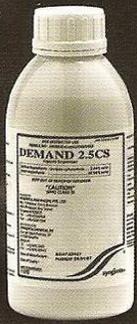


# demand<sup>®</sup>CS

INSECTICIDE

with iCAP<sup>™</sup> technology

A micro-encapsulated insecticide formulation combining the ease of use of a liquid with the residual power of a wettable powder



# introduction

## What is Demand® 2.5CS?

Demand® 2.5CS is a formulation containing microcapsules of lambda-cyhalothrin suspended in water. The slow release of the active ingredient provides long-lasting residual control up to 4 months depending on substrate and dose rate.

Demand® 2.5CS (capsule suspension) is a modern, high-technology insecticide developed for the most demanding pest controllers. Demand® 2.5CS formulation contains 25 grams/litre lambda-cyhalothrin to control a broad range of insect pests, both indoors and outdoors. These unique water-based formulations avoid the use of organic solvents and are among the most powerful insecticides available for the control of public health pests; such as mosquitoes, flies and other flying insects, and cockroaches, ants and other crawling insects.

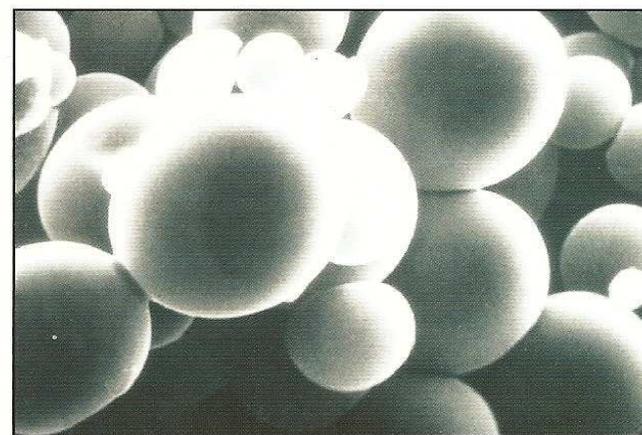
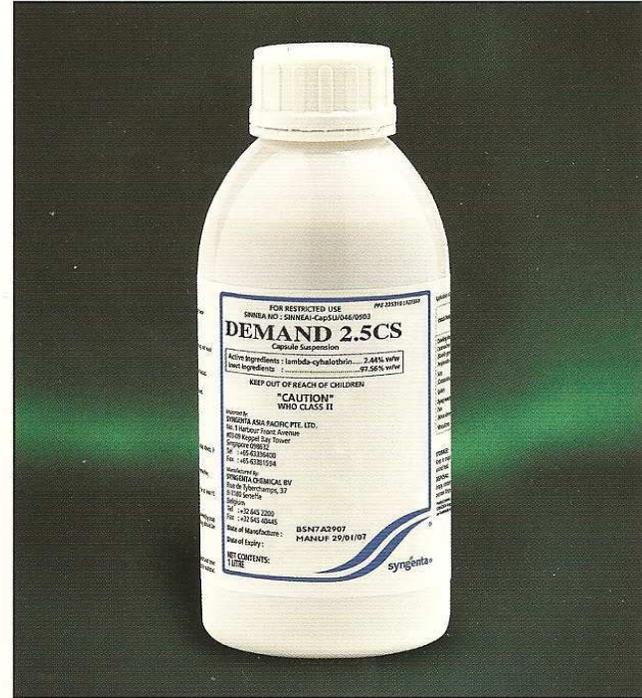
Demand® 2.5CS uses state-of-the-art microcapsule technology to give a product that combines the ease of use of an emulsifiable concentrate with the long-lasting residual strength of a wettable powder. Tiny droplets of lambda-cyhalothrin are contained within microcapsules in a creamy white suspension. In use, the products are diluted in water and applied to surfaces using conventional compression sprayer equipment.

After spraying, the water evaporates to leave the microcapsules on treated surfaces. The active ingredient remains isolated from the environment within the microcapsules and this protection provides extended duration effect, of especially on challenging surfaces such as cement. Insects moving over treated surfaces pick up microcapsules on their bodies. Once attached to the insects, the active ingredient rapidly moves out of the capsule and into the insect, providing a rapid knockdown effect followed by quick kill.

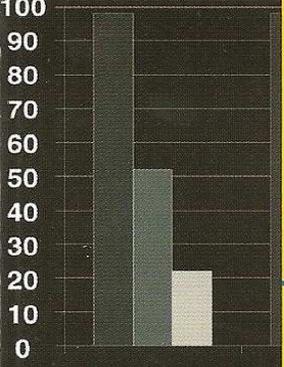
## Composition and WHO classification

After worldwide testing, lambda-cyhalothrin formulation is now registered and used in over 100 countries. It is approved by the Health and Safety Executive (HSE) in the UK and the Environment Protection Agency (EPA) in the USA for the control of pest insects and is approved by the World Health Organization for the control of insects that are the vectors of diseases such as malaria and dengue fever.

Demand® 2.5CS formulation contains 25 grams of lambda-cyhalothrin per litre. In terms of its acute toxicity, it is placed in the lowest hazard category, "WHO Class III".



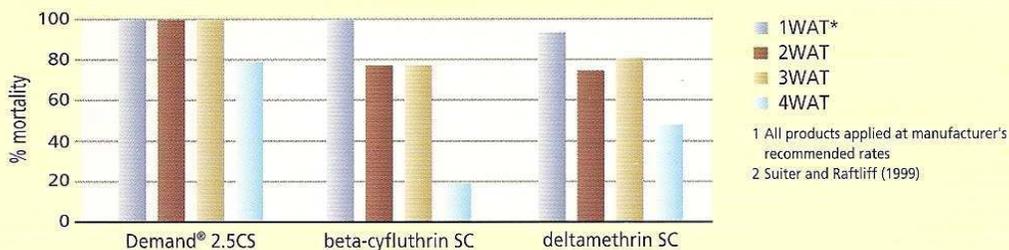
Close-up of Demand® 2.5CS microcapsules



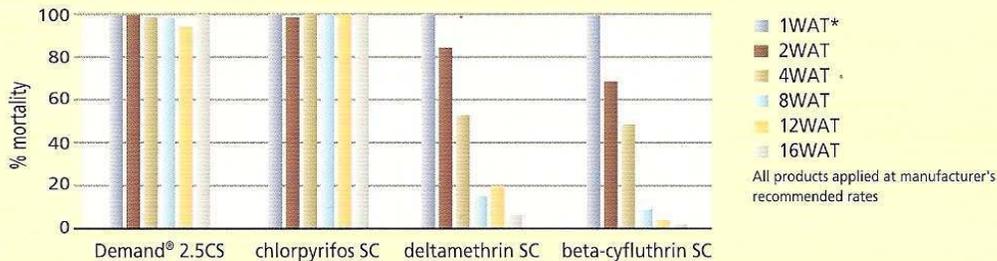
# technical data



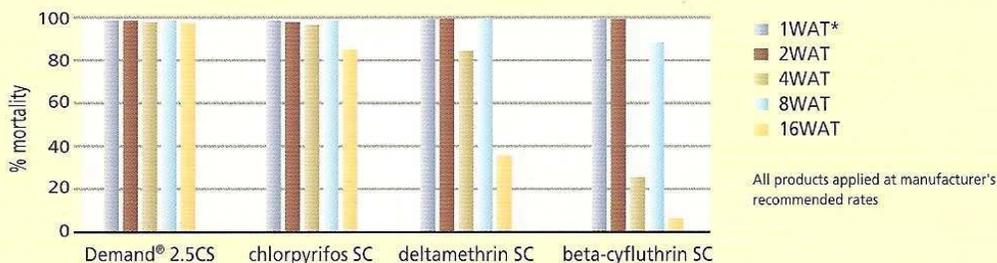
**Residual bioefficacy of Demand® 2.5CS against *Tetramorium caespitum* (pavement ant) and *Prenolepis imparis* (false honey ant)**



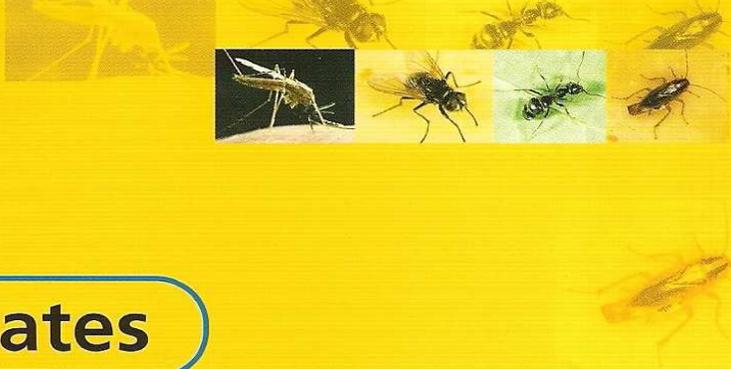
**Residual efficacy of Demand® 2.5CS and competitive products on cement. Mortality of *Blattella germanica* (German cockroach) 48 hrs after a 5 minute exposure**



**Residual efficacy of Demand® 2.5CS and competitive products on cement. Mortality of *Musca domestica* (House-flies) 24 hrs after 60 minute exposure**



\* WAT=weeks after treatment



# application & rates

Target insect & situation	Maintenance Rate		Clean-out Rate	
	Dose (ml) in 10 litres water 2.5CS	Active ingredient per m <sup>2</sup> of treated surface*	Dose (ml) in 10 litres water 2.5CS	Active ingredient per m <sup>2</sup> of treated surface*
<b>Outdoors:</b> Flying and crawling insects, mosquitoes, flies, sand flies, cockroaches, ants, etc.	100	10mg	200	20mg
<b>Indoors:</b> Flying and crawling insects, mosquitoes, flies, cockroaches, ants, fleas, bedbugs, etc.	100	10mg <small>*40 ml of spray solution is applied to each m<sup>2</sup> of treated surface</small>	200	20mg <small>*40 ml of spray solution is applied to each m<sup>2</sup> of treated surface</small>

## How to use Demand® 2.5CS

Always read the instructions on the label before using Demand® 2.5CS product. The quantity of Demand® 2.5CS to be used depends on the insects to be controlled and the intensity of their infestation, the location of the infestation (indoor/outdoor) and the surfaces (porous/non-porous/greasy) to be treated. Applications for heavy infestations, outdoor infestations, and difficult surfaces, require the use of higher rates of application than routine treatments and those conducted indoors. Routine treatments, which may be preventative in nature, are made at the lower, 'maintenance rate' (see Table). The treatment of established infestations may require the use of the higher 'clean-out' rate. The spray solution should be shaken in the tank before use and again if spray operations are interrupted. The product is also recommended for use in low-pressure crack and crevice treatments. Demand® 2.5CS can be tank mixed with insect growth regulators.

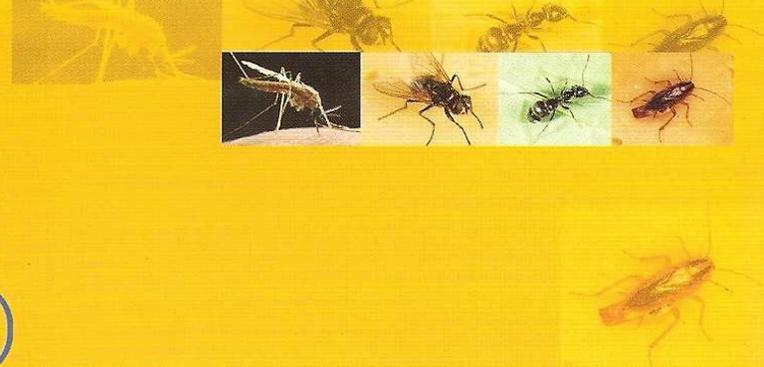
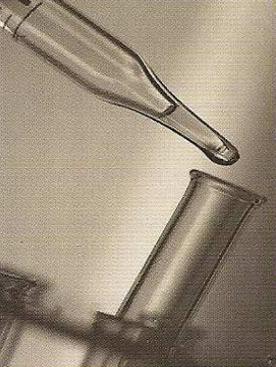
## When and where to use Demand® 2.5CS

Spray Demand® 2.5CS as soon as signs of infestations are noticed. Delay allows the infestations to become harder to eradicate, thereby adding time and costs to the operations. Follow the initial treatment with repeat applications as necessary.

Demand® 2.5CS can be sprayed anywhere and in any area that insects are causing problems for people and/or animals, such as factories, restaurants, food processing areas, hospitals, kitchens, bedrooms, etc. However, surfaces on which food will be prepared or stored should not be treated. Demand® 2.5CS can be applied to any surface, either indoors or outdoors, and is effective even on difficult surfaces such as painted wood and cement. It may also be used as a perimeter treatment, for example, by application to masonry, around doors and windows, on window/door screens, around patios and among ornamental shrubs and foliage.

To control house-flies, mosquitoes and other flying insects Demand® 2.5CS should be applied as a coarse low pressure spray on walls and ceilings of houses, dairy farms, animal housing and poultry farms.

Because the microcapsule formulation is not readily absorbed into treated surfaces, Demand® 2.5CS provides a longer duration of effect than emulsifiable concentrates (ECs) - even on cement and painted surfaces. Insects cannot detect and avoid deposits of Demand® 2.5CS because the active ingredient remains inside the microcapsule until it has been picked up by the insect. This distinguishes Demand® 2.5CS from EC or WP-based products.



# toxicology

**Formulation:**

25 g/l lambda-cyhalothrin

**Acute oral LD50:**

> 5000mg/kg body weight (male and female rat)

**Acute dermal LC50:**

> 2000 mg/kg body weight (rat)

**WHO Class:**

Green colour band.  
Products unlikely to produce hazard in normal use.

**Soil:**

Lambda-cyhalothrin is readily degraded in most soils and the products of degradation are ultimately converted to carbon dioxide and other benign metabolites. It does not leach through the soil. It is almost insoluble in water.

**Water:**

Although lambda-cyhalothrin can be shown to be toxic to fish and some aquatic invertebrate organisms under laboratory conditions, it presents little hazard to aquatic life under actual field conditions due to the very low rates at which it is applied.

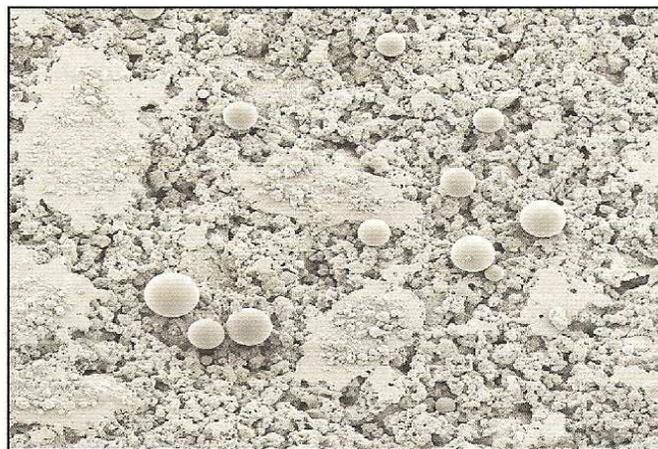
**Crop residues:**

Application of Demand® 2.5CS for the control of nuisance pests is unlikely to lead to the contamination of crops or livestock.

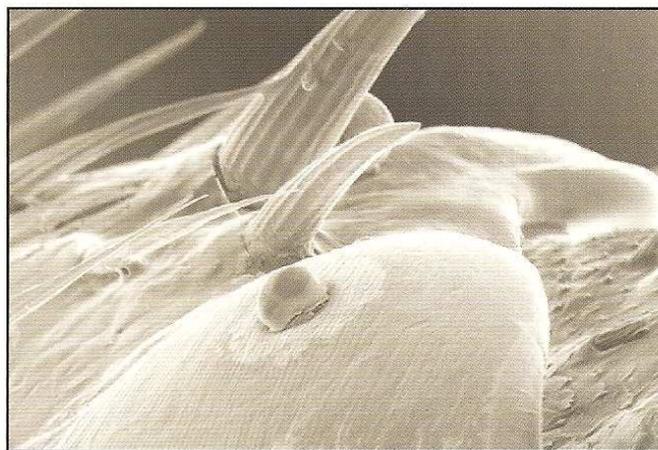
**Impact on wildlife:**

Lambda-cyhalothrin has very low toxicity to birds and moderate toxicity to honey bees.

**ALWAYS READ THE LABEL CAREFULLY. USE PESTICIDES SAFELY**



Demand® 2.5CS microcapsules shown on concrete



Demand® 2.5CS microcapsules on a cockroach leg



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### **Powerful**

Good knockdown.  
Excellent residual action.

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### **Versatile**

Works well on a wide range of surfaces.  
Controls a wide range of pests detrimental to public health.

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### **Easy to use**

Mixes quickly and easily.  
Doesn't clog equipment or cause nozzle wear.

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### **Customer friendly**

Water-based.  
No stains.  
Low odour.

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**syngenta**<sup>®</sup>

READ THE LABEL BEFORE USE : USE PESTICIDES SAFELY.

Demand<sup>®</sup> 2.5CS contains lambda-cyhalothrin

Demand<sup>®</sup> 2.5CS is a registered trademark of Syngenta Group Company © Syngenta 2006

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