

SEASONED WOOD AND TIMBER STRUCTURES

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CARPENTER ANTS

Preventive Control -

Carpenter ant colonies may establish in stumps, unhealthy or dead trees, and in various interior and exterior buildings wood structures such as studs, rafters, baseboards, door casings and other support structures. Exterior decaying structures are particularly vulnerable and should be replaced. Outside stacked wood materials should be removed or examined annually for colony establishment, and not placed adjacent to buildings.

Chemical Control –

The products listed below have label instructions for use against carpenter ants. They must be applied by licensed pesticide applicators unless otherwise indicated as domestic products.

Control Product	Active Ingredient	Concentration
Borid	orthoboric acid	99% ready-to-use powder
Demand CS	lambda – cyhalothrin	0.03% spray
Tempo 20 WP	cyfluthrin*	0.1% spray
Commercial: GenBor RTU, Penetreat, Tim-bor ----- Domestic: GenBor RTU-2, Later's Boric Acid Dust, Pre-Ser- Vor 25-3, Reco-Shield, Shell- Guard	disodium octaborate tetrahydrate	As per label instructions
Dragnet FT Prelude 240	permethrin	0.5% spray
Catalyst	propetamphos	0.5% spray
K-G Insecticide III Konk 400 Residual Insecticide TKO MAXX	Synergized propoxur	2% ready-to-use spray
Evercide Intermediate 2507	permethrin + pyrethrin + N-octyl bicycloheptane dicarboximide	85 g product/3.8 L
Pyrocide	Synergized pyrethrins	Ready-to-use spray

Locate and determine the extent of excavated cavities in wood structures from the small exuded piles of "sawdust", by "sounding", and by drilling fine holes. Inject or blow dust or sprays into holes near the top of cavities and into other cracks and crevices used as exit holes, or onto ant trails leading to and from the structure. Dusts are usually more effective than sprays. Liquid ant baits with 1-5% boric acid will assist in control of carpenter ant infestations.

References:

Effective Control of Carpenter Ant. Pest Management Regulatory Agency.

Web site: <http://www.pmra-arla.gc.ca/english/consum/carpenterants-e.html>

POWDERPOST BEETLES

Dry, seasoned, manufactured and unrotted coniferous and hardwoods may be attacked by a variety of species of Powderpost beetles which are more commonly in coastal B.C. areas than in the interior or prairie provinces. Most occurrences are in hardwoods in furniture, flooring, decorative trim, carved ornaments and other exotic wood products. Small circular holes and fine boring sawdust are diagnostic signs.

Cultural Control -

Expose infested material to heat (above 60°C) or to freezing temperatures for several hours. Unfinished material can be protected by varnishing, painting, coating with linseed oil or wax, or by using acceptable wood preservatives. Heavily infested material should be destroyed or replaced.

Chemical Control – For preventative and remedial treatment of wood.

Control Product	Active Ingredient	Concentration
Pre-Ser-Vor 25-3, Shell-Guard	disodium octaborate tetrahydrate	12.5% spray

References – Note: Pesticides recommended in the following fact sheets may not be registered for such uses in Canada.

1. Preventing and Controlling Powderpost Beetles in and Around the Home. J. DeAngelis. Fact sheet PNW 326 http://www.ent.orst.edu/urban/powderpost_beetles.html
2. Powder Post Beetles. University of Guelph, PDCF-114 (Revised 2003/11/07) <http://www.uoguelph.ca/pdc/Factsheets/Insect/PowderPostBeetles.html>

TERMITES

The Pacific dampwood termite and the subterranean termite feed in wood structures, especially coniferous materials and may eventually cause weakening or collapse of the structure. The Pacific dampwood termite is active in the greater Vancouver area and southern Vancouver Island. A native species the subterranean termite is active in the southern Interior of BC, greater Vancouver and the Sunshine Coast, and on Vancouver Island. Favoured locations include: coniferous forests; dead trees; stumps, logs, or various wood structures; and partially decayed or mechanically damaged wood material in contact with the

ground or moist substrate.

Monitoring -

Monitoring for termites is useful for detecting active colonies before building construction, and for assessing the efficacy of termiticide treatments either pre- or post-construction. Subterranean termite colonies can be detected by pounding pine stakes in the ground or by burying rolled cardboard in open-ended cans level with the soil surface and covered by a board. Place several stakes or traps in and along the margins of the property. Examine weekly for presence of white worker termites or evidence of feeding. Annually inspect inside and outside surfaces of building foundations and under sub-floors for presence of mud tubes extending up from the soil. Also examine points of contact between buildings and attached wooden structures (fences, decks, arbours, etc.) for presence of workers or feeding damage.

Preventive Control -

New Constructions: There are a number of construction techniques that can prevent or delay attack by subterranean termites. These techniques are described at the Urban Entomology Program Faculty of Forestry web site (http://www.utoronto.ca/forest/termite/Physical_Barriers/physbar.htm)

- Remove all wood and cellulose debris from property prior to erecting forms for pouring concrete.
- After pouring concrete slabs, walls, piers, etc., remove all framework wood from the building site. Do not use back fill containing wood or cellulose.
- It is important that new construction has a minimum wood-to-soil clearance of 50 cm in order to discourage termite invasion. Use pressure-treated wood where contact with soil is possible or clearance is less than 50 cm.
- Avoid use of polystyrene insulation panels on the exterior surface of building foundations as termites can tunnel through the material undetected.

Existing Structures: Replace wood infested and damaged beyond repair with pressure-treated or termiticides-treated lumber. Correct conditions leading to abnormally high moisture in and around the structure, e.g. grading, eaves troughing, etc.

Break wood-soil contact by the following measures:

- Remove all loose wood and other cellulose debris (stumps, roots, etc) from property around the structure to be protected.
- Ensure adequate clearance (50 cm) exists between soil and structural wood or support posts under porches or in crawl spaces. Excavate and pour new concrete piers if necessary. Wooden support posts can be replaced with steel jack posts.
- Window sills below grade level require alteration employing a window well to retain soil.
- Outdoor, wooden stair supports should be severed 10-15 cm above soil level and supported by concrete slabs or blocks.
- Where wooden siding is used, lower grade to expose a minimum of 15 cm of foundation wall.
- Repair all cracks or other points of entry for termites in foundation walls or concrete floors (e.g. expansion jackets, crevices, weeping tiles, utility holes, etc.) with commercial sealant - preferably concrete.
- Provide adequate ventilation for soil-surfaced crawl spaces under porches or living areas.

Chemical Control – Chemical control of termites is best achieved using a professional termite control contractor trained in the detection of termite infestations and in the effective use of termiticides. The products listed below can only be applied by licensed pesticide applicators unless otherwise indicated.

Control Product	Active Ingredient	Concentration
Commercial: Boracol, GenBor RTU, Penetreat, Tim-bor Domestic: GenBor RTU-2, Later's Boric Acid Dust, Pre-Ser-Vor 25-3, Reco-Shield, Shell-Guard	disodium octaborate tetrahydrate	As per label instructions
Dragnet FT	permethrin	0.5-1% emulsion

Disodium octaborate tetrahydrate can be applied to dry wood during construction to prevent termite feeding, or applied to infested wood to stop feeding. Follow product label instructions carefully.

References -

For more information on termites, see

1. Urban Entomology Program Faculty of Forestry, University of Toronto,

<http://www.utoronto.ca/forest/termite/termite.htm>

2. Biology and Control of Western Subterranean Termite, BC Ministry of Agriculture & Lands,

<http://www.al.gov.bc.ca/cropprot/termite.htm>

3. The Pacific Dampwood Termite (*Zootermopsis angusticollis*), UBC Faculty of Forestry

http://www.forestry.ubc.ca/fetch21/FRST308/lab8/zootermopsis_angusticollis/dampwood.html