

## TERM® Particle Barrier for Termites

## Product Data Sheet

Supplemental treatment for new construction

Perimeter treatment for existing structures

EPA Establishment No. 89537-TX-1



### DESCRIPTION

Polyguard's *TERM Particle Barrier* was developed for the mainland by Bryan Springer, a Galveston, TX based pest management professional, in 2005. Springer knew about the long record of research, and of the use in Hawaii, Australia, and the Pacific. He developed a product using mainland U.S. sources, and had the new barrier tested at Texas A&M's Department of Urban and Structural Entomology.

Particle termite barriers were invented by entomologist Dr. Walter Ebeling, University of California, in 1956. Significant developmental work at the University of Hawaii in the 1980's led to commercial application in Hawaii, Australia, and other parts of the world. However particle barriers have never been available in the mainland United States until now.

The principle behind particle barriers is simple. According to the University of Hawaii;

*"There are three basic requirements for a particulate barrier to be effective. First the granules must be small enough to pack well so there aren't any gaps the termites can squeeze through. At the same time, the granules must be big and heavy enough that the termites can't pick them up and move them. Third, the granules must be too hard for the termites to chew."*

Further research at Texas A&M defined additional key properties relating to particle angularity, fineness modulus, and weighted particle size.

Polyguard's particle barrier consists of quartz particulates exactly

sized and shaped to block both the *Reticulitermes flavipes* and *Coptotermes formosanus* species.

*TERM Particle Barrier* is a termite exclusion product. Used around the perimeter of the building, it can greatly reduce the quantity of termiticides needed to protect the structure.

Polyguard has registered our barrier manufacturing facility with the EPA, who along with state agencies regulates pesticides. However, Polyguard's barriers are classified by the EPA as *physical barriers*, as they contain no toxic components.

Termites trying to get into a structure are unable to penetrate the *TERM Particle Barrier*. Also important, in the case of the *Reticulitermes flavipes* species is that the insects are unable to get *out* of a structure which they previously penetrated. In the majority of infested structures, there is not sufficient moisture in the building for *Reticulitermes flavipes*, so they have to return to the soil to obtain moisture.



*This video shows termites who have emerged from a home for moisture. They are unable to move the TERM Particles, and never reach moisture*  
[19 Days in a Termite Colony](#)

### REFERENCES

The Green Building Certification Institute (GBCI) has approved the use of the Polyguard *TERM Particle Barrier* as eligible for credit when used as a physical termite barrier for the LEED for Homes v4 Sustainable Sites Credit: Nontoxic Pest Control.

There are additional ways in which LEED credits might be earned by incorporating *TERM Barrier System* components into the structure.

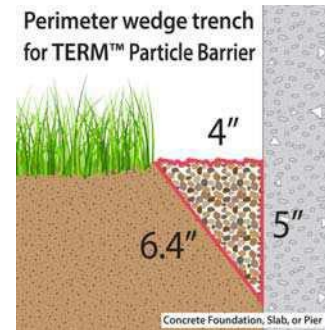
1. Increasingly, LEED is incorporating Integrated Pest Management (IPM) into standards.

## USES OF TERM PARTICLE BARRIER

The uses listed below are for either new construction, or on existing structures.

1. Properly installed around the perimeter of a structure, the barrier will block entry of termites to the home, and exit of termites which are inside the home.
2. As a termite barrier at bath traps.
3. As part of a TERM All Pest Bath Trap Barrier which excludes termites, fire ants, rodents, snakes, and moles. (See data sheet for TERM All Pest Bath Trap Barrier)

**Important: TERM Particle Barrier should be installed and maintained by a Polyguard approved Pest Management Professional who is licensed in that jurisdiction. Contact Polyguard for details.**



## INSTRUCTIONS FOR USE AS A PERIMETER TRENCH AROUND STRUCTURE

### ["TERM Particle Barrier Installation"](#)

1. Dig a wedge-shaped trench, minimum 4" across the top, and 5" deep down the vertical concrete face. These distances are plus or minus 1" because of the difficulty of digging exactly. The trench should be installed wherever vertical concrete surfaces of the structure are exposed around the entire perimeter.
2. *Note: For most soils the TERM Trencher, a patent pending tool designed to create a trench of the correct depth and width, can be used, with a significant reduction of installation effort. Pictured below is a sequence showing the TERM Trencher creating a properly sized wedge.*



Aim Trencher



Fire Trencher



Pull Trencher



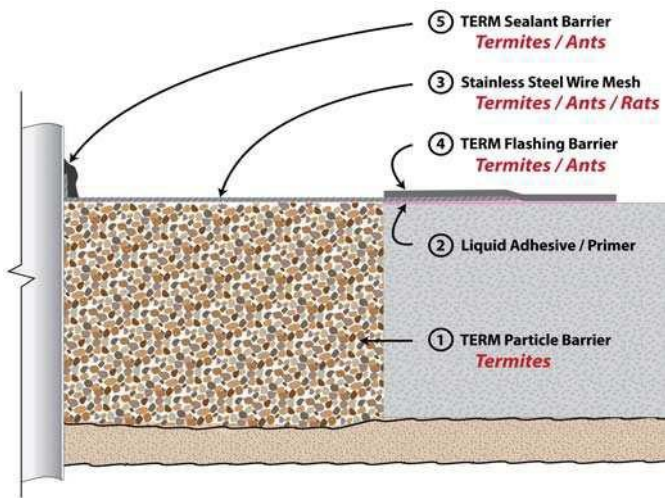
Until step is level with soil

3. Clean the vertical face of the concrete so that the surface will be completely clean of mud and debris. A quick way to do this is with a hosing of the exposed area of the wall.
4. Fill the trench to the grade level with TERM Particle Barrier.

### **Inspection and Repairs**

Note that regular inspection (approximately every six months) and repair (if necessary) of the TERM Particle Barrier perimeter is necessary. The following are some things which can compromise the barrier:

- a. Cats using the barrier as litter.
- b. Dogs digging up the barrier.
- c. Landscaping or construction activities which displace the barrier or cover it with dirt.
- d. Overgrowth by vegetation
- e. Debris or mulch.
- f. Children playing in the area.



**INSTRUCTIONS FOR TERM All Pest Bath Trap Barrier**

The *TERM Particle Barrier* is a key component of the *TERM Bath Trap*, required as a subterranean termite barrier. The remainder of the components protects against fire ants, rodents, snakes, moles, etc.

The TERM All Pest Bath Trap System has a separate data sheet. [Bath Trap Data sheet](#)

Under normal circumstances this bath trap installation should not require maintenance.

**Material Storage:** Barrier and accessories should be unloaded and stored carefully. Do not stack barrier material higher than 5' (1.5m) vertically, nor double stack pallets. Cartons should be stored on pallets and covered to prevent water damage.

**HOW MANY GALLONS OF TERMITICIDE CAN BE AVOIDED WITH TERM PARTICLE BARRIER?**

How many gallons of termiticide / insecticide chemicals can be avoided by installing non-chemical TERM Particle Barrier?			
	Location of treatment	Amount of termiticide or insecticide generally used ***	Maximum number of applications per year***
If termiticide / insecticide treatment is applied	Concrete perimeter	2 to 4 gallons per 10 lineal feet of perimeter***	1 to 4 times per calendar year***
	Bath trap openings	1 to 4 gallons per square foot of opening***	1 to 4 times per calendar year***
	*** The amounts, concentrations, and frequencies shown above are for post construction application, and are taken from the instruction label of a major termiticide/insecticide manufacturer. They apply to most states. However, regulations vary from state to state, so readers should individually determine the regulations on amount, concentration, and frequency of application for their own states.		
	Location of treatment	Amount of TERM Particle Barrier generally used	Number of applications per year
If TERM® Particle Barrier is applied	Concrete perimeter	Each 50# bag of particles should fill about 7 lineal feet of wedge shaped trench.	TERM Particle Barrier should be inspected by a Pest Control Professional a minimum of 1 to 4 times per calendar year. Damage from children, pets, landscaping, construction, etc. should be repaired.
	Bath traps openings	Calculate the cubic feet of volume needed. Particles should be 4" deep. Each 50# bag contains approximately 2/3 cubic feet of particles.	Under normal circumstances, bath traps treated with TERM Particle Barrier will not need maintenance.



## LIMITATIONS

### CRAWL SPACE / PIER AND BEAM WARNING AND EXCLUSION

*Polyguard TERM Particle Barrier* is generally not suitable for application to crawl spaces or pier and beam construction under new or existing structures.

The reason for this exclusion is the typical tight spaces, which create difficulty of making a proper installation, of checking for correct installation, of regular inspection and maintenance, and of checking the quality of regular maintenance. We advise against depending upon *TERM Particle Barrier* to exclude subterranean termites in crawl spaces and pier and beam structures, unless the structure has generous space – and sufficient lighting - for easy access and installation, inspection, and maintenance at all points underneath the structure.

Proper installation, regular inspection and maintenance are critical for *TERM Particle Barrier*, and too important for a situation which encourages people to cut corners.

Polyguard's *TERM Barrier System* products are part of an Integrated Pest Management (IPM) program and where local regulations require, may be used to supplement termiticide applications. The information in this data sheet is designed to be helpful to the reader. It is based on experience and information considered to be accurate and true. Readers should carefully consider and verify the information with investigation of any areas with uncertainty. *Polyguard* does not warrant the results to be obtained. Additionally, please read everything here in conjunction with *Polyguard's* conditions of sale, which are applicable to everything supplied by us. No statement here is intended for any use which would infringe any patent or copyright.

Purchaser is responsible for complying with applicable federal, state, or local laws and regulations covering product use including waste disposal

### PHYSICAL PROPERTIES

Property	Typical Property
Fineness Modulus	3.83
ASTM D 451 – Minimum % retained of sieve size 8 - 14	90%
% of void space (calculated using water displacement)	1.72
Hardness – Mohrs Hardness Scale	> 6
Gradient Angularity Mean gradient angularity	2000 - 3000

### PACKAGING INFORMATION

Product	Unit of Measure	Weight / Unit
Polyguard TERM Particle Barrier	Bag	50 lb.

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