

TERM® Particle Barrier for Termites (new construction)

EPA Establishment No. 89537-TX-1

Product Data Sheet

DESCRIPTION



TERM Particle Barrier installed around exposed perimeter concrete at an Oklahoma hospital

Polyguard's TERM Particle Barrier was developed for the mainland U.S. 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. Springer 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 Eberling, University of California at Berkeley, 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 not 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 *Coptotermes formosanus* and the *Reticulitermes flavipes* species.

ADVANTAGES

TERM Particle Barrier is a termite exclusion product. Used around exposed concrete perimeter of the building, or in bath traps, it can greatly reduce the quantity of termiticides needed to protect these areas.

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

Termites trying to enter a structure are unable to penetrate the TERM Particle Barrier. Also important, termites are unable to get out of a structure which they previously penetrated to obtain needed moisture.

The picture below shows termites who had exited a structure trying unsuccessfully to reach soil because they cannot move TERM.Particles aside.



You can see a video of the failed termite efforts at the 3.00 minute mark of this demonstration video:

<https://www.youtube.com/watch?v=-Kfdg6GtsFc&t=90s>

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 has incorporated Integrated Pest

Management (IPM) into standards

LEED calls for IPM protocols in order to “minimize pest problems and exposure to pesticides”.

A key IPM element is; “Nonchemical pest preventative measures....designed into the structure...”. TERM Barriers are nonchemical pest preventative measures.

2. LEED rating systems for homes incorporate (SSC5) *Non-toxic pest control*”. Two components found in the TERM Barrier System are mentioned; they are steel mesh and sand barriers. Both are used as termite barriers.

TERM Sealant Barrier / membranes are not mentioned, as they are only now entering the field for sustainable construction alternatives.

3. The incorporation of TERM Sealant Barrier / membranes into the building envelope should be a strong candidate for Innovation credit.

4. Finally, if the project site is former agriculture land with residual pesticide contamination, TERM Barriers may qualify under LEED IAQ Credit 5 - Indoor Chemical and Pollutant Source Control (below grade toxin barrier) or SS3 - Brownfield redevelopment.

USES OF TERM PARTICLE BARRIER

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

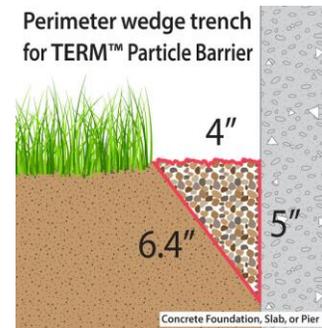
1. Properly installed around the perimeter of a structure, the barrier will block entry of termites to the home and exit of termites which are inside the home.
2. As a termite barrier at bath traps.
3. As part of a TERM All Pest Bath Trap Barrier which excludes termites, fire ants, rodents, snakes, and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

[Polyguard TERM Sustainable Pest Barriers - Particle Barrier - Non-Chemical Termite Barrier - YouTube](#)

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 Bath Trap Barriers

TERM has two types of bath trap barriers:

1. All Pest Bath Trap Barrier – suitable for new construction, but generally not in existing construction due to difficulties in access to trap.
2. Particle Barrier Bath Trap – suitable for existing or new construction- In combination with All Pest Bath Trap Barrier, can also provide “belt and suspenders” protection against termites.

Photos and links to installation videos are shown below:

| | |
|--|--|
| | |
| <p>TERM All Pest Bath Trap Barrier</p> | <p>TERM Particle Bath Trap Barrier</p> |
| <p>TERM® Non-Chemical Termite Barrier – All Pest Bath Trap Barrier - Polyguard - YouTube</p> | <p>TERM® Non-Chemical Termite Barrier – Physical Exclusion at Bath Traps Using Stone Particles - YouTube</p> |

The TERM Full Bath Trap System has a separate data sheet.
<https://www.polyguardproducts.com/term/library/data-sheets-and-guide-specs/>

Under normal circumstances TERM bath trap installations 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.

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.

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 all applicable federal, state, or local laws and regulations covering use of the product 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 (<i>calculated using water displacement</i>) | 1.72 |
| Hardness – Mohs Hardness Scale | > 6 |
| Angularity – Graded as angular or subangular | angular or subangular |

PACKAGING INFORMATION

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