



Association of Structural Pest Control Regulatory Officials (ASPCRO)  
Termiticide Standards Committee

**Termiticide Performance Standards.**

August 5, 2010

**Statement of Purpose of Document**

This document contains a set of recommendations on the efficacy standards that termiticides other than baits should meet in order to provide adequate consumer protection when these pesticides are used to control or manage termites. This document is intended to provide guidance to State regulatory agencies that make decisions on the registration of termiticides, and the Termiticide Label Review Committee of ASPCRO as established the “*Amended Memorandum of Understanding between the United States Environmental Protection Agency and the Association of Structural Pest Control Regulatory Officials*” signed December 9, 2004 by USEPA (the *MOU*), and, in particular, to serve as the recommendations of the Termiticide Standards Committee of ASPCRO as described Paragraph 6 of the *MOU*.

This document is not intended to be a model or recommended ordinance. The Termiticide Standards Committee may, from time to time, amend this document and the definitions used in this document as needed. When a definition is changed in, or added to, this document, the date of change or addition will be noted.

**1. DEFINITIONS:**

- 1.1. The term *alternate inspection method(s)* refers to any method of inspecting for subterranean termites that is used in conjunction with, but not as a replacement for, probing and sounding of visible and accessible areas of a structure for the purpose of determining the presence of subterranean termites or subterranean termite activity. These methods include, but are not limited to, moisture meters, acoustic detection, chemical detection, microwave technology, canine detection, fiber optics or infrared technology.
- 1.2. The term *annual inspection* refers to the probing and sounding of visible and accessible areas of a structure for the purpose of determining the presence of subterranean termites or subterranean termite activity at least once during a calendar year.
- 1.3. The terms *field test(s)* or *field plot test(s)* refers to a non-laboratory, non-building, test conducted using an easily replicated experimental unit, such as a block of wood placed on the soil, and an experimental design incorporating a statistically valid number of replications, and testing the effect of a treatment on damage caused by termites on unprotected wood such as the United States Department of Agriculture concrete slab method soil residual treatment testing protocol published February 11, 1994, RWU-4502-2-1994, available from the Wood Products Insect Research Unit, 201 Lincoln Green, Starkville, MS 39759.

- 1.4. The term *inspection* refers to the probing and sounding of visible and accessible areas of a structure for the purpose of determining the presence of subterranean termites or subterranean termite activity. All inspections must include a graph of the structure inspected. Such graph must indicate the location of any subterranean termites or subterranean termite activity. All inspections must be conducted by a certified pest management professional or documented researcher.
- 1.5. The term *kills only termiticide* refers to a pesticide product that kills termites when applied to active infestations but does not provide significant residual activity that will prevent subsequent reinfestation.
- 1.6. The term *kills termites* refers to subterranean termites dying as a result of feeding or contacting a pesticide.
- 1.7. The term *non-soil applied residual* refers to a pesticide applied to any portion of the structure other than the soil under or around the structure which persists or leaves a residue sufficient to eliminate, prevent or manage subterranean termite activity.
- 1.8. The term *post-construction treatment* refers to all pesticide treatments made to eliminate, prevent or manage subterranean termite activity in a structure after the installation of the final grade and not applied as part of the construction process.
- 1.9. The term *preventive treatment for new construction or pre-construction treatment* refers to all pesticide treatments made to eliminate, prevent or manage subterranean termite activity in a structure under construction up to and including the installation of the final grade and as part of the construction process.
- 1.10. The terms *preventive or preventative treatment* refers to all pre-construction or post-construction pesticide treatments made to provide structural protection before a subterranean termite infestation is present. Preventative or preventative treatments also occur when a structure is not infested with subterranean termites for 12 months or more following elimination of a previous termite infestation.
- 1.11. The terms *protect(s) a structure, protection, eliminate(s) and control(s)* have the same meaning as the term structural protection.
- 1.12. The term *proxy test(s) or proxy structures* refers to the use of small structures, such as storage shed type buildings, rather than buildings constructed for human occupancy. Proxy structures should have a minimum size of 100 sq ft or as accepted by TSRP, and contain structural components similar to those found in buildings constructed for human occupancy, such as flooring, siding, and roof components.
- 1.13. The terms *remedial or curative treatment/application* refers to post-construction pesticide treatments made to eliminate or manage an active subterranean termite infestation already present. A pesticide product may make claims to provide only curative or remedial treatment if it is only used to remove existing infestations and is not intended to protect ongoing structural protection.
- 1.14. The term *soil applied residual* refers to a pesticide applied to the soil and which persists or leaves a residue sufficient to eliminate, prevent or manage subterranean termite activity.

- 1.15. The term *structural protection* refers to the elimination, prevention or management of subterranean termite activity in a structure as a result of a preventive or curative application of a pesticide product.
- 1.16. The term *structural test(s)* or *building test(s)* refers to tests of termiticide efficacy that use a building constructed for human occupancy or a proxy structure as defined above. Structural tests or building tests are differentiated from field tests in that field tests use simplified test units that are not structures.
- 1.17. The term *subterranean termite(s)* refers to any species of the following genera of termites: *Heterotermes*, *Coptotermes* or *Reticulitermes*.
- 1.18. The terms *termite infestation* or *termite activity* refers to the presence of live subterranean termites in, on, or under a structure.
- 1.19. The term *termiticide* refers to a pesticide product that kills termites when applied to eliminate, prevent, or manage subterranean termites.

## **2. GENERAL REQUIREMENTS FOR ACCEPTANCE FOR REGISTRATION OF ALL TERMITICIDES (EXCEPT BAITS).**

- 2.1. All pesticides, except baits, proposed for registration as termiticides with label claims of structural protection must be tested in and meet the standards specified in **Part 3, Performance Standards**, below in USEPA Regions 4 and 9. Tests in Region 6 are required for pesticides with Formosan termite recommendations on the label. Tests in other USEPA regional locations, and data from outside of the United States, may be reported, but data developed in those regions should not substitute for testing in USEPA regions 4 and 9. Any pesticide that fails to meet the performance standards in **Part 3, Performance Standards**, below in Region 4 or 9 will not be recommended for registration as a preventive treatment for new construction, although they may be recommended for registration for other termite management uses.
- 2.2. Pesticides proposed for registration that do not make any claims for structural protection do not have to be tested in USEPA Regions 4 or 9.
- 2.3. Pesticides that meet the performance standard in **Part 3.1** or **Part 3.2, Performance Standards**, below will be recommended for registration and can make a label claim of structural protection. Pesticides that meet the performance standard in Part 3.1, Pesticides Proposed for Registration for Preventive Treatment for New Construction, can include claims for preventive treatment for post-construction, curative or remedial treatment without additional testing.
- 2.4. Pesticides cannot be recommended for registration with labeled application rates lower than those that meet the performance standards.
- 2.5. Separate registrations or brands are required for pesticides that meet different performance standards at different application rates (e.g. structural protection at high rates and “kills only” at low rates).
- 2.6. No label claim of structural protection can be made for any product that fails to meet the requirements specified in **Part 3, Performance Standards**, below.
- 2.7. Data developed under test conditions other than those specified in **Part 4, Test Conditions**, below may be accepted if developed under a protocol that is approved by the Termiticide Scientific Review Panel (TSRP) established in the Memorandum of Agreement between ASPRCO, the National Pest Management Association (NPMA) and the Responsible Industry for a Sound Environment (RISE) dated August 27, 2003, or a protocol approved by the USEPA.

## **3. PERFORMANCE STANDARDS/LABEL STATEMENT REQUIREMENTS**

### **3.1. Pesticides Proposed For Registration For Preventive Treatment For New Construction:**

- 3.1.1. Soil Applied Residuals – Field plot tests shall demonstrate protection from damage to untreated wood in the field plot test specified in Section 1.4 above, so that when termite damage is rated the damage rating must equal a rating of 9 or higher under the Standard Test Method of Evaluating Wood Preservatives by field tests with stakes, 1996, ASTM D1758-96 scale (available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania, USA 19428-2959) in 90% of the plots for a minimum of five years or, alternatively, provide data from a test protocol accepted by the TSRP that demonstrates the equivalent level of protection.

3.1.1.1. The calculation of the percentage of plots that meet the rating of 9 or higher as described in Section 3.1.1. above, will be based on an annual evaluation and results calculated for all test plots each year, with replacement of the test wood in each plot. The calculation of the percentage of plots that meet the performance standard above is not to be calculated cumulatively over the multi-year test period. If a plot fails during a year, it is counted as a failure for that year only.

3.1.2. Non-soil Applied Residuals – Building tests shall be conducted in accordance with the test conditions established in Part 4, Test Conditions, and shall demonstrate protection from damage to untreated wood so that when rated the rating must equal a rating of 9 or higher under the Standard Test Method of Evaluating Wood Preservatives by field tests with stakes, 1996, ASTM D1758-96 scale (available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania, USA 19428-2959) in 90% of the tests for a minimum of five years after treatment, or, alternatively, provide data from a test protocol accepted by the TSRP that demonstrates the equivalent level of protection.

3.1.2.1. The calculation of the percentage of buildings that meet the rating of 9 or higher as described in Section 3.1.2. above, can be based on an annual evaluation or an evaluation at the end of the multi-year test period. The calculation of the percentage of building that meet the performance standard above is to be calculated cumulatively over the multi-year test period. Once a building has sustained damage, it must be counted as a failure over the entire test period.

### 3.2. Pesticides Proposed For Registration With Only Preventive Claims For Post Construction Termite Treatment :

3.2.1. Building or structural tests that conform to the test conditions specified in Part 4, Test Conditions, below, are required for pesticides that make only post construction treatment claims, and do not make claims or seek registration for preventive treatment for new construction . This applies to soil applied residual pesticides, as well as those non-soil applied materials that seek registration for post-construction preventive treatment only.

3.2.2. Building tests shall be conducted in accordance with the test conditions established in Part 4, Test Conditions, and shall demonstrate protection from damage to untreated wood so that when rated the rating must equal a rating of 9 or higher under the Standard Test Method of Evaluating Wood Preservatives by field tests with stakes, 1996, ASTM D1758-96 scale (available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania, USA 19428-2959) in 90% of the tests for a minimum of five years or, alternatively, provide data from a test protocol accepted by the TSRP that demonstrates the equivalent level of protection.

3.2.2.1. The calculation of the percentage of buildings that meet the rating of 9 or higher as described in Section 3.2.2. above, can be based on an annual evaluation or an evaluation at the end of the multi-year test period. The calculation of the percentage of building that meet the performance standard above is to be calculated cumulatively over the multi-year test period. Once a building has sustained damage, it must be counted as a failure over the entire test period.

3.2.3. Pesticides with test data that show control in 90% of buildings for time frames shorter than five years, can be registered with the following conditions:

3.2.3.1. No product with efficacy in building tests less than 3 years will be recommended for registration.

3.2.3.2. A statement prominently placed on label that pesticide did not demonstrate efficacy under test conditions for five years must appear. The statement shall read as follows:

*“This pesticide has only been shown to be effective in providing termite control for 3 to 5 years”.*

3.2.3.3. The label must contain a statement requiring that the pest management service provider using the pesticide distribute information provided by the registrant to the consumer that *“This pesticide has only been shown to be effective in providing termite control for 3 to 5 years”*. A standardized document developed by ASPCRO can be used by the pest management service provider to accompany the registrant provided information.

3.2.3.4. As a condition of registration, no representation of protection from termite infestation or damage for more than 3 -5 years can be made.

3.2.3.5. The label must contain an enforceable statement requiring an annual inspection if the pesticide was applied under a service contract with a term of more than one year and for as long as the service contract is in effect. The statement shall read as follows:

*“The use of this pesticide requires an annual inspection of the treated structure by the company providing the service which includes the probing and sounding of visible and accessible areas for the purpose of determining the presence of subterranean termites or subterranean termite activity at least once during a calendar year”*

### 3.3. Pesticides Proposed For Registration With Only Curative or Remedial Claims To Control An Active Infestation:

3.3.1. Building or structural tests that conform to the test conditions specified in Part 4, Test Conditions, below, are required for pesticides that make only curative or remedial claims to control an active infestation.

3.3.2. If a pesticide is only making claims of clearance of an infestation, the pesticide should demonstrate that it eliminates infestation in 90% of buildings with documented active infestations within 6 months and that re-infestation is prevented for 6 months after elimination of infestation.

3.3.2.1. A statement shall appear on label that pesticide has only shown the ability to remove an infestation. The statement shall read as follows:

*“This pesticide has only demonstrated the ability to remove an infestation from a structure and does not prevent reinfestation for longer than six months from treatment.”*

*“Ongoing structural protection will require inspection and treatment with a pesticide shown to provide long term protection.”*

The label must contain an enforceable statement requiring that a PCO distribute registrant provided information to the consumer that this pesticide has only demonstrated the ability to remove an infestation from a structure and does not provide structural protection. Ongoing structural protection will require inspection and treatment with an alternate pesticide.”

3.3.3. As a condition of registration, no representation of any structural protection can be made.

#### 3.4. For Pesticides Labeled With “Kills Only” Claims For Post Construction Termite Treatment:

3.4.1. If a pesticide is only making claims that it will kill existing termites in and/or around a structure, the pesticide should demonstrate that it will kill 100% of termites in the application area within 30 days of application.

3.4.2. These pesticides need only submit laboratory data showing mortality data for termites exposed to the pesticide that meets the standard in Section 3.4.1.

3.4.3. A statement shall appear on the label that pesticide has only shown the ability to kill existing termites in and/or around a structure. The statement shall read as follows:

*“This pesticide has only demonstrated the ability kill existing termites in and/or around a structure and does not provide structural protection. Ongoing structural protection will require inspection and treatment with an alternate pesticide.”*

3.4.4. The label must contain an enforceable statement requiring that a PCO distribute registrant provided information to the consumer that this pesticide has only demonstrated the ability to kill existing termites and does not provide structural protection. Ongoing structural protection will require inspection and treatment with an alternate pesticide.

3.4.5. As a condition of registration, no representation of any structural protection can be made.

#### **4. TEST CONDITIONS FOR DEVELOPMENT OF DATA**

4.1. Data from field plot and building tests must be developed under Good Laboratory Practices Standards (40 CFR Part 160, revised 2001), or a United States Environmental Protection Agency Quality Assurance Agreement, or the United States Forest Service Quality Assurance process, or using a TSRP approved protocol, or a state approved quality assurance agreement.

Listed below are the appropriate test conditions needed to demonstrate the above efficacy standards.

## 4.2. Field Plot Tests

- 4.2.1. Data from field plot tests shall be conducted by the United States Department of Agriculture /Forest Service using their soil residual treatment testing protocol published February 11, 1994, RWU-4502-2-1994, available from the Wood Products Insect Research Unit, 201 Lincoln Green, Starkville, MS 39759; or by a qualified researcher using the above protocol, or by a qualified researcher using a different protocol accepted by the TSRP.
- 4.2.2. For pesticides that make claims for Formosan termite control that use field plot tests to demonstrate efficacy, tests must be conducted in an area with active Formosan termite infestations using the soil residual testing protocol specified in Section 4.2.1, or using a protocol accepted by the TSRP.

## 4.3. Building Tests (Structural Tests):

- 4.3.1. Data from building tests shall be collected consistent with the following requirements:
- 4.3.2. Building tests shall include a minimum of 60 structures equally divided at the initiation of the test between EPA regions 4 and 9. If Formosan termite recommendations are on the label, the structures are to be equally divided between regions 4, 6, and 9. Of the structures tested in region 6, at least 50% of the tests shall be for Formosan termites unless claims of control of Formosan termites are not made.
- 4.3.3. If additional building tests are conducted, all test results must be reported, or, an agreed upon method for unbiased selection of reported structures must be used. If any structures drop out of the test, a complete explanation of the reasons for this must be provided.
- 4.3.4. The tests shall be conducted on structures\* with wood framed exterior walls.
- 4.3.5. All treatments shall be applied according to the label or proposed label directions for use (including multiple applications if that is the proposed use). All applications shall be made by a certified pest management professional or a person identified as a participant in the study and is properly qualified and trained to make the pesticide application.
- 4.3.6. Building test inspections must, at a minimum, include the probing and sounding of visible and accessible areas of the interior and exterior of a structure and use of at least one alternate inspection method such as use of moisture meters, acoustic detection, chemical detection, microwave technology, canine detection, fiber optics or infrared technology.
- 4.3.7. Building tests must include demonstration of termite active foraging around test buildings, or ,if proxy structures are used ,untreated control structures may be used. – TSRP to provide list of means of demonstrating termite active foraging and use of untreated controls.



- 4.3.8. Tests using proxy structures are permissible if the proxy building is 100 square feet or greater and meets all other requirements. Smaller proxy structures are permissible if the structure replicates building features and is accepted by TSRP.
- 4.3.9. All inspections of structures in the test must include a schematic or graph of the structure inspected. Such a schematic or graph must be a reasonable depiction of the structure inspected and indicate the location of any subterranean termites or subterranean termite activity. All inspections must be conducted by a certified pest management professional or a person identified as a participant in the study and who is properly qualified and trained to make the inspection.
- 4.3.10. For pesticides labeled for use for post construction termite treatments, an annual inspection, as described in items # 4 and #7 above, is required.
- 4.3.11. For pesticides that claim clearance of existing infestations, these infestations must be documented with a photograph and identification to at least genus, and a graph or schematic of each structure showing the location of any and all active or previous infestations.
- 4.3.12. For pesticides that claim clearance of existing infestations, an inspection, as described in items #4 and #7 above, must be performed within the first 6 months after application and then again at 6 months after the elimination of the infestation.

## **5. GENERIC AND ALTERNATE FORMULATIONS**

### **5.1. Pesticides proposed for registration as a FIFRA Section 3(c)(3) (B)(i)(I) (“me-too”) registration using data citation agreements**

- 5.1.1. State regulatory agencies may be asked to register, or the TLRC may be asked to comment on the proposed registration of, pesticides that contain the same active ingredient of a currently registered termiticide, but that are proposed for registration by another registrant. This type of registration is commonly referred to as a “me-too” registration, and is authorized under FIFRA Section 3(c)(3) (B)(i)(I).
- 5.1.2. The registrants of these products may cite the efficacy data of previously registered products to demonstrate compliance with the performance standards and applicable test conditions established above provided that a valid offer to pay or data sharing agreement has been executed.
- 5.1.3. States and the TLRC should consider differences in formulation that may affect efficacy of the proposed pesticide. If the differences in formulation are considered significant, the state or TLRC should consider requesting data that will address the potential impact of the formulation difference on efficacy. The type of data required will differ depending on the formulation type and mode of action of the pesticide. The recommended type of data is provided in the table below:

<b>FORMULATION TYPE</b>	<b>POTENTIAL DIFFERENCES</b>	<b>DATA TYPE</b>
<b>Emulsifiable Concentrates, Soluble Concentrates</b>	<b>Emulsifiers, surfactants, preservatives that can affect product stability (shelf life)</b>	<b>Effective soil concentration (termiticide use), residue degradation curve, product stability tests</b>
<b>Wettable powders, water dispersable granules</b>	<b>Particle size, dispersion in water, bioavailability</b>	<b>Effective soil concentration (termiticide use), studies to determine equivalency to cited product using selected pests.</b>
<b>Baits</b>	<b>Palatability of bait matrix, stability of bait matrix</b>	<b>Studies with select pest to determine palatability of bait matrix, product stability tests</b>
<b>Non-repellant termiticides</b>	<b>Detectability of formulation</b>	<b>Choice box test</b>
<b>Wood treatment products</b>	<b>Solvents, product stability</b>	<b>Effective wood concentration and bioavailability, product stability tests</b>
<b>Granular Products</b>	<b>Carriers, "stickers," bioavailability</b>	<b>Studies to determine equivalency to cited product using selected pests</b>
<b>Ready to Use liquid</b>	<b>Solvents, surfactants, stability of formulation</b>	<b>Studies to determine equivalency to cited product using selected pests, stability studies</b>
<b>Aerosols</b>	<b>Solvents, surfactants, propellants</b>	<b>Studies to determine equivalency to cited product using selected pests</b>