Proven effectiveness**



Mural Bio-od-22x has been tested in collaboration with renowned laboratories: IRD Montpellier, AD Scientifique de Strasbourg, Agronomic Institute of Gembloux, in order to certify its insecticidal effect, its resistance to molds and its safeguarding of indoor air quality.

Preliminary tests were carried out by the cone method on recommended species, such as tsetse flies and mosquitoes of the genus Anopheles Gambiae. The killing rate observed on flies, tsetse flies, mosquitoes, and wasps is over 90%, where the World Health Organization (WHO) requires a rate of 50%.

MURAL-Bio-od-22x is harmless to humans and warm-blooded animals. This certificate was made by the Phycher | Bio Development after the following tests:

- Skin sensitization
- Acute skin irritation
- Acute dermal toxicity
- Acute eye irritation
- Acute oral toxicity



## Public spaces protection

Tests under WHO supervision are being carried out in France and Reunion Island, Burundi, Tanzania and Uganda.

On Reunion Island, these tests are carried out on various sites: public spaces, communities (churches, orphanages, schools, army and police), hospitals, hotels, households, etc.

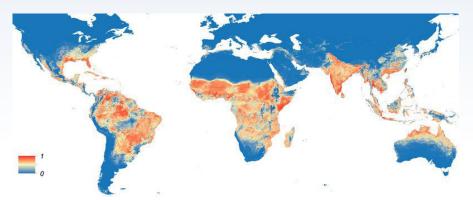


#### Zika virus

Zika is an emerging virus transmitted by mosquitoes, first identified in Uganda in 1947 in rhesus monkeys, through a yellow fever surveillance network. It was first diagnosed in humans in 1952 in Uganda and the United Republic of Tanzania. Zika virus disease outbreaks have been observed in Africa, the Americas, Asia and the Pacific.

Symptoms are similar to other infections caused by arboviruses such as dengue, including:

- Fever
- Rashes
- Conjunctivitis
- Muscle and joint pain
- Discomfort
- Headache



Distribution of Zika virus cases (2016)

During the major epidemic outbreaks in French Polynesia and Brazil, in 2013 and 2015 respectively, national health authorities reported potential neurological and autoimmune complications.

Recently in Brazil, local health authorities have observed an upsurge in cases with Guillain-Barré syndrome that coincide with cases of Zika virus infection, as well as an increase in the number of newborns with microcephaly in the northeast of the country.

Organizations investigating outbreaks caused by Zika virus are reporting a growing body of data linking this virus to microcephaly.

Zika virus is transmitted to humans by the bite of an infected mosquito of the genus Aedes Aegypti in tropical regions. It also transmits dengue, chikungunya and yellow fever.

Mosquitoes and their breeding sites pose a significant risk for Zika virus infection.

Prevention and control are based on reducing the number of mosquitoes at the source (elimination or modification of breeding sites) and reducing contact between these insects and humans. It can be done as follows:

- Apply repellents
- Wear clothing (preferably light-colored) that covers the body as much as possible
- Put physical obstacles, insect screens, closed doors and windows
- Sleep under mosquito nets during the day
- Protect your home with mosquito repellent paint

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DanLogic-HyGreen SRL offers truly new concepts combining products with methods where the words «evolution» and «efficiency» have never been dissociated: anti-dust mite spray for mattresses, dry cleaners for all surfaces, cleaners and deodorants for freezers and refrigerators, hospital disinfectants, detangling treatments, natural insecticides for horses, insecticidal paints.

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