Dow AgroSciences™

Vikane®

Proven Performance. Superior Support.

Methods to Control Existing Drywood Termite Infestations

	Vikane® gas fumigant	d-limonene (citrus oil)
Methodology	**Whole-structure treatment:** The entire structure is tarped and thoroughly fumigated with Vikane, killing all detected and undetected termites, including those inaccessible for spot treatment.	**Spot treatment:** Only detected, accessible colonies can be treated by drilling small holes at about 5 inch intervals into which d-limonene (citrus oil) is injected.
Third-Party Validation of Efficacy	**Fumigation with Vikane is the most thorough, consistent and efficacious treatment of infested structures evaluated in more than 20 years of university research and nearly 50 years of commercial use.**[1,2,3] Researchers and pest control operators acknowledge that whole-house fumigation, compared to spot treatments, penetrates better into concealed locations, and large volumes of wood are treated more efficiently.[4]	**There is no published peer-reviewed research on efficacy of d-limonene (citrus oil) when applied to structures.** Unpublished research demonstrated when completely accessible, cut wood was drilled at 5 inch intervals and injected with 92% d-limonene at a volume equaling 3% of the wood volume, drywood termites survived in 50% of the treated wood.[5]
Limitations on Treatment Application by Termite Location in Structure	**There are no limitations.** Vikane penetrates all airspaces in termite galleries within the tarped structure to kill termites. [1,2]	**Termite colonies must be accessible to the applicator.**
Limitations on Efficacy by Applicator Ability to Detect Termites	**There are no limitations.** Vikane penetrates all airspaces in termite galleries to control detected and undetected termites. [1,2]	**Detecting live termite infestation is critical for treatment efficacy of spot treatment with d-limonene.** Undetected colonies will not be treated or controlled. Besides visual inspection, other detection methods include dogs, odor detectors, fiber optics, movement-sensitive devices and feeding-sensitive devices. These devices are infrequently used and, except for feeding-sensitive devices, adequate research has not been conducted to confirm their reliability to detect drywood termites. With the uncertainty of current detection methods, the secretive behavior of drywood termites and building construction (drywall or other wall coverings) concealing infestations, there is always doubt as to the location and extent of all drywood termite colonies in buildings that restrict accessibility and limit treatment.[6]
Possibility of Damage by Treatment Application	The possibility of damage is low when Vikane is used according to the label. Improper tarping may cause damage.	Many injection holes in wood and walls may need to be repaired. d-limonene is an oily liquid which is used as a solvent and a degreaser. Its effect on paint and surface finishes is unknown.
Flammability	**Vikane is non-flammable.**	**d-limonene is flammable with a flash point of 115° F.**
Indoor Air Quality	Applicator must follow specific aeration procedures followed by air testing using sensitive detection equipment to confirm airborne concentrations comply with federal label requirements. Aeration procedures and detection equipment have been extensively researched to validate their performance.	d-limonene has a pungent citrus odor. No air testing is conducted after application.

References

[1]Lewis, V.R. and M.I. Haverty. 1996. Evaluation of six techniques for control of the Western drywood termite (Isoptera: Kalotermitidae) in structures. *Journal of Economic Entomology* 89(4): 922-934.

[2]Scheffrahn, R.H., N.-Y.Su, and P. Busey. 1997. Laboratory and field evaluations of selected chemical treatments for control of drywood termites (Isoptera: Kalotermitidae). *Journal of Economic Entomology* 902(2): 492-502.

[3]Su, N.-Y., and R.H. Scheffrahn. 1986. Field comparison of sulfuryl fluoride susceptibility among three termite species (Isoptera: Kalotermitidae, Rhinotermitidae) during structural fumigation. *Journal of Economic Entomology* 79(4): 903-908

[4]Lewis, V.R. 2003. IMP for Drywood Termites (Isoptera: Kalotermitidae). *Journal of Entomological Science* (38(2): 181-199

[5]Unpublished data, R.H. Scheffrahn, University of Florida, (personal communication and http://www.xt2000.com/efficacy.htm)

[6]Lewis, V.R. 2002,. Drywood Termites. Pest Notes, University of California Agriculture and Natural Resources. Publication 7440.

www.TermiteTenting.com

Vikane is a federally Restricted Use Pesticide. Always read and follow label directions.

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