

HOUSEHOLD AND STRUCTURAL PEST CONTROL – Products for Use by the General Public and Products for Professional Use Only

The following tables provide household and structural pest control recommendations with pesticides for use by the homeowner and with pesticides for use by licensed pest control operators only. Mention of pesticides in this section does not imply that chemicals are or should be the first or only means of control. Nonchemical control methods, including exclusion and sanitation, should always be considered when seeking to obtain a long-term solution to household pest problems.

All chemical information provided below is given with the understanding that no endorsement of named products is intended nor is criticism implied of similar products that are not mentioned. Individuals who use pesticides are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Before purchasing or using any pesticide, always read and carefully follow the label directions.

Insecticides listed below are identified by common chemical name. A trade name in parentheses may also be listed as a convenience for the reader. Additional trade names that may be available locally are listed in the **HOMEOWNER INSECTICIDE PRODUCT LIST** beginning on page 308.

Formulation Designations: A = Aerosol (injectable or spray); B = Bait (gel or granular); D = Dust; F = Fogger (total release aerosol); FM = Foam; FU = Fumigant; G = Granular; P = Powder (for mixing with water); L = Liquid (for mixing with water or ready-to-use); S = Bait (station).

Pests	Insecticide	Formulation	Precautions and Remarks
ANT (a) Indoors (For information on Carpenter Ants , see entry below.)	abamectin (Raid Max Double Control Ant Bait)	S	Place bait stations in areas where ants are active. Keep out of reach of children and pets. Use dust formulations only in inaccessible areas. Repeat treatment as effectiveness diminishes. Some products are not suitable for use in residential kitchens or commercial food/feed preparation sites. Read the product label carefully. Remove food from storage areas before treating. Apply products as directed on the label. Imiprothrin is usually formulated with other pesticides in these products.
	allethrin (Ultra-Kill)	A	
	beta-cyfluthrin (Bayer Advanced)	L	
	bifenthrin (Ortho)	A, L	
	borax/boric acid (Hot Shot, Terro)	B, D, S	
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	
	diatomaceous earth (PermaGuard)	D	
	deltamethrin (Black Flag, Raid, Spectracide)	A, L	
	dinotefuran (Hot Shot)	S	
	eugenol (Bayer Advanced, Bioganic, Raid)	A, D, L	
	fipronil (Combat)	B	
	hydramethylnon (Amdro, Combat)	S	
	imiprothrin (Hot Shot, Raid)	A	
	indoxacarb (Hot Shot)	S	
	lambda-cyhalothrin (Spectracide)	L	
	lemongrass oil (Hot Shot)	A, L	
	mint oil (Victor)	A	
	permethrin (various others)	A, D, G	
	prallethrin (Bengal Hot Shot)	A	
	propoxur (Ortho)	S	
pyrethrins, pyrethrum (Black Flag, Hot Shot)	A		
sodium O-phenylphenate (Bayer Advanced)	A		
tetramethrin (various others)	A		
zeta-cypermethrin (Cynoff)	D		
ANT (b) Outdoors See "Ant" and "Imported Fire Ant" under Home Lawns .	beta-cyfluthrin (Bayer Advanced)	L	Apply granular bait around nest. Place bait stations in areas where ants are active. Treat nest and surrounding area. May be applied along building perimeter. Apply products as directed on the label.
	bifenthrin (Ortho)	G, L	
	borax (Terro)	B	
	cypermethrin (Hi-Yield)	L	
	deltamethrin (Black Flag, Raid, Spectracide)	A, L	

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ANT (b) Outdoors	diatomaceous earth (PermaGuard)	D		
	dinotefuran (Hot Shot)	S		
	fipronil (Combat)	B		
	gamma-cyhalothrin (Spectracide)	G, L		
	hydramethylnon (Amdro, Combat)	B		
	indoxacarb (Hot Shot, Spectracide)	S		
	lambda-cyhalothrin (Hot Shot, Spectracide, Terro)	L		
	permethrin (various others)	L		
	prallethrin (Spectracide)	A		
	tetramethrin (various others)	L		
	zeta-cypermethrin (Cynoff)	D		
BED BUG	beta-cyfluthrin (Bayer Advanced)	L	Apply to mattress tufts and folds, crevices in bed frame and cracks and crevices along baseboard. Mattress heat sanitizing is an alternative.	
	deltamethrin (Black Flag)	L		
	diatomaceous earth (PermaGuard)	D	Apply products as directed on the label.	
	eugenol (Bioganic, Raid)	A, D		
	imiprothrin (Raid)	A	Imiprothrin is formulated with other pesticides in these products.	
	lambda-cyhalothrin (Hot Shot)	L		
	permethrin (various others)	L, A		
	phenoxybenzyl (Bayer, Black Flag, Hot Shot)	A		
	prallethrin (Hot Shot)	A		
	silicon dioxide	D		
	sumithrin (Enforcer)	A, L		
	zeta-cypermethrin (Cynoff)	D		
BEE (a) Indoors	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	Apply only for sporadic invaders. If bees are found frequently, locate and remove the nest.	
	diatomaceous earth (PermaGuard)	D		
	eugenol (Bioganic)	A, D	Apply products as directed on the label.	
	imiprothrin (Raid)	A		
	permethrin (various others)	A		
	pyrethrins, pyrethrum	A, L		
	resmethrin (Spectracide)	A, L		
	tetramethrin (various others)	A		
BEE (b) Outdoors	beta-cyfluthrin (Bayer Advanced)	L	Apply after dark when insects have returned to nest. Some materials are available in pressurized cans that propel an insecticide stream up to 10 feet. Repeat treatment may be necessary.	
	bifenthrin (Ortho)	L		
	carbaryl (various others)	D, L, P		
	For carpenter bees, see Carpenter Bee entry.	cypermethrin (Hi-Yield)	L	Apply products as directed on the label.
		deltamethrin (Raid)	L	
	eugenol (Bioganic)	A, D		

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BEE (b) Outdoors (cont.) For carpenter bees, see Carpenter Bee entry.	gamma-cyhalothrin (Spectracide)	L	Apply after dark when insects have returned to nest. Some materials are available in pressurized cans that propel an insecticide stream up to 10 feet. Repeat treatment may be necessary. Apply products as directed on the label.
	permethrin (various others)	A, L	
	prallethrin (Hot Shot)	A	
	tetramethrin (various others)	L	
	zeta-cypermethrin (Cynoff)	D	
BOOKLOUSE (psocid) (Indoors and outdoors)	allethrin (Ortho)	A	Apply as a barrier spray along foundation and entry points (doors and windows). Read labels to determine which products are suitable for indoor use. Clean up moisture problems that may attract insects indoors. Excess moisture may impede product effectiveness. Imiprothrin is formulated with other pesticides in these products.
	beta-cyfluthrin (Bayer Advanced)	L	
	bifenthrin (Ortho)	L	
	cypermethrin (Spectracide)	A	
	diatomaceous earth (PermaGuard)	D	
	eugenol (Bioganic, Raid)	A, D	
	imiprothrin (Raid)	A	
	mint oil (Victor)	A	
	permethrin (various others)	L	
	pyrethrins, pyrethrum	A	
tetramethrin (various others)	A		
BOXELDER BUG (Outdoors)	beta-cyfluthrin (Bayer Advanced)	L	Harmless insects become nuisances when searching indoors for hibernation sites in the fall. Treat door thresholds, window ledges and other areas where the insects congregate or may gain entry.
	bifenthrin (Ortho)	L	
	deltamethrin (Spectracide)	L	
	gamma-cyhalothrin (Spectracide)	L	
	permethrin (various others)	L	
BROWN DOG TICK (a) Indoors	allethrin (Ortho)	A, L	Spot-treat pet beds (not actual bedding) along with cracks, crevices and similar hiding areas. DO NOT apply to animals (see also ANIMAL INSECT CONTROL section). Discard or launder infested bedding in hot, soapy water. Imiprothrin is formulated with other pesticides in these products.
	beta-cyfluthrin (Bayer Advanced)	A, L	
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	
	deltamethrin (Spectracide)	L	
	diatomaceous earth (PermaGuard)	D	
	eugenol (Bioganic, Raid)	A, D	
	imiprothrin (Black Flag)	A	
	gamma-cyhalothrin (Spectracide)	L	
	permethrin (various others)	A	
	pyrethrins, pyrethrum	A	
tetramethrin (various others)	A		

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Pests	Insecticide	Formulation	Precautions and Remarks
BROWN DOG TICK (b) Outdoors and under buildings	beta-cyfluthrin (Bayer Advanced)	L	See also ANIMAL INSECT CONTROL section.
	bifenthrin (Ortho)	G	
	cypermethrin (Hi-Yield)	L	
	deltamethrin (Black Flag, Spectracide)	L	
	diatomaceous earth (PermaGuard)	D	
	eugenol (Bioganic, Raid)	A, D	
	gamma-cyhalothrin (Spectracide)	G, L	
	permethrin (various others)	L	
tetramethrin (various others)	L		
CARPENTER ANT (a) Indoors	abamectin (Advance)	B	Apply as directed on label.
	acetamiprid (Transport)	L	Apply as directed on label. Also contains bifenthrin.
	allethrin (Ortho)	A	Apply as directed on label.
	beta-cyfluthrin (Bayer Advanced, Tempo)	L	Apply as directed on label.
	bifenthrin (Ortho, Transport)	A, L	Apply as directed on label. Also contains acetamiprid.
	boric acid (Niban, PermaDust)	B	Apply as directed on label.
	chlorfenapyr (Phantom)	L	Apply as directed on label.
	deltamethrin (Bayer Advanced, Spectracide, Suspend)	L	Apply as directed on label.
	dinotefuran (Alpine)	FM, L	Apply as directed on label.
	fipronil (Combat, Maxforce)	B	Bait where you see ant activity. Apply as directed on label.
	imidacloprid + cyfluthrin (Temprid SC)	L	Apply as directed on label.
	indoxacarb (Advion, Arilon)	B, L	Apply as directed on label.
	lambda-cyhalothrin (Demand, Spectracide)	FM, L	Apply as directed on label.
	permethrin (Dragnet, various others)	L	Apply as directed on label.
	sodium borate (Boracare, Timbor, Spectracide, Terminate)	D, L	Apply as directed on label.
thiamethoxam (Optigard)	L	Apply as foam to wall voids or infested wood.	
zeta-cypermethrin (Cynoff)	D	Apply dust formulation directly to galleries.	
CARPENTER ANT (b) Outdoors	abamectin (Advance)	B	Apply as directed on label.
	acetamiprid + bifenthrin (Transport)	L	Apply as directed on label. Also contains bifenthrin.
	beta-cyfluthrin (Bayer Advanced, Tempo)	L	Treat into and around the nest, then seal holes.
	bifenthrin (Ortho, Bifen, Talstar)	L	Spray or inject into wood.
	boric acid (Niban, PermaDust)	B	Apply as directed on label.
	chlorfenapyr (Phantom)	L	Apply as directed on label.
	cyfluthrin (Bayer Advanced)	L	Apply as directed on label.
	cypermethrin (Hi-Yield, Martin's Viper, Demon TC)	L	Treat into and around the nest.
	deltamethrin (Suspend)	L	Treat into and around the nest.
	dinotefuran (Alpine)	FM, L	Apply as directed on label.

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CARPENTER ANT (b) Outdoors (cont.)	fipronil (Maxforce, Termidor)	B, G, P	Apply bait granules in ant foraging areas. Water area after applying granules.	
	gamma-cyhalothrin (Spectracide)	L	Apply as directed on label.	
	hydramethylnon (Maxforce)	B	Apply granules along perimeter of building or nest. (Maxforce is for professional use.)	
	imidacloprid + cyfluthrin (Temprid SC)	L	Apply as directed on label.	
	indoxacarb (Arilon)	L	Apply as directed on label.	
	lambda-cyhalothrin (Demand, Spectracide)	L	Apply as directed on label.	
	permethrin (Dagnet, various others)	L	Apply as crack and crevice or spot treatment or paint onto surface. Application by drilling and injecting is also permitted.	
	sodium borate (Boracare, Timbor, Spectracide)	L, D, P	Spray, brush on or inject into wood. For long-term protection, apply a water repellent stain to exterior wood surfaces two to three weeks after treatment.	
	zeta-cypermethrin (Cynoff)	D		
CARPENTER BEE	beta-cyfluthrin (Bayer Advanced, Tempo)	L	Apply liquid as a surface spray and into entrance hole. Seal entrance hole.	
	bifenthrin (Ortho, Talstar)	L	Apply as a coarse surface spray and into entrance hole. Seal entrance hole.	
	boric acid (PermaDust, PT 240)	B	Apply as directed on label.	
	carbaryl (various others)	D, L	Apply liquid as a surface spray and into entrance hole. Puff into and around entrance holes using dust applicator. Seal with wood plugs, putty, or stainless steel wool.	
		cypermethrin (Demon TC)	L	Treat into and around the nest.
		deltamethrin (Spectracide, Suspend SC)	D, L	Apply liquid as a coarse surface spray and into gallery entrance. Puff into and around entrance holes using dust applicator. Seal with wood plugs, putty or stainless steel wool.
		imidacloprid + cyfluthrin (Temprid SC)	L	Apply as directed on label.
		lambda-cyhalothrin (Demand, Spectracide)	L	Spray or inject into wood. Seal holes in wood before injecting. Avoid runoff.
		permethrin (Dagnet)	L	Spray or inject into wood. Seal holes in wood before injecting. Avoid runoff.
		sodium borate (Boracare, Timbor, Spectracide)	D, P	Apply dust formulation directly into galleries.
		zeta-cypermethrin (Cynoff)	D	Apply dust formulation directly into galleries.
CARPET BEETLE (a) Nonfabric areas and infested areas of carpets only	allethrin (Ortho)	A, L	Treat cracks, crevices and hidden areas to point of runoff with spray. Moisten but DO NOT saturate fabric. For valuable rugs or cloth items, consider hiring a pest control professional.	
	beta-cyfluthrin (Bayer Advanced)	A		
	bifenthrin (Ortho)	A, L		
	cypermethrin (Black Flag)	A		
	deltamethrin (Black Flag, Spectracide)	A		
	diatomaceous earth (PermaGuard)	D		
	eugenol (Bioganic)	A, D		
	imiprothrin (Hot Shot)	A	Imiprothrin is formulated with other pesticides in these products.	
	gamma-cyhalothrin (Spectracide)	L		
	prallethrin (Ortho)	A		
	pyrethrins, pyrethrum	A		
	zeta-cypermethrin (Cynoff)	D	Use Cynoff Insecticide as a crack and crevice treatment in closets and other storage areas where these pests are found. This is an adjunct treatment and will not control moth larvae already on the clothes. DO NOT apply this product directly to clothing.	

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Pests	Insecticide	Formulation	Precautions and Remarks
CARPET BEETLE (b) On fabric	allethrin (Ortho)	A, L	Other pyrethroids are also available ready-to-use. While many are specifically recommended for clothes moths, they are also effective on carpet beetles. DO NOT saturate fabric.
	diatomaceous earth (PermaGuard)	D	
	prallethrin (Black Flag)	A	
	pyrethrins, pyrethrum	A, L	
CENTIPEDE (a) Indoors	allethrin (Ortho)	A, L	Usually infest damp areas such as basements. Spot-treat cracks, crevices and moldings where pests may crawl. Some products are not suitable for use in residential kitchens or commercial food/feed preparation sites. Read the product label carefully. Imiprothrin is formulated with other pesticides in these products.
	beta-cyfluthrin (Bayer Advanced)	A, L	
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	
	deltamethrin (Spectracide)	L	
	diatomaceous earth (PermaGuard)	D	
	eugenol (Bioganic, Raid)	A, D	
	gamma-cyhalothrin (Spectracide)	L	
	imiprothrin (Hot Shot, Raid)	A	
	permethrin (various others)	A	
	prallethrin (Ortho)	A	
pyrethrins, pyrethrum	A		
zeta-cypermethrin (Cynoff)	D		
CENTIPEDE (b) Outdoors	beta-cyfluthrin (Bayer Advanced)	L	Treat infested areas around building foundations, vents and similar access points. Barrier sprays of 12 to 18 inches along perimeter may be effective.
	bifenthrin (Ortho)	G	
	cypermethrin (Hi-Yield)	L	
	deltamethrin (Spectracide)	L	
	diatomaceous earth (PermaGuard)	D	
	gamma-cyhalothrin (Spectracide)	L	
	permethrin (various others)	L	
	tetramethrin (various others)	A	
zeta-cypermethrin (Cynoff)	D		
CHIGGER (red bug) (Outdoors)	beta-cyfluthrin (Bayer Advanced)	L	Apply to grass, bushes and weeds in infested areas. Thoroughly saturate soil, but avoid runoff into ponds, lakes or other bodies of water. Repeat as needed. Apply labeled repellent products to shoes, ankles and legs before entering suspected chigger-infested areas.
	bifenthrin (Ortho)	G, L	
	deltamethrin (Spectracide)	L	
	gamma-cyhalothrin (Spectracide)	L	
	lambda-cyhalothrin (Bonide)	L	
	permethrin (various others)	L	
	tetramethrin (various others)	L	
CLOTHES MOTH (a) Nonfabric areas and infested areas of carpet only			See Carpet Beetle .

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CLOTHES MOTH (b) On fabric			See Carpet Beetle .
CLOTHES MOTH (c) In storage areas	dichlorvos (Pest Strip, Ortho No-Pest Strip)	FU strip	Hang strip in clothes closets or storage chests up to 1,000 cubic feet in capacity. Not for use in occupied rooms or in closets in occupied rooms. Follow label instructions carefully.
	paradichlorobenzene (PDB)	Crystals or similar solid	Effective repellents on clean fabric in airtight enclosures. Avoid contact with plastic buttons and zippers.
CLOVER MITE (a) Indoors	allethrin (Ortho)	A, L	Pests are strictly a nuisance. Treat around door thresholds. Some products are not suitable for use in residential kitchens or commercial food/feed preparation sites. Read the product label carefully. Imiprothrin is formulated with other pesticides in these products.
	beta-cyfluthrin (Bayer Advanced)	A, L	
	deltamethrin (Spectracide)	L	
	diatomaceous earth (PermaGuard)	D	
	eugenol (Bioganic, Raid)	A, D	
	imiprothrin (Raid)	A	
	gamma-cyhalothrin (Spectracide)	L	
	permethrin (various others)	A	
	prallethrin (Ortho)	A	
	pyrethrins, pyrethrum	A	
CLOVER MITE (b) Outdoors	beta-cyfluthrin (Bayer Advanced)	G, L	Treat around points of entry, such as foundations, vents, windows and doors. Maintain a 12-inch wide vegetation-free zone along foundation. Spray 1 to 2 feet high along the foundation wall and a 3- to 5-foot barrier on the grass or landscaped areas around the foundation. Water immediately after applying granules. Apply products as directed on the label.
	bifenthrin (Ortho)	C, G	
	deltamethrin (Spectracide)	L	
	diatomaceous earth (PermaGuard)	D	
	gamma-cyhalothrin (Spectracide)	L	
	permethrin (various others)	G, L	
	tetramethrin (various others)	L	
COCKROACH (a) Indoors	abamectin (Raid Max)	S	Apply sprays along baseboards, under sinks, in cabinets and in other infested areas. Remove and cover food and cooking and eating utensils before spraying cabinets. DO NOT restock shelves until surface dries completely. Some products are not suitable for use in residential kitchens or commercial food/feed preparation sites. Read the product label carefully. Place bait stations in infested areas; follow label instructions. Keep out of reach of children and pets. Sanitation is critical. Before using baits, eliminate other food sources. Place bait stations in cabinets under sinks and behind stoves and refrigerators. Slow acting but gives long-lasting control. Force small amounts into all hidden nesting areas with dust applicator.
	allethrin (Ultra-Kill)	A, L	
	beta-cyfluthrin (Bayer Advanced)	L	
	bifenthrin (Ortho)	A, L	
	boric acid	B, D	
	chlorpyrifos (Hot Shot)	S	
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	
	diatomaceous earth (PermaGuard)	D	
	deltamethrin (Black Flag)	L	
	dinotefuran (Hot Shot)	S	
	eugenol (Bioganic, Raid)	A, D	
	fipronil (Combat)	B, S	

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COCKROACH (a) Indoors	hydramethylnon (Amdro, Combat)	B	Avoid over-application and inhalation of dust. Some formulations may contain pyrethrins or pyrethrum. DO NOT contaminate food preparation or storage sites. Use diatomaceous earth in the same manner as boric acid powders. Hydroprene is an insect growth regulator and should be used with an adulticide. Imiprothrin is formulated with other pesticides in these products. Apply products as directed on the label.
	hydroprene (Egg Stopper)	S	
	imiprothrin (Hot Shot, Raid)	A	
	indoxacarb (Hot Shot)	B	
	gamma-cyhalothrin (Spectracide)	A, L	
	lemongrass oil (Hot Shot)	A, L	
	permethrin (various others)	A	
	prallethrin (Ortho)	A	
	pyrethrins, pyrethrum	A	
	tetramethrin (various others)	F	
zeta-cypermethrin (Cynoff)	D		
COCKROACH (b) Outdoors	beta-cyfluthrin (Bayer Advanced)	A, L	Some species of cockroaches can live indoors and outdoors. Cockroaches that live outdoors tend to hide under mulch, ivy and similar cover. Treat groundcover and along foundation walls, patios and other areas where cockroaches are seen. Certain products cannot be used on or around edible plants. Read product labels for any limitations. Apply products as directed on the label.
	bifenthrin (Ortho)	A, L	
	cypermethrin (Hi-Yield)	L	
	deltamethrin (Spectracide)	L	
	diatomaceous earth (PermaGuard)	D	
	dinotefuran (Hot Shot)	S	
	gamma-cyhalothrin (Spectracide)	G, L	
	hydramethylnon (Amdro, Combat)	B	
	lambda-cyhalothrin (Spectracide)	A, L	
	permethrin (various others)	A, L	
	tetramethrin (various others)	A, L	
zeta-cypermethrin (Cynoff)	D		
CRICKET (Indoors and in crawlspaces)	beta-cyfluthrin (Bayer Advanced)	L	Crickets enter homes through basements and similar areas. Some formulations may be sprinkled along foundation. Read product label before using outdoors. Treat along foundation walls, patios and other areas where crickets are seen. Apply in a light 2- to 4-inch band around foundation. DO NOT use excessive amounts, and DO NOT apply to foliage of ornamentals or to food crops. Apply products as directed on the label. Imiprothrin is formulated with other pesticides in these products.
	bifenthrin (Ortho)	A	
	boric acid	B	
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	
	deltamethrin (Spectracide)	L	
	diatomaceous earth (PermaGuard)	D	
	eugenol (Bioganic)	A, D	
	gamma-cyhalothrin (Spectracide) OUTDOORS ONLY	G, L	
	imiprothrin (Raid)	A	
	permethrin (various others)	L	
	prallethrin (Ortho)	A	
	pyrethrins, pyrethrum	L	
	tetramethrin (various others)	A	
zeta-cypermethrin (Cynoff)	D		

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EARWIG (a) Indoors	allethrin (Ortho)	A	Repeat treatment may be necessary at two-week intervals. Some products are not suitable for use in residential kitchens or commercial food/feed preparation sites. Read the product label carefully.
	beta-cyfluthrin (Bayer Advanced)	L	
	bifenthrin (Ortho)	A, L	
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	
	diatomaceous earth (PermaGuard)	D	
	eugenol (Bioganic, Raid)	A, D	
	imiprothrin (Raid)	A	
	gamma-cyhalothrin (Spectracide)	L	
	prallethrin (Ortho)	A	
EARWIG (b) Outdoors	beta-cyfluthrin (Bayer Advanced)	L	Repeat treatments at 14-day intervals if necessary. Granular formulations are for outdoor use only and must be watered into soil or applied before rain.
	bifenthrin (Ortho)	G, L	
	cypermethrin (Hi-Yield)	L	
	diatomaceous earth (PermaGuard)	D	
	gamma-cyhalothrin (Spectracide)	G, L	
	lambda-cyhalothrin (Spectracide)	L	
	permethrin (various others)	D, G, L	
	tetramethrin (various others)	L	
	zeta-cypermethrin (Cynoff)	D	
FLEA (a) Indoors	allethrin (Ortho)	D	Only use products specifically labeled for flea control. Apply to carpets and crevices in flooring. DO NOT leave chemical residue on surface. Avoid accidental inhalation during application. Treat sleeping quarters of pets and other localized areas, such as under cushions and furniture, as specified on label. Vacuum carpets and furniture before applying, and dispose of contents properly. Sprays may be used for general area treatment. Also treat cracks, crevices and similar areas only. Foggers are only effective when used in conjunction with other sprays to other critical areas. Treat infested animals with properly labeled product for lasting control. See also ANIMAL INSECT CONTROL section.
	beta-cyfluthrin (Bayer Advanced)	L	
	bifenthrin	A	
	boric acid	D	
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	
	deltamethrin (Spectracide)	L	
	eugenol (Bioganic)	A, D	
	imiprothrin (Black Flag)	A	
	lambda-cyhalothrin (Spectracide)	L	
	methoprene (Precor)	A, F, L	
	permethrin (various others)	L	
	phenoxybenzyl (Hot Shot)	A	
	pyrethrins, pyrethrum	L	
	pyriproxyfen (Archer, NyLar)	A, L	
	sumithrin (Enforcer)	D	
tetramethrin (various others)	F, L		
zeta-cypermethrin (Cynoff)	D		

HOUSEHOLD AND STRUCTURAL PEST CONTROL – Products for Use by the General Public and Products for Professional Use Only

Pests	Insecticide	Formulation	Precautions and Remarks
FLEA (b) Outdoors	beta-cyfluthrin (Bayer Advanced)	L	Concentrate on kennels and shaded areas where animals tend to rest or congregate. Apply liquid formulations with sufficient spray volume to saturate soil. Granular formulations must be watered into soil or applied before rain. Repeat as needed at 4- to 6-week intervals. Apply as directed on the label. See also ANIMAL INSECT CONTROL section.
	bifenthrin (Ortho)	L	
	cypermethrin (Hi-Yield)	L	
	deltamethrin (Spectracide)	L	
	diatomaceous earth (PermaGuard)	D	
	gamma-cyhalothrin (Spectracide)	G, L	
	lambda-cyhalothrin (Spectracide)	L	
	permethrin (various others)	L	
tetramethrin (various others)	L		
FLIES (a) Indoors	allethrin (Ortho)	A	Strips can only be used in unoccupied areas. Apply as labeled to areas or objects (such as garbage cans) infested with flies. Repeat treatments as may be necessary. See label before treating areas of vegetation. Sanitation in the area is essential for satisfactory control of flies.
	beta-cyfluthrin (Bayer Advanced)	L	
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	
	deltamethrin (Black Flag, Spectracide)	A	
	dichlorvos (Vapona, Pest Strip, Ortho No-Pest, Hot Shot)	FU strip	
	eugenol (Bayer)	L	
	lemongrass oil (Hot Shot)	A	
	permethrin (various others)	A, F	
	pyrethrins, pyrethrum (various others)	A, L	
tetramethrin (various others)	L, F		
FLIES (b) Outdoors	beta-cyfluthrin (Bayer Advanced)	L	Apply as a surface spray to areas or objects (such as garbage cans) infested with flies. Repeat treatments may be necessary. See label before treating areas of vegetation. Sanitation in the area is essential for satisfactory control using any of these chemicals but particularly important with baits. Use as directed.
	bifenthrin (Ortho)	L	
	cypermethrin (Hi-Yield)	L	
	deltamethrin (Black Flag, Spectracide)	A, L	
	imidacloprid (Maxforce)	B	
	lambda-cyhalothrin (Spectracide)	L	
	permethrin (various others)	L	
	prallethrin (Hot Shot)	A	
	tetramethrin (various others)	A	
HORNETS, MUD DAUBERS, WASPS, YELLOW JACKETS (a) Indoors	allethrin	A	Apply to insects as needed for quick knockdown. Mechanical control (swatting) is usually adequate. Use product with “crack and crevice” nozzle to reach nests in wall voids. Remove nest when wasps are dead.
	beta-cyfluthrin (Bayer Advanced)	L	
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	
	eugenol (Bioganic)	A, D	
	prallethrin (Ultra-Kill, Spectracide)	A	
	pyrethrins, pyrethrum	A, L	
	S-bioallethrin (Spectracide)	A	
tetramethrin (various others)	A		

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Pests	Insecticide	Formulation	Precautions and Remarks	
HORNETS, MUD DAUBERS, WASPS, YELLOW JACKETS (b) Nest and adjacent areas	beta-cyfluthrin (Bayer Advanced)	L	Apply to nest or opening after dark when insects have returned to nest. Repeat treatment may be necessary. Most are packaged in pressurized containers that direct an insecticide stream of up to 10 feet. For yellow jackets and other soil-dwelling wasps, apply chemical to nests in soil.	
	bifenthrin (Ortho)	L		
	carbaryl (various others)	D, L		
	cypermethrin (Hi-Yield)	L		
	deltamethrin (Spectracide)	A		
	diatomaceous earth (PermaGuard)	D		
	eugenol (Bioganic)	A, D		
	lambda-cyhalothrin (Hot Shot, Spectracide)	L		
	permethrin (various others)	L		
	prallethrin (Hot Shot, Spectracide, Ultra-Kill)	A		
	tetramethrin (various others)	A		
zeta-cypermethrin (Cynoff)	D	Not for use on paper wasps.		
LICE: body, head, crab (on person)	malathion (Ovide)	L	Shampoo formulations. Thoroughly treat infested areas of body with lotion. Wash infested clothing with strong soap and very hot water. Dryclean woolens. Ovide requires a physician's prescription. Insecticidal treatment of furniture, carpets or other areas of the home are not needed.	
	permethrin (Nix)	L		
	pyrethrins, pyrethrum (Rid)	L		
MILLIPEDE (a) Indoors	allethrin (Ortho)	A	Harmless pest is short-lived once indoors; therefore, insecticides may not be necessary. Spot-treat pest entrance areas (door thresholds). Outside treatment is necessary for satisfactory control. Some products are not suitable for use in residential kitchens or commercial food/feed preparation sites. Read the product label carefully.	
	beta-cyfluthrin (Bayer Advanced)	L		
	bifenthrin (Ortho)	L		
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L		
	deltamethrin (Spectracide)	A		
	diatomaceous earth (PermaGuard)	D		
	eugenol (Bioganic)	A, D		
	imiprothrin (Raid)	A		Imiprothrin is formulated with other pesticides in these products.
	lambda-cyhalothrin (Hot Shot, Spectracide)	L		
	mint oil (Victor)	A		
	permethrin (various others)	D, L		
	prallethrin (Hot Shot)	A		
	pyrethrins, pyrethrum	A		
zeta-cypermethrin (Cynoff)	D			
MILLIPEDE (b) Outdoors	beta-cyfluthrin (Bayer Advanced)	L	Use as barrier treatment along foundation wall, door threshold and window ledge. Some sprays may damage vegetation under hot, humid conditions. Read label precautions. For lawn treatment, apply an insecticide band 10 to 15 feet wide. Apply liquid formulations with sufficient spray volume to saturate soil. Use granular formulations outdoors only; water into soil or apply before rain. Repeat as needed at four- to six-week intervals.	
	bifenthrin (Ortho)	G, L		
	cypermethrin (Hi-Yield)	L		
	diatomaceous earth (PermaGuard)	D		
	gamma-cyhalothrin (Spectracide)	G, L		
	lambda-cyhalothrin (Hot Shot, Spectracide)	D, G, L		

HOUSEHOLD AND STRUCTURAL PEST CONTROL – Products for Use by the General Public and Products for Professional Use Only

Pests	Insecticide	Formulation	Precautions and Remarks
MILLIPEDE (b) Outdoors	permethrin (various others)	D, G, L	
	tetramethrin (various others)	L	
	zeta-cypermethrin (Cynoff)	D	
MOSQUITOES (a) Indoors	allethrin (Ortho)	A	Aerosol sprays may provide temporary relief. Keep insects out by installing and repairing screens. Other labeled pyrethroids are also effective.
	beta-cyfluthrin (Bayer Advanced)	L	
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	
	deltamethrin (Black Flag, Spectracide)	A	
	lemongrass oil (Hot Shot)	A	
	permethrin (various others)	A	
	pyrethrins, pyrethrum (Raid)	A	
tetramethrin (various others)	F		
MOSQUITOES (b) Outdoors (See also INSECT CONTROL IN RECREATION AREAS)	<i>Bacillus thuringiensis (Bt)</i> (Mosquito Dunks)	Solid	<i>Bacillus thuringiensis</i> is a “biopesticide” containing bacteria that kills mosquitoes and some biting flies. Place in small ponds, bird baths and ornamental pools (not swimming pools). Follow instructions for specifics of application.
	beta-cyfluthrin (Bayer Advanced)	L	
	bifenthrin (Ortho)	L	Long-term control requires eliminating or cleaning mosquito breeding areas, such as discarded containers, ditches and other artificial sources of standing water. Spraying nearby vegetation may eliminate some mosquito resting sites, but some formulations may damage vegetation. Aerosols or foggers may be used for temporary relief when winds are insignificant. Use repellents on exposed body areas.
	cypermethrin (Hi-Yield)	L	
	deltamethrin (Black Flag, Spectracide)	A, L	
	gamma-cyhalothrin (Spectracide)	G, L	
	lambda-cyhalothrin (Spectracide)	L	
	permethrin (various others)	A, L	
	prallethrin (Ortho)	A	
tetramethrin (various others)	A		
OLD HOUSE BORER	aluminum phosphide (Phostoxin)	FU	Use aluminum phosphide for infested furniture, stacked lumber and other wood products. Apply under gas-tight tarpaulins or in a sealed chamber. Requires an Arkansas Class 3 General Fumigation Commercial Pesticide Applicator’s License.
	beta-cyfluthrin (Bayer Advanced, Tempo)	L	Spray, brush on or inject into wood. Seal holes in wood before injecting. Avoid runoff.
	bifenthrin (Ortho, Talstar)	L	Apply as directed on the label.
	cypermethrin (Demon TC)	L	
	deltamethrin (Suspend SC)	L	
	imidacloprid + cyfluthrin (Temprid SC)	L	Apply as directed on the label.
	permethrin (Dragnet, various others)	L	Apply as directed on the label.
	sodium borate (Boracare, Timbor, Spectracide)	D, L	Spray, brush on or inject into wood. For permanent protection, a water repellent should be applied to exterior surfaces 2 to 3 weeks after treatment.
	sulfuryl fluoride (Vikane)	FU	Apply under gas-tight tarpaulins only. Hold for 24 hours at temperature above 60 degrees F. Requires an Arkansas Class 3 General Fumigation Commercial Pesticide Applicator’s License.

HOUSEHOLD AND STRUCTURAL PEST CONTROL – Products for Use by the General Public and Products for Professional Use Only

Pests	Insecticide	Formulation	Precautions and Remarks
PANTRY PESTS (Pests in food storage areas)	beta-cyfluthrin (Bayer Advanced)	L	Discard infested material. Overall treatment of storage shelves and pantry is usually not necessary. Treat cracks, crevices, moldings and similar areas only. Remove and cover food and cooking and eating utensils before spraying storage cabinets. DO NOT restock shelves until surfaces are dry. Cover treated shelves with shelf paper if desired. Some products are not suitable for use in residential kitchens or commercial food/feed preparation sites. Read the product label carefully. Imiprothrin is formulated with other pesticides in these products.
	bifenthrin (Ortho)	L	
	cypermethrin (various others)	L	
	deltamethrin (Black Flag, Spectracide)	A	
	diatomaceous earth (PermaGuard)	D	
	eugenol (Bioganic)	A, D	
	fipronil (Maxforce FC Magnum Roach Killer Bait Gel)	B	
	gamma-cyhalothrin (Spectracide)	L	
	imiprothrin (Raid)	A	
	mint oil (Victor)	L	
	permethrin (various others)	L	
	prallethrin (Hot Shot)	A	
pyrethrins, pyrethrum	A, F		
zeta-cypermethrin (Cynoff)	D		
POWDERPOST BEETLE	aluminum phosphide (Phostoxin)	FU	Use aluminum phosphide for infested furniture, stacked lumber or other wood products. Apply under gas-tight tarpaulins or in a sealed chamber. Requires an Arkansas Class 3 General Fumigation Commercial Pesticide Applicator's License.
	beta-cyfluthrin (Bayer Advanced, Tempo)	L	Use beta-cyfluthrin as a coarse spray; brush on or inject into wood. Avoid excessive runoff.
	bifenthrin (Ortho, Talstar)	L	
	chlorfenapyr (Phantom)	L	
	cypermethrin (Demon TC)	L	
	deltamethrin (Suspend SC)	L	
	imidacloprid + cyfluthrin (Temprid SC)	L	Apply as directed on the label.
	lambda-cyhalothrin (Demand, Spectracide)	L	Apply as directed on the label.
	permethrin (Dragnet, various others)	L	
	sodium borate (Boracare, Spectracide, Timbor)	D, L	For long-term protection, apply a water repellent to exterior surfaces 2 to 3 weeks after treatment.
sulfuryl fluoride (Vikane)	FU	Use sulfuryl fluoride for infested furniture, stacked lumber or other wood products. Apply under gas-tight tarpaulins only. Hold for 24 hours at temperature above 60 degrees F. Requires an Arkansas Class 3 General Fumigation Commercial Pesticide Applicator's License.	
SCORPIONS	acetamiprid + bifenthrin (Transport)	L	Apply as directed on the label.
	beta-cyfluthrin (Bayer Advanced, Tempo)	L	
	bifenthrin (Bifen, Talstar)	G, L	
	cypermethrin (Cynoff, Demon, Martin's Viper)	L	

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Pests	Insecticide	Formulation	Precautions and Remarks
SCORPIONS	diatomaceous earth (Mother Earth D)	D	
	gamma-cyhalothrin (Spectracide)	G, L	
	lambda-cyhalothrin (Demand, 228L, Spectracide)	G, L	
	permethrin (Flee, Dragnet, Prelude, various others)	L	
	phenothrin (Bedlam)	L	
	pyrethrins, pyrethrum (Kicker, Pyrenone, various others)	A, L	
	silica gel (Drione, Tri-Die)	D	
SILVERFISH	allethrin (Ultra-Kill)	A	Treat cracks, crevices, moldings and similar areas. Attic treatment may be necessary. Apply to cracks and crevices and behind and underneath appliances. Spray along baseboards and other areas where silverfish are found.
	beta-cyfluthrin (Bayer Advanced)	L	
	bifenthrin (Ortho)	L	
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	
	deltamethrin (Black Flag, Spectracide)	A	Apply as directed on the label.
	diatomaceous earth (PermaGuard)	D	
	eugenol (Bioganic)	A, D	
	gamma-cyhalothrin (Hot Shot, Spectracide)	A, L	
	imiprothrin (Raid)	A	
	mint oil (Victor)	A	
	permethrin (various others)	L	
	prallethrin (Ortho)	A	
	pyrethrins, pyrethrum	A	
	tetramethrin (various others)	A	
zeta-cypermethrin (Cynoff)	D		
SOWBUGS AND PILLBUGS (a) Indoors	allethrin (Ortho)	A	Clean up breeding and hiding places; treat thoroughly. Outdoor barrier treatments along foundation and door thresholds are usually sufficient. Some products are not suitable for use in residential kitchens or commercial food/feed preparation sites. Read the product label carefully.
	beta-cyfluthrin (Bayer Advanced)	L	
	bifenthrin (Ortho)	L	
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	
	deltamethrin (Black Flag, Spectracide)	A, L	
	diatomaceous earth (PermaGuard)	D	
	eugenol (Bioganic)	A, D	
	gamma-cyhalothrin (Spectracide)	L	
	mint oil (Victor)	A	
	permethrin (various others)	A	
	prallethrin (Ortho)	A	
	pyrethrins, pyrethrum	A	
	zeta-cypermethrin (Cynoff)	D	

HOUSEHOLD AND STRUCTURAL PEST CONTROL – Products for Use by the General Public and Products for Professional Use Only

Pests	Insecticide	Formulation	Precautions and Remarks
SOWBUGS AND PILLBUGS (b) Outdoors	beta-cyfluthrin (Bayer Advanced)	L	Use as barrier treatment along foundation wall, door threshold and window ledges. Oil (petroleum-distillate) sprays may harm asphalt, rubber and vinyl tiles. Some sprays may damage vegetation under hot, humid conditions. Read label precautions. For lawn treatment, apply an insecticide band 10 to 15 feet wide. Apply liquid formulations with sufficient spray volume to saturate soil. Granular formulations are for outdoor use only and must be watered into soil or applied before rain. Repeat as needed at 4- to 6-week intervals.
	bifenthrin (Ortho)	G, L	
	cypermethrin (Hi-Yield)	L	
	deltamethrin (Spectracide)	A	
	diatomaceous earth (PermaGuard)	D	
	gamma-cyhalothrin (Spectracide)	G, L	
	lambda-cyhalothrin (Spectracide)	L	
	permethrin (various others)	D, G, L	
	tetramethrin (various others)	L	
	zeta-cypermethrin (Cynoff)	D	
SPIDERS (a) Indoors	allethrin (Ultra-Kill)	A	Treat infested areas along baseboards. Use foggers if rooms have been undisturbed for some time and spider populations are extensive. Some products are not suitable for use in residential kitchens or commercial food/feed preparation sites. Read the product label carefully.
	beta-cyfluthrin (Bayer Advanced)	L	
	bifenthrin (Ortho)	L	
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	
	deltamethrin (Black Flag, Spectracide)	A	Apply as directed on the label.
	diatomaceous earth (PermaGuard)	D	
	eugenol (Bioganic)	A, D	
	gamma-cyhalothrin (Spectracide)	L	
	imiprothrin (Raid)	A	Imiprothrin is formulated with other pesticides in these products.
	mint oil (Victor)	A	
	permethrin (various others)	A	
	prallethrin (Ortho)	A	
	pyrethrins, pyrethrum	A	
	tetramethrin (various others)	A	
	zeta-cypermethrin (Cynoff)	D	Not for use on black widow and brown recluse spiders.
SPIDERS (b) Outdoors	beta-cyfluthrin (Bayer Advanced)	L	Apply as a barrier treatment along foundation. Spray corners of decks, eaves, porches and other areas where spiders tend to build webs. Webbing can be knocked down as an alternative. Exercise caution when spraying in crawlspace. Avoid inhaling spray. Apply as directed on the label.
	bifenthrin (Ortho)	L	
	cypermethrin (Hi-Yield)	L	
	diatomaceous earth (PermaGuard)	D	
	gamma-cyhalothrin (Spectracide)	G, L	
	lambda-cyhalothrin (Spectracide)	L	
	permethrin (various others)	L	
	tetramethrin (various others)	L	
		zeta-cypermethrin (Cynoff)	

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Pests	Insecticide	Formulation	Precautions and Remarks
SPRINGTAILS (Indoors and Outdoors)	allethrin (Ultra-Kill)	A	Apply as a barrier spray along foundation and entry points. Some products may be used indoors for temporary relief. Clean up moisture conditions that may attract insects indoors. Excess moisture may impede product effectiveness. Some products are not suitable for use in residential kitchens or commercial food/feed preparation sites. Read the product label carefully. Apply as directed on the label. Imiprothrin is formulated with other pesticides in these products.
	beta-cyfluthrin (Bayer Advanced)	L	
	bifenthrin (Ortho)	L	
	cypermethrin (Black Flag, Hi-Yield, Hot Shot, Spectracide)	A, F, L	
	deltamethrin (Spectracide)	A	
	diatomaceous earth (PermaGuard)	D	
	eugenol (Bioganic)	A, D	
	gamma-cyhalothrin (Spectracide)	G, L	
	imiprothrin (Raid)	A	
	lambda-cyhalothrin (Spectracide)	L	
	mint oil (Victor)	A	
	permethrin (various others)	L	
	prallethrin (Ortho)	A	
	pyrethrins, pyrethrum	A	
	tetramethrin (various others)	A	
zeta-cypermethrin (Cynoff)	D		
STINGING CATERPILLARS			See Caterpillar entry under INSECT CONTROL FOR ORNAMENTALS GROWN IN NURSERIES OR LANDSCAPES section.
STINK BUGS (Indoors and outdoors)	beta-cyfluthrin (Bayer Advanced)	L	Apply as directed on label.
	bifenthrin (Ortho)	L	Apply as directed on label.
	gamma-cyhalothrin (Spectracide)	G, L	Apply as directed on label.
STORED FOOD PESTS			See Pantry Pests .
TERMITE DRYWOOD SPECIES (Wood treatment)	acetamiprid + bifenthrin (Transport)	L	Use a coarse spray or drill and inject into wood.
	aluminum phosphide (Phostoxin)	FU	Apply under gas-tight tarpaulins or in sealed chamber. Requires an Arkansas Class 3 General Fumigation Commercial Pesticide Applicator's License.
	beta-cyfluthrin (Bayer Advanced, Tempo)	L	Use a coarse surface spray or inject into wood.
	bifenthrin (Ortho, Talstar)	L	Use a coarse surface spray or inject into wood.
	cypermethrin (Demon TC)	L	Use a coarse spray or inject into wood for localized infestations.
	dinotefuran (Alpine)	FM, L	Apply as directed on label.
	fipronil (Termidor)	FM, L	Use as a coarse surface spray or inject into wood.
	imidacloprid (Dominion, Premise)	FM, L	Drill and inject spray or foam into voids.
imidacloprid + cyfluthrin (Temprid SC)	L	Apply as directed on label.	

HOUSEHOLD AND STRUCTURAL PEST CONTROL – Products for Use by the General Public and Products for Professional Use Only

Pests	Insecticide	Formulation	Precautions and Remarks
TERMITE DRYWOOD SPECIES (Wood treatment) (cont.)	lambda-cyhalothrin (Spectracide)	L	Apply as directed on label. Localized treatments. Spectracide is not recommended as a sole protection against termites.
	permethrin (Dragnet, various others)	L	Use as a coarse spray on wood for localized infestation.
	sodium borate (Boracare, Spectracide, Timbor)	L	Use as a coarse surface spray or inject into wood.
	sulfuryl fluoride (Vikane)	FU	Apply under gas-tight tarpaulins only. Hold for 24 hours at temperature above 60 degrees F. Requires an Arkansas Class 3 General Fumigation Commercial Pesticide Applicator's License.
	thiamethoxam (Optigard)	L	Use as a coarse spray or drill and inject into wood.
	zeta-cypermethrin (Cynoff)	D	This product is intended to kill workers and/or winged reproductive forms of termites present at the time of application only. Application of this product will not provide structural protection nor substitute for mechanical alteration, soil or foundation treatment with termiticide. This product is not to be used as sole protection against termites, as it is not intended for use for elimination of termite infestations nor for protection against future infestations. A professional inspection is recommended.
TERMITE SUBTERRANEAN SPECIES (a) Wood treatment	acetamiprid + bifenthrin (Transport)	L	
	beta-cyfluthrin (Bayer Advanced, Tempo)	L	Use as a coarse spray; brush on or inject into wood. Avoid excess runoff.
	bifenthrin (Ortho, Talstar)	L	For use only in voids or channels in damaged wood or to cracks and spaces between wooden members of structures.
	boric acid (Perma-Dust)	A	Use as a coarse surface spray or inject into wood.
	chlorantraniliprole (Altriset)	L	Use as a coarse spray around or inject into infested poles, trees and stumps (outdoors).
	chlorfenapyr (Phantom)	L	Use a coarse spray or inject into wood.
	cypermethrin (Demon TC)	L	Use a coarse surface spray or inject into wood.
	deltamethrin (Suspend SC)	L	Use a coarse surface spray or inject into wood.
	diflubenzuron (Advance, Exterra)	S	Aboveground stations used in conjunction with in-ground baiting systems.
	dinotefuran (Alpine)	FM, L	Apply as directed on label.
	fipronil (Termidor)	FM, L	Use a coarse spray or inject into wood.
	imidacloprid (Premise)	B, FM, L	Gel and foam formulations may be injected into voids or damaged wood.
	imidacloprid + cyfluthrin (Temprid SC)	L	Apply as directed on label.
	lambda-cyhalothrin (Demand, Spectracide)	L	Apply as directed on label. Localized treatments. Spectracide is not recommended as a sole protection against termites.
	noviflumuron (Recruit IV AG)	S	Available only as part of the Sentricon in-ground system.
	permethrin (Dragnet, various others)	L	Use a coarse spray; brush on or inject into wood. Avoid excessive runoff.
sodium borate (Boracare, Spectracide, Timbor)	D, L	Spray, brush on or inject into wood. For long-term protection, apply a water repellent to exterior wood surfaces 2 to 3 weeks after treatment. Not a replacement for soil treatment.	

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Pests	Insecticide	Formulation	Precautions and Remarks
TERMITE SUBTERRANEAN SPECIES (a) Wood treatment	sulfluramid (FirstLine)	S	Aboveground stations used in conjunction with in-ground baiting systems.
	zeta-cypermethrin (Cynoff)	D	This product is intended to kill workers and/or winged reproductive forms of termites present at the time of application only. Application of this product will not provide structural protection nor substitute for mechanical alteration, soil or foundation treatment with termiticide. This product is not to be used as sole protection against termites, as it is not intended for use for elimination of termite infestations nor for protection against future infestations. A professional inspection is recommended.
TERMITE SUBTERRANEAN SPECIES (b) Soil treatment	acetamiprid + bifenthrin (Transport)	L	NOTE: Most structural termite infestations require treatment by a pest control professional with a Class 1 Termite and Other Structural Pest Control License issued by the Arkansas State Plant Board. Apply these materials as directed on label. Shatter is for localized treatments. Arilon should be used for spot or localized treatment only. (Arilon is not intended as a sole protection against termites.) FirstLine is for professional use only. Terminate is for the general public. Terminate is not recommended as the sole protection against termites.
	bifenthrin (Bifen, Ortho, Talstar)	L	
	chlorfenapyr (Phantom)	L	
	chlorantraniliprole (Altriset)	L	
	cypermethrin (Demon, Prevail FT)	L	
	diflubenzuron (Advance, Exterra)	S	
	fenvalerate (Tribute)	L	
	fipronil (Termidor, Taurus)	L	
	hexaflumuron (Shatter)	B	
	imidacloprid (Bayer Advanced, Premise)	G, L	
	imidacloprid + cyfluthrin (Temprid SC)	L	
	indoxacarb (Arilon)	L	
	lambda-cyhalothrin (Demand, Spectracide)	L	
noviflumuron (Recruit HD)	S		
permethrin (Dragnet FT, MasterLine)	L		
sulfluramid (FirstLine, Terminate)	S		
TICKS (Outdoors)			See Brown Dog Tick and control of ticks in ANIMAL INSECT CONTROL section.
WASPS, YELLOW JACKETS			See Hornets, Mud Daubers, Wasps, Yellow Jackets .

INDUSTRIAL AND HOUSEHOLD PESTS – Pesticides for use by licensed pest control operators only

Chemical Class ¹	Inorganic				Carbamates		Organo-phosphates		Pyrethroids																										
	Boric acid (Niban, Perma-Dust, Perma-Guard)	Diatomaceous earth (Mother Earth D)	Silica gel (Drione, Tri-Die)	Sodium Tetraborate (Advance 388B)	Methomyl (Apache, Flytek)	Propoxur (PT2, Invader)		Acephate (Orthene)		Dichlorvos (Nuvan)		Allethrin (PT565 Plus XLO)	Bifenthrin (Bifen, Talstar)	Cyfluthrin (Tempo Ultra, Ultrashield CS)	Cypermethrin (Demon, Cynoff)	Deltamethrin (DeltaDust, DeltaGard, Suspend)	Deltamethrin (DeltaDust, DeltaGard, Suspend)	Deltamethrin (DeltaDust, DeltaGard, Suspend)	Esfenvalerate (Onslaught)	Etofenprox (Zenprox)	Fenvalerate (Pyrid)	Lambda-cyhalothrin (Demand, 228L)	Lambda-cyhalothrin (Demand, 228L)	Permethrin (Flee, Dragnet, Prelude)	Phenothrin (Bedlam)	Prallethrin (ULD Spy-300)	Pyrethrins and pyrethrum (Kicker, Pyrenone)	Pyrethrins and pyrethrum (Kicker, Pyrenone)	Pyrethrins and pyrethrum (Kicker, Pyrenone)	Sumithrin (Bedlam)	Tetramethrin (CB Stinger)				
Pesticide	B, D	D ³	D ³	B	B	B	S	S	Strip	S	S	S, G	S	S	S	D	G	S	S	S	S	S	G	S	S	S	A ³	S ³	D ³	S	S				
Formulation ²																																			
Pests																																			
ants	Y	Y	Y	Y			Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				
bed bugs	Y	Y	Y						Y	Y	Y											Y	Y												
bees			Y					Y		Y		Y	Y	Y	Y							Y											Y		
booklice	Y	Y	Y					Y		Y		Y																							
bugs (true) ⁴	Y		Y				Y	Y	Y			Y	Y	Y					Y			Y			Y	Y	Y					Y			
carpet beetles		Y						Y	Y	Y	Y		Y						Y	Y	Y	Y			Y		Y	Y	Y						
centipedes	Y	Y	Y				Y	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y					Y			
clothes moths		Y							Y	Y	Y		Y														Y								
clover mites	Y	Y	Y				Y	Y			Y		Y	Y		Y								Y		Y		Y	Y						
cockroaches	Y	Y	Y				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y	Y	Y	Y		Y		
crickets	Y	Y	Y				Y	Y		Y	Y	Y	Y	Y	Y							Y	Y	Y	Y	Y	Y	Y	Y	Y					
earwigs	Y	Y	Y					Y	Y			Y	Y	Y								Y	Y	Y	Y	Y	Y	Y	Y	Y					
fleas		Y	Y					Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y	Y	Y				
flies/gnats	Y	Y	Y		Y	Y		Y	Y	Y	Y	Y	Y	Y	Y							Y			Y	Y	Y	Y	Y	Y	Y	Y			
hornets/wasps			Y					Y		Y	Y	Y	Y	Y								Y				Y	Y	Y	Y	Y				Y	
lady beetles		Y	Y					Y				Y	Y	Y												Y									
millipedes	Y	Y	Y				Y	Y		Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y		Y	Y											
mosquitoes										Y	Y	Y	Y	Y								Y					Y	Y	Y						
pantry pests	Y	Y	Y					Y			Y		Y								Y	Y	Y			Y		Y	Y	Y					
scorpions		Y	Y									Y	Y	Y										Y	Y	Y		Y	Y						
silverfish	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y		Y	Y								Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
sowbugs		Y					Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y	Y	Y	Y	Y		Y	
spiders		Y					Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y	Y	Y					
springtails		Y					Y	Y		Y		Y	Y	Y		Y						Y			Y	Y	Y	Y							
ticks			Y				Y				Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y							

¹Alternating uses of insecticides in different chemical classes can help reduce the likelihood of the pests developing resistance to one group or class of compounds.
²Formulation Designations: A = aerosol (includes crack and crevice); B = bait (granular, gel or station); D = dust; S = sprayable (concentrate or powder, some RTU formulations); G = granular.
³Some formulations of diatomaceous earth and silica gel contain pyrethrins as a flushing agent. Some pyrethrins and pyrethroid formulations contain piperonyl butoxide as a synergist.
⁴True bugs includes boxelder bugs, stink bugs, kudzu bugs and similar occasional invaders.

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Chemical Class ¹	Insect Growth Regulators ³					Neonicotinoids								Other Classes												
	Hydroprene (Gencor)	Fenoxycarb (Altosid, Pre-Strike) ⁷	Methoprene (Altosid, Kabat, Pharorid, Precor, Vigren)	Methoprene (Altosid, Kabat, Pharorid, Precor, Vigren)	Pyriproxyfen (Archer, Ultracide)	Acetamiprid (Transport) ⁵	Dinotefuran (Advance)	Dinotefuran (Alpine)	Dinotefuran (Alpine)	Dinotefuran (Alpine)	Imidacloprid (FlyBait, Maxforce, Premise, Temprid ⁹)	Thiamethoxam (Optigard) ¹⁰	Clothianidin (Maxforce Impact)	Abamectin (Ascend, Avert, Advance)	Aluminum phosphide (Phostoxin) ⁶	Chlorfenapyr (Phantom) ⁷	Cyanothraniliprole (Zyrox)	d-Limonene (ProCitra-DL)	Fipronil (Maxforce F, TopChoice, Termidor ⁸ , Taurus)	2-Phenyl Propriolone (Eco PC)	Hydramethylinon (Amdro, Siege, Maxforce)	Imidacloprid (FlyBait, Maxforce, Premise, Pre-empt)	Indoxacarb (Advion)	Indoxacarb (Arilon)	Mint oil (Victor)	Sulfuryl fluoride (Vikane, Profume) ⁶
Formulation ²	A, S	S	B	A, S	A, S	B, S	B	A	D	FM	B	B, S		B	F	S	B	S	B, G, S	A, S	B	B	B	WDG	A	F
Pests																										
ants	Y		Y		Y	Y	Y	Y	Y	Y				Y		Y		Y	Y	Y	Y	Y	Y	Y	Y	
bed bugs				Y	Y			Y	Y						Y											Y
bees						Y			Y											Y					Y	
booklice								Y																		
bugs (true) ⁴						Y		Y	Y	Y		Y						Y		Y						
carpet beetles								Y	Y																	Y
centipedes						Y			Y									Y		Y						
clothes moths								Y										Y								Y
clover mites						Y		Y										Y								
cockroaches	Y				Y	Y	Y	Y	Y					Y		Y		Y	Y	Y	Y	Y	Y	Y	Y	Y
crickets					Y	Y		Y	Y							Y		Y		Y				Y	Y	
earwigs	Y					Y		Y	Y						Y			Y							Y	
fleas				Y	Y	Y			Y									Y								
flies/gnats	Y				Y	Y		Y	Y						Y	Y	Y								Y	
hornets/wasps						Y			Y											Y						Y
lady beetles						Y									Y			Y								Y
millipedes						Y		Y	Y						Y			Y		Y						Y
mosquitoes	Y	Y	Y		Y	Y												Y		Y						
pantry pests	Y			Y	Y			Y	Y						Y	Y			Y							Y
scorpions						Y									Y											
silverfish						Y		Y	Y						Y					Y					Y	
sowbugs						Y	Y	Y	Y									Y							Y	
spiders						Y		Y	Y						Y			Y		Y						
springtails						Y		Y							Y			Y							Y	
ticks					Y	Y									Y		Y									

¹Alternating uses of insecticides in different chemical classes can help reduce the likelihood of the pests developing resistance to one group or class of compounds.

²Formulation Designations: A = aerosol; B = bait (granular, gel or station); BR = briquet; D = dust; F = fumigant, FM = foam; G = granular; S = sprayable (concentrate or powder, some RTU formulations); WDG = water dispersible granule.

³I GR products are not typically effective against adult stage of pests. Use an adulticide to provide quicker control of pest population.

⁴True bugs includes boxelder bugs, stink bugs, kudzu bugs and similar occasional invaders.

⁵Transport spray also contains bifenthrin; outdoor use only.

⁶Requires a Class 3 General Fumigation or a Class 8 Food Related Fumigation License issued by the Arkansas State Plant Board.

⁷Chlorfenapyr labeled for indoor use only for these pests. Phantom is not a knockdown insecticide for pests such as wasps.

⁸Termidor is labeled for outdoor use only; use other fipronil products indoors.

⁹Temprid contains both imidacloprid and cyfluthrin.

¹⁰Optigard is not for use against pharaoh ants or carpenter ants.