

Proper Pre-Construction Termite Treatments

A Guide for Homeowners, Builders, and Pesticide Applicators



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Bulletins 1 & 2

The Department of Pesticide Regulation licenses pest control operators and regulates the application of pesticides for the prevention or control of subterranean termites. Most structures built in South Carolina are treated against termite infestation during the construction process. These preventative termite treatments are commonly referred to as “pre-treats.”

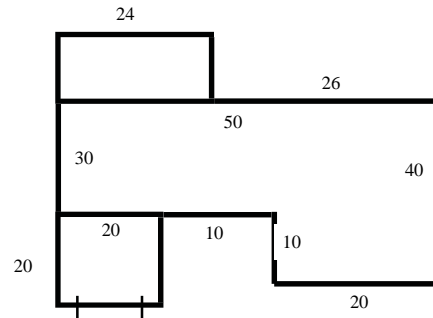
Pesticides used to treat for termites (termiticides) are purchased in concentrated form and are diluted for application. To evaluate the treatment process, it is necessary to know the correct dilution rate and the correct volume of the solution that should be applied in or around various structural elements.

Dilution rates are specified on each termiticide label. These vary from product to product. Be sure to review the label to know the correct rate. Once the diluted solution is prepared, the volume of solution to be applied to various structural elements is the same for all termiticides:

1. Soil fill to be covered by a slab is treated at a rate of one (1) gallon per 10 square feet. If the fill is coarse gravel, the application rate is 1 1/2 gallons per 10 square feet.
2. Soil backfill along walls, around piers or pipes, and under “critical areas” such as slab expansion joints are treated at a rate of four (4) gallons per 10 linear feet (per foot of depth—if footers are covered by more than 12 inches of soil backfill, additional volume is required). This includes fill areas inside chimney foundations and earth-filled porches. In situations where the soil will not absorb the volume of dilution required, most labels allow decreasing the volume with a corresponding increase in the concentration. This is usually accomplished by doubling the rate and applying half the normal volume of water.
3. Voids are hollow masonry construction (walls, piers, etc.) and are treated at a rate of two gallons per 10 linear feet. A row of concrete blocks would be considered as a single void regardless of the number of “cells” or chambers in each block (i.e., a ten foot long wall would require two gallons). Where multiple voids exist—such as a concrete block wall with a brick veneer—each running void is treated at the two gallons per 10 linear feet rate.

Pre-treats normally require more than one visit to the site. Various parts of the structure are treated as they are ready and before pouring of slabs or covering of wall voids. It is also important to bear in mind that treatments cannot be made under conditions where soil is water-saturated. Termiticide labels do not allow this because of the potential danger of contaminating the water table or surface water. For more information, see Bulletin 18, *Pre-Treating Water-Saturated Soil: How Wet is Too Wet?*.

Example Treatment of Supported Slab Construction With Surrounding Block Wall and One Foot Interior Fill



TRIP 1

A) Treat soil under main slab before concrete is poured $50 \times 30 = 1500 \text{ ft}^2 + 20 \times 10 = 200 \text{ ft}^2$:
Total 1700 ft^2 treated at 1 gallon per $10 \text{ ft}^2 = \underline{170 \text{ gallons}}$.

B) Treat soil under garage slab before concrete is poured $20 \times 20 = 400 \text{ ft}^2$ treated at 1 gallon per $10 \text{ ft}^2 = \underline{40 \text{ gallons}}$.

C) Treat inside foundation wall (expansion joint under main slab $30 + 50 + 40 + 20 + 10 + 10 + 20 = 180$ linear feet treated at 4 gallons per 10 linear feet = 72 gallons.

D) Treat soil in the garage expansion joint (3 sides only; the front has no block wall and only a garage door). $20 + 20 + 20 = 60$ linear feet treated at 4 gallons per 10 linear feet = 24 gallons.

E) Treat masonry voids (all hollow block wall).

$30 + 50 + 40 + 20 + 10 + 10 + 20 + 20 + 20 = 220$ linear feet treat at 2 gallons per 10 linear feet = 44 gallons

Total for trip 1 = $170 + 40 + 72 + 24 + 44 = \underline{350 \text{ Gallons}}$

TRIP 2

Treat soil under expansion joint of rear attached slab before additional concrete poured 24 feet at 4 gallons per 10 linear feet = 9.6 gallons (approximately 10 gallons).

Note: This area may also be treated on trip 3 but the attached slab would have to be drilled to allow the chemical to be applied in the proper location.

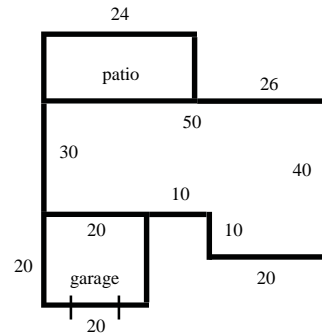
TRIP 3

Treat soil adjacent to outside foundation wall (this should be done after all sod and landscaping activities are complete).

$20 + 30 + 26 + 40 + 20 + 10 + 10 + 20 = 176$ linear feet (note: area under attached slab treated on trip 2) treated at 4 gallons per 10 linear feet = 70.4 Gallons

Total for Job = $350 + 10 + 70 = \underline{430 \text{ gallons}}$

Example Treatment of Crawlspace Construction



Imagine that this house has a single brick foundation wall, a concrete driveway, a concrete attached slab, and eighteen (18) 16" x 8" block piers.

TRIP 1

Treat inside foundation wall and piers.

A) Inside foundation wall $30 + 50 + 40 + 20 + 10 + 10 + 20 = 180$ linear feet treated at 4 gallons per 10 linear feet = **72 gallons.**

B) 18 piers treated at about 2 gallons per pier = **36 gallons.**

Note: The gallon approximation is derived from treating the inside 16" masonry void at 2 gallons per 10 linear feet and the soil adjacent to the pier (16"+16"+8"+8") at a rate of 4 gallons per 10 linear feet : *This equals 1.86 gallons or approximately 2 gallons.*

***This example is based on the most common practice for treating crawlspace homes; however, it is recommended that only the masonry voids be treated at this point in construction and the soil adjacent to walls and piers be treated at a later point in construction. This would prevent disturbance of treated soil by workers during construction and prevent unnecessary exposure to workers on site.*

TRIP 2

Treat garage slab and attached porch.

A) Attached slab - 24 feet of expansion joint at 4 gallons per 10 linear feet = **9.6 gallons**

B) Garage slab - $20 \times 20 = 400$ square feet at 1 gallon per 10 square feet = **40 gallons**

C) Garage expansion joint = $20 + 20 + 20 = 60$ linear feet at 4 gallons per 10 linear feet = **24 gallons**

TRIP 3

Treat soil adjacent to outside foundation wall after all landscaping activities are complete.

A) $20 + 30 + 26 + 40 + 20 + 10 + 10 + 20 = 176$ linear feet at 4 gallons per 10 linear feet = **70.4 gallons**

Total for job = 252 gallons

Quick Guide to Proper Rates

There is not a number that can be multiplied by the footage to give the exact amount of solution for all structures. Two buildings of equal size may require different amounts, depending on the type of construction. However, the following guide will roughly show the approximate volume of solution required for similarly constructed buildings. The cost of termiticide solutions the applicator can range from about 40 cents to as much as \$2.00 per gallon.

Structure Size	Slab Structure	Crawlspace
1000 square feet	230 gallons	150 gallons
2000 square feet	380 gallons	195 gallons
3000 square feet	570 gallons	340 gallons
5000 square feet	800 gallons	—
25,000 square feet	3150 gallons	—
50,000 square feet	5900 gallons	—
75,000 square feet	8600 gallons	—
100,000 square feet	11,300 gallons	—

REMEMBER!

The Department of Pesticide Regulation does not regulate the pricing of termite treatments. However, we do investigate complaints or tips that indicate an improper treatment may have been performed. If you have any questions, please call your nearest Department of Pesticide Regulation Field Office at the number listed in the bottom of this page.

As part of Regulatory and Public Service Programs at Clemson University, the Department of Pesticide Regulation has been serving the State of South Carolina for over a century. We license pesticide dealers, private and commercial applicators, and pest-control businesses. We register pesticide products for use in the State and perform quality assurance analyses of pesticide formulations. DPR protects farm workers from pesticides by administering the Federal Worker Protection Standard in South Carolina.

The Department of Pesticide Regulation administers the State Groundwater Protection Plan, the Pesticide Container Recycling Program, and the Integrated Pest Management in Schools Initiative. The Federal regulations that protect endangered species from pesticides have also been assigned to the DPR.

We are the enforcement and investigative authority in the State for pesticide use, alleged pesticide misuse, substandard termite treatments, and the Wood Infestation Report required in most real estate transactions.

Anderson..... 843.494.2332
Aynor..... 843.957.1727
Beaufort..... 843.255.6060 Ext 111
Charleston..... 843.225.7065
Clemson..... 803.260.1462
Columbia..... 803.736.7680 Ext 112
Florence..... 843.667.1393
Newberry..... 803.403.7262
North Myrtle Beach.... 843.360.1512
York..... 803.628.0303

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