



THE PES AFRICA GUIDE TO COCKROACHES

PREVENT. CONTROL. ELIMINATE



overview

Water, food and shelter are all that cockroaches need to thrive. Pathogen and Environmental Solutions is the leading providers of pest control products to the professional pest control industry with more than 200 years of industry experience.

We have an extensive knowledge base on cockroach species, behaviors and habits, and what the most effective methods of **prevention, control and elimination** are.

This guide is designed to provide helpful information on cockroaches, and how to identify, inspect and treat areas of cockroach infestation. With these tips, you can help your customers improve sanitation and control cockroach infestations in their facilities.

FACT:

Cockroaches learn which nutrients their body requires most and then seek these out.



identifying the three common cockroach species in South Africa

GERMAN



up to
1.6
centimeters

The **German cockroach**, which is only found indoors, is best identified by its small size and by the two dark parallel lines running from the back of the head to the wings.

ORIENTAL



up to
3.2
centimeters

The **Oriental cockroach** is dark brown to black in colour. The male's wings cover 3/4 of the abdomen; the female wings are extremely short and underdeveloped.

AMERICAN



up to
5
centimeters

The **American cockroach** is the largest in size of all the common cockroach species. They are often found outdoors but can infest indoor areas as well.

bait application

USAGE

Remove any source of food from the infested area. Inject the cockroach gel into grooves, and cracks where the cockroaches live, feed and breed, especially areas that contribute to their development: Damp, Warm and Dark eg. behind furniture and appliances.

RATE OF APPLICATION

Always apply according to the product's label instructions. PES Africa's Advion Cockroach Gel should be applied as a number of small spots of approximately 5mm in diameter. A spot of gel bait of 5mm in diameter weighs approximately (0.1g).

In cases of severe infestation, where large amounts of cockroaches are present, in areas that are particularly dirty or cluttered or where alternative sources of food cannot be entirely eliminated, a higher application rate is recommended.

INFESTATION	APPLICATION	SPOT SIZE
Low Infestation	Apply 2 spots x 0.1 gr (5mm size) per m ²	 2 x 0,1g/ m ²
Heavy infestation	Apply 5 spots x 0.1 gr (5mm size) per m ²	 5 x 0,1g/ m ²
Heavy Infestation (Recommended close to know harborage sites)	Apply 1 thin line of 5cm x 0.3cm or 1 spot of (10mm size) 0.5 gr per m ²	 5 cm x 0.3 cm  1 x 0,5g/ m ²

COMMON COCKROACH SPECIES



- American Cockroach
- Brown-Banded Cockroach
- German Cockroach
- Oriental Cockroach
- Smokybrown Cockroach

Advion® Cockroach Gel:

An advanced solution for cockroach control



- ▶ New active ingredient, new mode of action
- ▶ Bio-activated by the cockroach
- ▶ Extremely attractive formulation, no bait aversion
- ▶ The only bait to perform tertiary kill
- ▶ Kills more cockroaches with less bait
- ▶ Long-lasting after application
- ▶ Complete control of all key cockroach species
- ▶ Ideal for use in food handling establishments



Advion® Cockroach Gel: toxicity profile

Advion® Cockroach Gel	
▶ Acute Oral	▶ >5000 mg/kg
▶ Acute Dermal	▶ >5000 mg/kg
▶ Acute Inhalation	▶ NA
▶ Eye Irritation	▶ Not an irritant
▶ Dermal Irritation	▶ Not an irritant
▶ Skin Sensitization	▶ Not a sensitizer

best practices

INSPECTION & MONITORING



LOOK FOR SANITATION ISSUES

Use a flashlight during inspections to look under and behind furniture, appliances and storage items. A good pair of kneepads and a inspection mirror will allow you to view hard to-reach areas.



TAKE PICTURES

Use a mobile device and selfie stick to take photos of areas that are difficult to access, such as refrigerators or in ceilings, especially if you don't have a ladder.



EXAMINE GLUE TRAPS

- Move glue traps around to identify the direction a cockroach was moving, which will help to find the harbourage area.
- Check the life stages of the cockroaches captured on the glue trap. A lot of small instars (adolescent cockroaches) can indicate a recent hatch or close proximity to the harbourage area. If the glue trap has captured cockroaches in multiple life stages - especially adult males - it indicates under-baiting.
- Date glue traps so you will know how long they have been in use.

SANITATION



REMOVE FOOD SOURCES

To spur cockroaches to eat the bait, eliminate competing food sources in the area.



USE A VACUUM

- Vacuuming is a quick way to reduce a cockroach population and increase the effectiveness of baits and residuals.
- Determine the efficacy of the treatment by returning to vacuum up dead cockroaches; the more dead cockroaches there are, the more likely the control method is working.

best practices cont.

INSPECTION & MONITORING



TARGET HARBOURAGE

The majority of a cockroach population consists of young nymphs, which are more likely to stay near the harbourage area. Place the bait as close to the harbourage area as possible so the nymphs are more likely to find and eat it.



STAY LOW

Cockroaches are found in many different places, so you will need to get on your hands and knees for optimal bait placement. Some areas may require you to apply bait behind or underneath furniture or appliances.



ROTATE & TEST BAITS

Minimize bait aversion by rotating baits with a different matrix. If the cockroach population keeps growing, try placing two or three different types of bait close to the harbourage area. If all baits are gone after 24 hours, under-baiting was likely the problem. If only one bait has been eaten, the cause could be bait aversion.



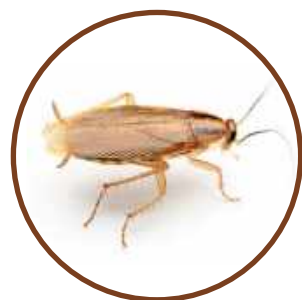
USE MULTIPLE METHODS

For best results, employ different control methods:

- Try spot spray treatment using an approved product with residual properties.
- Dust in wall voids, behind switch plates and socket covers.
- Use an Ultra Low Volume (ULV) treatment in drop ceilings.
- Seal any noticeable cracks and crevices with caulk (after first informing the customer).



AGENT PEST BAIT



- **Agent Pest Bait:** A new hydramethylnon-based cockroach gel bait from Villa Public Health.
- Hydramethylnon: A tried and trusted active ingredient for 20 years.
- Now you can source all your cockroach gel bait actives from one company (hydramethylnon, fipronil, imidacloprid).
- Manufactured by a proudly South African company – Villa Public Health.
- Three active ingredients and three modes of action.
- Practise rotation with Villa Public Health cockroach gels to prevent insecticide resistance developing.
- Three different gel matrixes will prevent gel bait aversion from developing.

APPLICATION AREAS

- Kitchens in restaurants and hotels
- Industrial kitchens in food processing plants
- In the home
- Staff rooms
- Locker rooms
- Sewers
- Bakeries
- Ships
- Submarines (in disposable bait stations)
- Fast food outlets
- Food storage areas

PESTS CONTROLLED

- All pest cockroach species, particularly American and German cockroaches.
- Other insects may be attracted to and feed on Agent and thus be controlled – ants, house crickets and fish moths.

APPLICATION

Attach a 30g cartridge to a suitable gel applicator. Remove cap, attach application tip and place small drops in cockroach harbourages. Smaller drops, applied more frequently, will give better control.

DOSAGE

Normal rates

American cockroach

Place two spots of 0,25g gel per m².

German cockroach

Place one spot of 0,25g gel per m².

High rates

American cockroach

Place three spots of 0,25g gel per m².

German cockroach

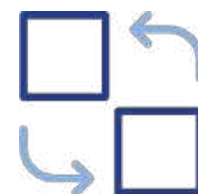
Place two spots of 0,25g gel per m².



ALWAYS READ ALL PESTICIDE LABELS THOROUGHLY BEFORE USE

best practices cont.

CUSTOMER COMMUNICATION



REPLACE CARDBOARD

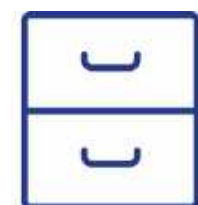
Recommend that your customer replace all cardboard storage with plastic or metal containers, as cockroaches frequently hide in corrugated cardboard boxes.



PRIORITIZE TASKS

Give your customer one or two specific and manageable tasks that are the most critical at that time. For example, remind the customer to do the dishes and seal all food packages every night.

BUSINESS & PRODUCT TIPS



STORE BAIT CAREFULLY

Be mindful not to contaminate the bait when it is in storage, know the expiry date and avoid extreme heat, smoke, exhaust, cleaners, paint and other volatiles.

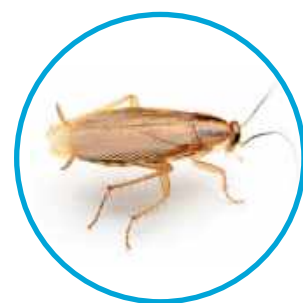


ALLOCATE RESOURCES FOR CLEAN OUTS

Initial cleanouts are a significant investment, as they require a great deal of time and effort and may require more frequent follow-up treatments to control the cockroach population. A PCO should plan accordingly for cleanouts and additional services.



ROSSI 200 SUPER



Rossi 200 Super is the last word in insecticide resistance management in residual sprays. A combination of active ingredients in two chemical classes with two very different modes of action, **Rossi 200 Super** will address the ever increasing instances of insecticide resistance in South Africa.

Rossi 200 Super is a suspension concentrate formulation (SC) with all the attendant advantages of SC formulations:

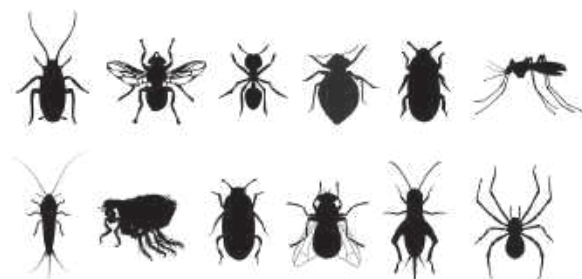
- Low or no odour.
- Very low solvent content is more friendly to the environment.
- Excellent residuality.
- Ease of use and easy mixing.

APPLICATION AREAS

- Homes
- Hotel and restaurant kitchens
- Food processing facilities
- Hostels
- Staff rooms
- Sewers
- Schools and hospitals
- Bakeries
- Commercial, office and industrial facilities
- Poultry houses
- Farm outbuildings
- Fast food outlets



PESTS CONTROLLED



DOSAGE

One easy to remember dosage for all pests: 60 ml in 5 litres water applied to 100 m².

Villa Public Health and Pathogen and Environmental Solutions are pioneers in the management of insecticide resistance and the use of adjuvants with Public Health pesticides. If you need additional information on either of these two topics contact your Villa or Pathogen representative.

AVAILABILITY

ROSSI 200 SUPER is available in 1 litre squeeze and pour bottles.

No more hassles in measuring the right volume – easy to mix and apply – apply the right dosage every time.

tips & tricks

Here are some helpful pointers to use as a reference while on the job.

BAIT CREVICES

Apply bait to cracks and crevices, depositing enough to kill the existing cockroaches.

REMOVE OLD BAIT

Use a putty knife or blade to remove old bait, as the presence of old bait could trigger bait aversion.

CHECK BAIT

Make sure cockroaches are eating the bait. If they are not, try a different bait, with a new food matrix, and rotate baits quarterly to combat bait aversion.

BAIT AVERSION

Don't exclusively use gel bait for control. Including other methods of control helps limit bait aversion and reduces cockroach populations.

PLACE BAIT NEARBY

Put bait near or inside cockroach harbourages. Cockroaches will rarely travel long distances if food is only inches away.

PLACE ENOUGH BAIT

Apply enough bait for the population. Under-baiting will necessitate re-applying frequently without gaining control of the infestation.

CHOOSE LOCATIONS

Don't place bait where pesticide has been applied, or anywhere bait might be washed away or mopped up.

READ LABEL

Read and follow the label to reduce errors and maximize the effectiveness of the bait.

CLEAN UP

Remove any food residue, as it can draw cockroaches away from bait placements.

AVOID FOOD SURFACES

Never apply bait to food or food-handling surfaces.

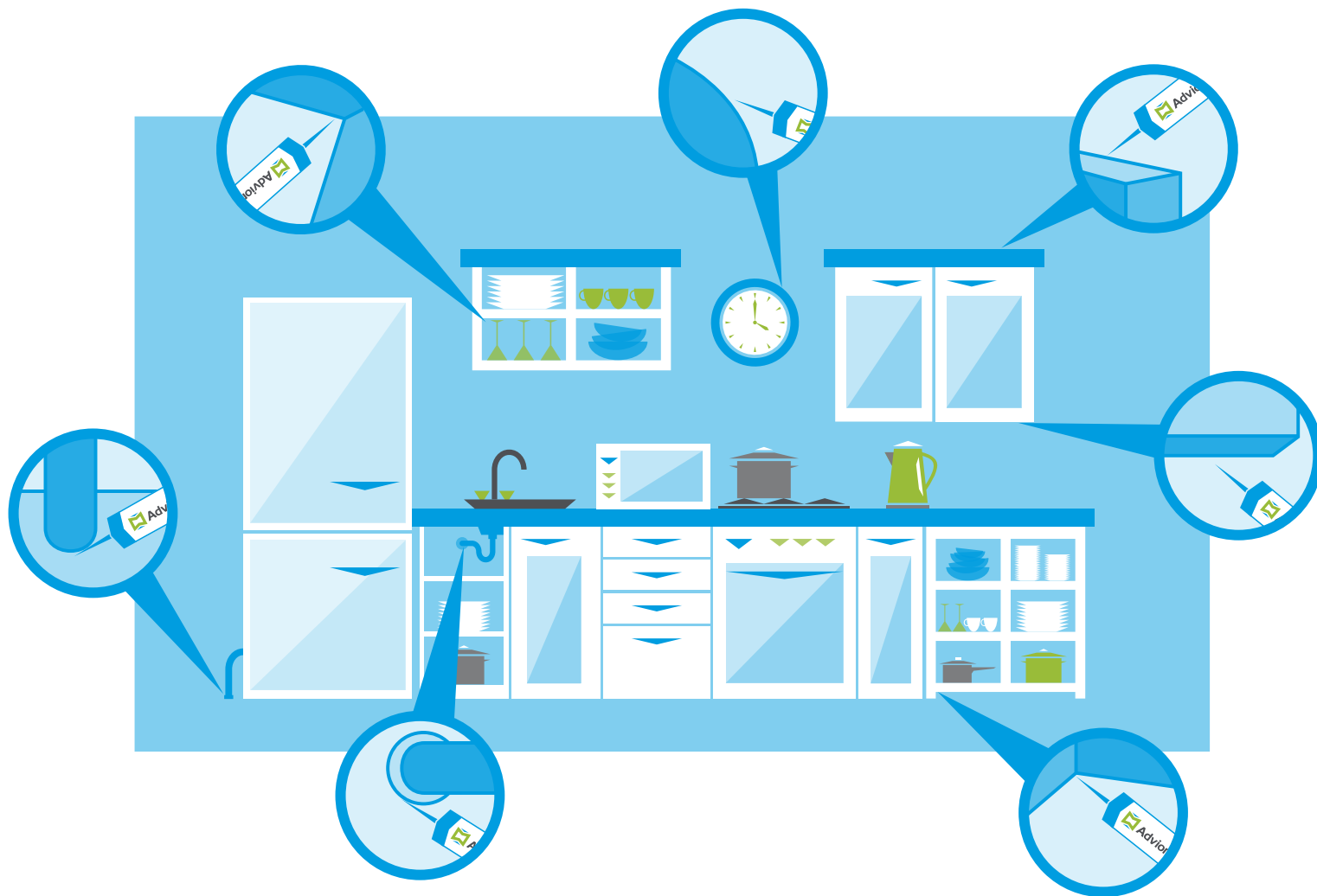
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where to apply cockroach gels?

Cockroach gels are safe to use in sensitive areas such as residential buildings, supermarkets, restaurants, food handling and storage facilities. Apply the gel in places such as :

- Behind and under appliances,
- Hollow spaces in floors, walls and ceilings,
- Around plumbing pipes and under sinks,
- Doors and windows.



The American cockroach can live for up to one year.



The female American cockroach will produce up to 90 egg cases in her lifetime.

WHAT IS A HARBOURAGE?

It's a location, typically warm and damp, where cockroaches seek shelter and reproduce.



92%

OFF ALL COCKROACHES ARE RARELY SEEN OUTSIDE OF THE HARBOURAGE AND EXIST AS A HIDDEN DANGER.

ROSSI INSECT

Rossi bait application

PEST CONTROLLED

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- Food storage areas.



COCKROACH	DOSAGE	
	NORMAL RATES	HIGH RATES
American Cockroach	Apply 2 spots x 0.03 gr per m ²	Apply 3 spots x 0.03 gr per m ²
German Cockroach	Apply 1 spot x 0.03 gr per m ²	Apply 2 spots x 0.03 gr per m ²

“

The key aspect of cockroach baiting is to ensure that plenty of bait is made available, especially when dealing with serious infestations.

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DOSAGE

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German cockroach

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