

BITHOR[®] DUAL ACTION

INSECTICIDE



bifenthrin

imidacloprid

THE SILENT ASSASSINS

TWO DIFFERENT MODES OF ACTION COMBINE
INTO THE UNSTOPPABLE INSECTICIDE



Dual mode of action

using the intensified effects of two actives with completely different properties



Non-repellent

through the two actives working together to become undetectable



Competitive

Priced so you can use indoors or outdoors any time you need



Long term

Continues to protect your property through the effects of two well known residual actives

BITHOR[®] DUAL ACTION

INSECTICIDE

In 1985, a **Japanese visionary** discovered neonicotinoid insecticides and **revolutionized pest control**. Ensystem have taken his foundation and melded it with **another discipline**, pyrethroid chemistry, creating an **unstoppable synergy BITHOR[®] DUAL ACTION**.

KETSUGO BUKI

def: forge a combination weapon

TWO ACTIVES, 45 g/L bifenthrin (pyrethroid) and 55 g/L imidacloprid (neonicotinoid), each with a totally different mode of attack combine into an unstoppable synergy stronger than its individual components.

KAKUSHI BUKI

def: art of hidden weapons

NON-REPELLENT, odourless, water-based micro-suspension concentrate, meaning the insect will remain in contact with the treated surface longer - unaware it is acquiring its lethal dose.

ANSATSUNIN

def: power of an assassin

LONG TERM, residual action is provided through the intensified effects of two well known and trusted actives, magnifying the potency of the other, even after a prolonged period.

BUJINKAN

def: the divine warrior academy

COMPETITIVELY PRICED, so you can harness the power. Available for both indoor and outdoor use, the magnifying effect means BITHOR DUAL ACTION is more effective, even at lower concentrations.

THE PROVEN POWER OF BIFENTHRIN
COMBINES WITH NON-REPELLENT IMIDACLOPRID

BITHOR® DUAL ACTION KAGE ARUKI JUTSU

def: forge a combination weapon

BITHOR DUAL ACTION blends two actives, bifenthrin and imidacloprid, together to form a micro-suspension concentrate, where the particle size is optimised to penetrate the insect cuticle more readily, whilst providing improved residual performance on a wide range of surfaces and under a wide range of weather conditions.

POWER FROM SYNERGY

By combining two actives from two totally different chemical groups we create a unique product that kills the toughest pests. The two actives combine together to create a synergistic effect with each actively intensifying the effects of the other, to create a more potent solution than either alone.

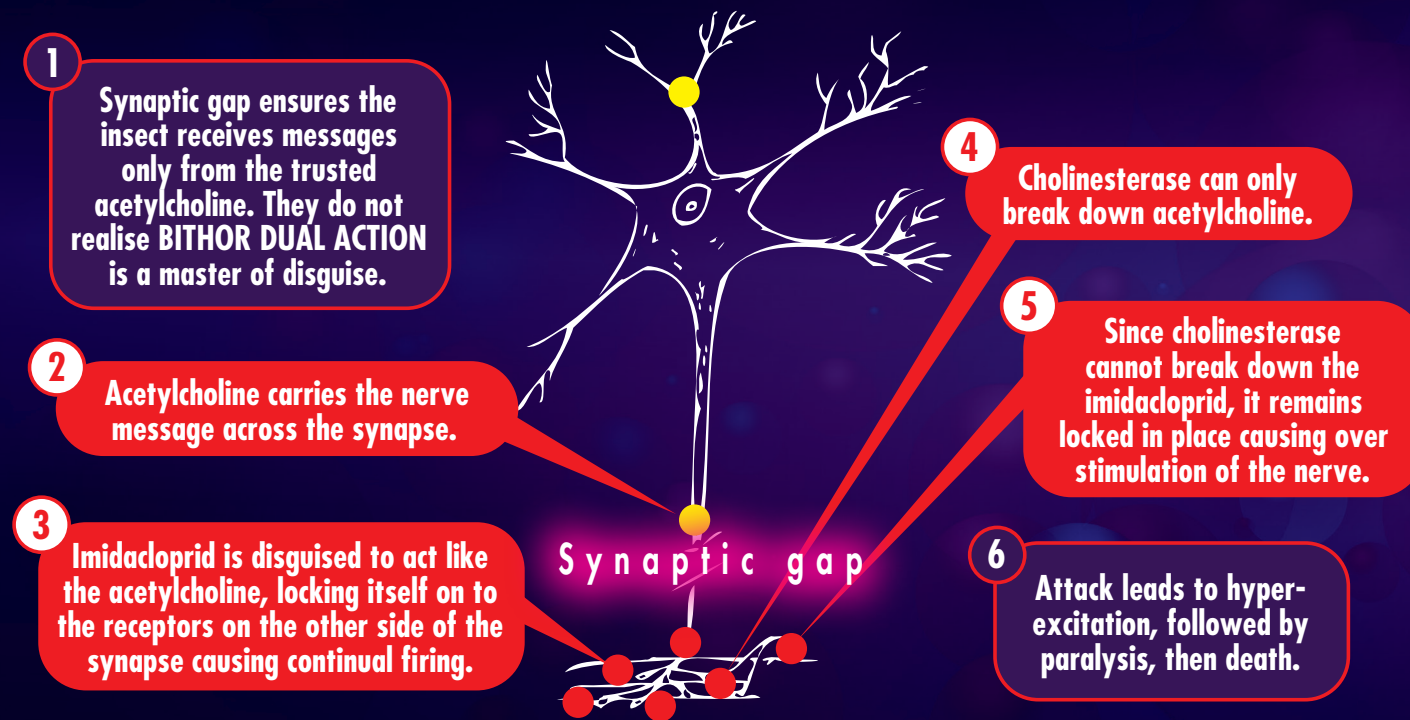
IMIDACLOPRID THE ART OF GISOJUTSU

def: art of hidden weapons

Japanese visionary Professor Shinzo Kagabu is the principal discoverer and father of the neonicotinoid insecticides. Professor Shinzo first prepared imidacloprid in 1985 when he was a researcher in the pesticide development project in Nihon Tokushu Noyaku Seizo.

Imidacloprid is a neonicotinoid insecticide that acts as **a synaptic toxin**. It mimics the actions of the naturally occurring neurotransmitter, acetylcholine.

Acetylcholine passes the nerve cell message across the synaptic gap. The acetylcholine is then broken down by the enzyme cholinesterase. However, cholinesterase cannot break down imidacloprid, so the nerve cells are continually stimulated, resulting in a neural overdose.



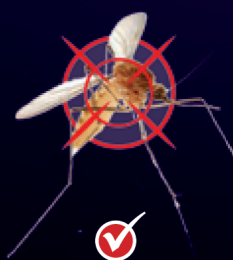
BITHOR® DUAL ACTION IS EFFECTIVE AGAINST:



Ants



Cockroaches



Mosquitos



Flies



Fleas

BITHOR[®] DUAL ACTION

INSECTICIDE

Two actives from two totally different chemical groups combine together to create a synergistic effect with each active intensifying the effects of the other, to kill even the toughest pests.

HOW THE DUAL ACTION EFFECT WORKS

Bifenthrin is combined with the non-repellent imidacloprid, to create a combination product that is effectively non-repellent.

Non-repellent acetylcholine impersonator
Gisojutsu

def:
art of hidden weapons

Ingredients are milled together to create an even distribution



Actives meld into one unique product

Creating a product stronger than its individual actives

Pyrethroid power from the well-trusted and proven bifenthrin
Kakushi geri

def:
kicking open the gates



Ticks



Bed bugs



Spiders



Clothes moths



Fishmoths
(Silverfish)

BIFENTHRIN

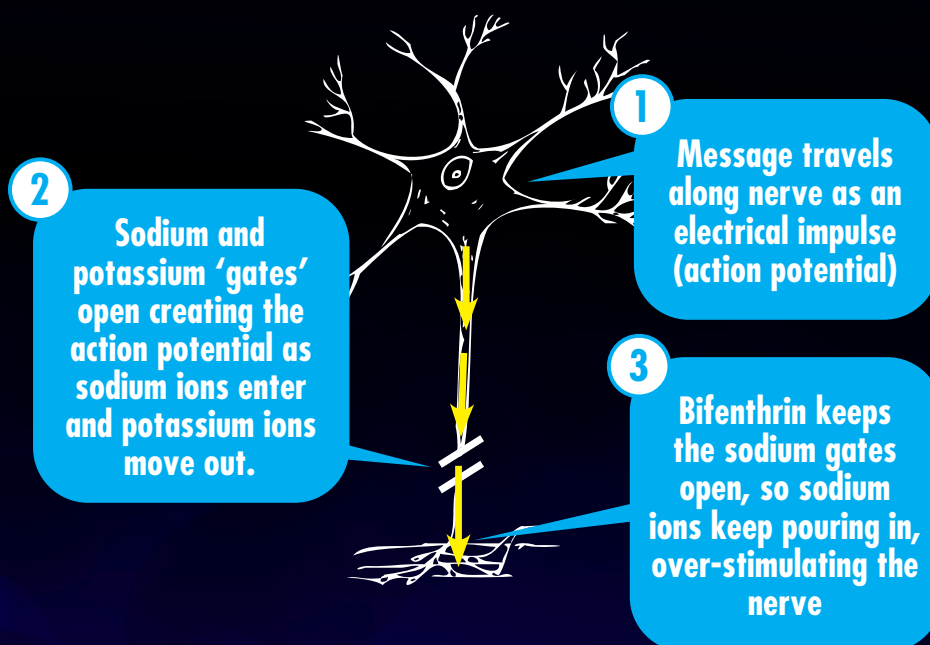
KAKUSHI GERI

def: kicking open the gates

In contrast to imidacloprid, bifenthrin is a pyrethroid insecticide that acts as **an axonic toxin**. The nerve axon is electrically polarised; when a message passes along the axon it does so through the effects of sodium and potassium 'gates'. Pyrethroids affect the polarity of the nerve by keeping the 'sodium gates' open; so the insects go into convulsions.

Unlike most other pyrethroids, bifenthrin contains no alpha-cyano group, and since the combination with imidacloprid allows it to be used at a reduced level, it means that BITHOR DUAL ACTION is essentially non-repellent.

This ensures the insect will remain in contact with the treated surface longer. This means BITHOR DUAL ACTION is more effective, even at lower concentrations, which in turn improves the performance of the product.



BITHOR® DUAL ACTION

FAMILY FRIENDLY NINJAS

While the thought of BITHOR DUAL ACTION is making household insects nervous, it has a different effect on your family members. This is because mammals and insects have structural differences in their nervous systems. A range of toxicology studies were

performed on BITHOR DUAL ACTION Insecticide to confirm the safety of the product with the combination of actives. All studies were performed by Eurofins Product Safety Laboratories in New Jersey, USA; in accord with US EPA and OECD guidelines.

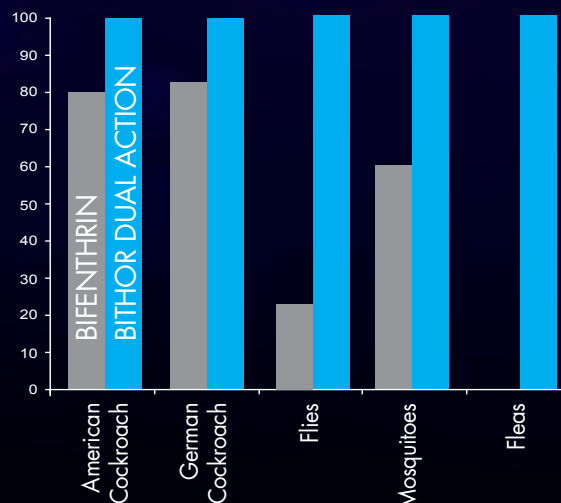
Test	Result	Comments
Acute Oral (rat) LD ₅₀	1,098 mg/kg	Female rats were selected for the test since they are more sensitive.
Acute Dermal (rat) LD ₅₀	>2,000 mg/kg	At this dose rate no mortality was observed, all animals continued to gain body weight, and no clinical abnormalities were observed.
Primary Eye Irritation (rabbit)	Mildly irritating	All animals recovered with no ill effects.
Dermal Sensitisation (mouse)	Not a dermal sensitiser	Product was tested at 100% and applied for three consecutive days.
Acute Inhalation (rat) LC ₅₀	>5.11 mg/kg	All animals survived and appeared active and healthy at the end of the exposure period.
Primary Skin Irritation (rabbit)	Slightly irritating	All symptoms cleared after 48 hours.

UNSTOPPABLE AGAINST HOUSEHOLD INSECTS

In a series of independent laboratory trials*, BITHOR DUAL ACTION showed significantly improved performance when compared to a bifenthrin positive control formulation, indicating the synergistic effects of the combined actives. Trial used just thirty minutes exposure periods! Surfaces are timber or glass.

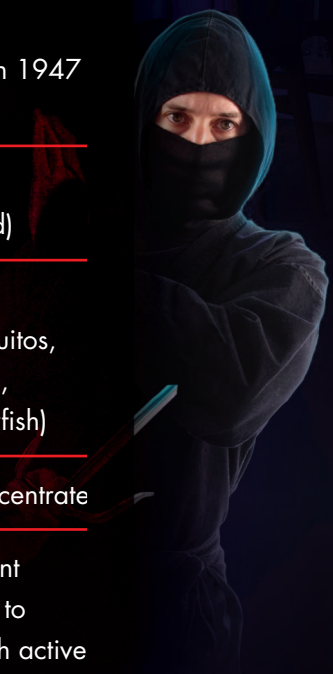
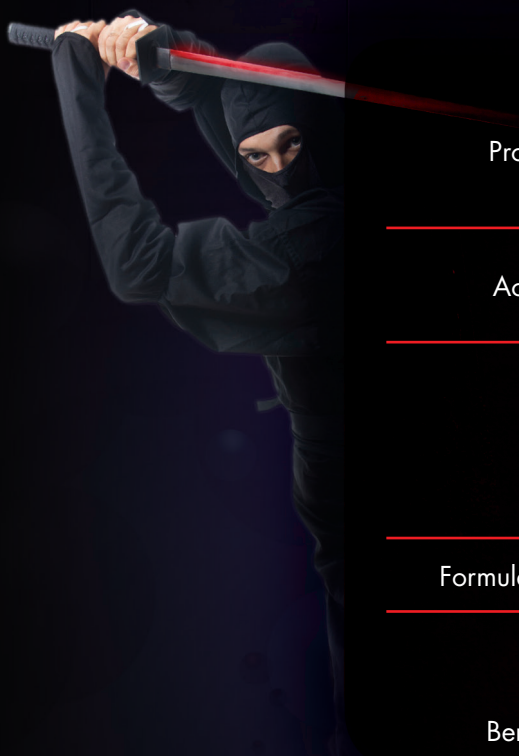
At 90 days BITHOR DUAL ACTION still provided 100% mortality against German cockroaches (*Blattella germanica* Linnaeus), house flies (*Musca domestica* Linnaeus), mosquitoes (*Aedes aegypti* Linnaeus) and cat fleas (*Ctenocephalides felis* Bouché).

*Trials conducted by South African Bureau of Standards (SABS).



BITHOR[®] DUAL ACTION

INSECTICIDE



Product	BITHOR DUAL ACTION Insecticide Reg.No.L9717 Act/Wet 36 of/van 1947 Namibian Reg. No. N-AR1729
Actives	45 g/L bifenthrin (pyrethroid) 55 g/L imidacloprid (neonicotinoid)
Pests	Wide variety of household pests including ants, cockroaches, mosquitos, flies, fleas, ticks, bed bugs, spiders, clothes moths and fish moths (silverfish)
Formulation	Water-based micro-suspension concentrate
Benefits	Two actives from two totally different chemical groups combine together to create a synergistic effect with each active

ENSYSTEX[™]
LEADING INNOVATION IN PEST MANAGEMENT

Active ingredient: Bifenthrin (pyrethroid) 45 g/L;
Imidacloprid (chloro-nicotinyl) 55 g/L

ENSYSTEX SOUTH AFRICA (PTY) LTD
Building 3, The Burns Business Park
12 A Jet Park Road, Jet Park, 1460
www.ensystex.co.za

PHONE 080 ENSYSTEX / +27 11 894 3845



- ✓ **PREMIUM QUALITY** YOUR COMPLETE SATISFACTION GUARANTEED OR A FULL REFUND
- ✓ **COMMITTED TO YOU** TECHNICAL SUPPORT AVAILABLE 24HRS 365 DAYS A YEAR
- ✓ **UNRIVALLED EXPERTISE** ALWAYS DELIVERING YOU THE ADVICE YOU NEED, WHEN YOU NEED IT

© BITHOR is a registered trademark of Ensystex, Inc. used by licence to Ensystex Philippines Inc.
BROB2001 2.03 03.20