

ANT/TERMITE PROOFING METHOD

Technical Field

The present invention relates to the control of ants/termites, and in particular to a method of ant/termite proofing buildings and structures.

Background of the Invention

A common method of providing protection for buildings and other ground supported structures against ants, and in particular termites, is to soak the ground under and/or around the building with chemicals which destroy existing termites and leave a residue to destroy termites for several years. The chemicals used, however, poison the ground and are typically hazardous to humans, animals and vegetation. The effectiveness of the chemicals also deteriorates over time.

It is also known to protect structures supported on piers by a sheet metal barrier between the piers and building. Use of a similar sheet, for protection of buildings formed on concrete slabs, which underlays or is embedded throughout the entire slab would not protect the building from termites for any period of time due to corrosion of the product within a short time frame.

A method of protecting buildings by forming an ant proof barrier between adjacent structures which comprise the building has been proposed. The barrier is formed from stainless steel mesh strips secured to the adjacent structures, thereby preventing passage of ants therebetween. Use of a mesh structure, however may allow passage of small ants through pores thereof, and thin ligaments forming and surrounding the pores may be susceptible to damage and/or degradation, thereby forming larger pores through which larger ants may pass. It has further been found that the method of adhering the mesh strip to the concrete slab has allowed the ingress of termites, the adhesive material not being hard enough to resist the passage of termites.

The use of a mesh structure also precludes use of the barrier as a flashing to direct any water that enters a cavity area adjacent the external wall of a building away to the outside of the building.

A further barrier which has been proposed utilises a strip of aluminium or stainless steel which is provided with a band of perforations along its length adjacent one edge. Whilst it is intended that these perforations are to be filled with parging material when adhering the barrier to a structure, incomplete or inaccurate application of the

paring material and/or incorrect alignment of the barrier will result in at least some of the perforations remaining open, providing for entry of termites.

Object of the Invention

It is the object of the present invention to provide an improved ant/termite barrier.

Summary of the Invention

There is disclosed herein a method of ant/termite proofing a structure which includes two adjacent substantially ant/termite impervious sections, said method comprising securing respective opposing edge portions of a strip of substantially continuous marine grade aluminium sheet material to the respective adjacent sections such that an integral barrier is formed therebetween, at least one of said opposing edge portions being secured to its respective adjacent section by means of an ant/termite impervious silicon based adhesive.

Preferably said marine grade aluminium sheet material is at least 0.5 mm thick.

Preferably one of said adjacent sections is a concrete slab.

Preferably one of said adjacent sections is an upstanding wall.

Alternatively one of said adjacent sections is a conduit passing through the other said adjacent section.

One of said edge portions may be embedded in its respective adjacent section.

Typically said adhesive is "Altern Termite Proof Silicon".

Typically said marine grade aluminium sheet material is marine grade series 5005 aluminium sheet material.

There is further disclosed herein a method of anti/termite proofing a structure which includes a concrete slab and an upstanding exterior wall positioned on said slab with the exterior face of said wall being generally flush with an end face of said slab, said method comprising the steps of:

securing a strip of continuous marine grade aluminium sheet material between said wall and said concrete slab by means of an ant/termite impervious silicon based adhesive with an edge portion of said strip protruding beyond said wall exterior face; and

providing a surface coating on said wall exterior face and said slab edge face, said surface coating having a thickness such that said strip edge portion is generally flush with the exterior face of said surface coating.

Preferably said strip of continuous marine grade aluminium sheet material is secured to said concrete slab by means of said ant/termite impervious silicon based adhesive.

Preferably said surface coating is a cement based render.

Preferably said marine grade aluminium sheet material is at least 0.5 mm thick.

Preferably said adhesive is "Alterm Termite Proof Silicon".

Preferably wherein said marine grade aluminium sheet material is marine grade series 5005 aluminium sheet material

Brief Description of the Drawings

Preferred forms of the present invention will now be described by way of example with reference to the accompanying drawings wherein:

Figure 1 is a sectional elevational view of a termite barrier installation between a base slab and external wall.

Figure 2 is a sectional elevational view of a termite barrier installation between adjacent base slab sections.

Figure 3 is a sectional elevational view of a termite barrier installed externally to an existing structure.

Figure 4 is a sectional elevational view of another termite barrier installation between a base slab and external wall.

Figure 5 is a sectional elevational view of a termite barrier installation between a floor slab and conduit.

Figure 6 is a plan view of the termite barrier installation of Figure 5.

Figure 7 is a sectional elevational view of another termite barrier installation between a concrete slab and a wall.

Detailed Description of the Preferred Embodiments

In the embodiment according to Figure 1 the base slab 1 and external brick wall 2 of a building are provided with a barrier strip 3 extending across a gap 6 therebetween. The strip 3 provides a barrier for any termites attempting to pass up through the gap 6 which extends between the external wall 2 and an internal wall 4. During construction of the external wall 2, one course of bricks is layed along the perimeter of the building. A first edge portion 7 of the barrier strip 3 is bonded along the length of the base slab 1 with a termite resistant silicon based parging material (not depicted in the drawings). A second edge portion 5 of the barrier strip 3 is positioned on top of the first course of bricks in the

external wall 2 along its length, with mortar being placed on top of the edge portion 5 of the barrier strip 3.

A further example is depicted in Figure 2 which shows two adjacent base slabs 11,12 at a control joint. After pouring of the slabs 11,12 a barrier strip 13 is placed along the length of the joint between the slabs 11,12 with opposing longitudinally extending edges 14,15 being bent bonded to the top of the respective slabs 11,12. A longitudinally extending fold 16 is preferably provided in the barrier strip 13 adjacent to the joint to allow for expansion and contraction of the slabs 11,12.

In a further embodiment, as illustrated in Figure 3, a termite barrier strip 31 is applied to the exterior of an existing building. The structure depicted shows a footing 32 on which has been constructed an external wall 33 and a concrete slab 34, with an internal wall 35 further constructed on the slab 34. As the structure is complete, and there is no access to the gap between the slab 34 and external wall 33, the barrier strip 31 is applied to the outside of the building.

First the ground 35 surrounding the building is excavated to expose the area around the junction of the external wall 33 and footing 32. A lower edge 36 of the barrier strip 31 is then bonded to the footing 32, with the opposing upper edge 37 being bonded to the external wall 33 above ground level 35. The barrier strip 31 should extend approximately 100 to 200 mm above ground level 35 to prevent termites, which can not survive in the external environment, from entering the building.

An alternative embodiment to that depicted in Figure 1 is provided in Figure 4. Here the second edge portion 46 of the barrier strip 41 is placed and bonded between the base slab 44 and the internal wall 45. The first edge portion 47 is again placed between successive layers of brickwork in the external wall 43, thereby providing a damp course and flashing in addition to a termite barrier.

Figures 5 and 6 depict a concrete slab 61 through which a conduit 62 passes. Any small gaps between the slab 61 and conduit 62 can provide a passage for the ingress of termites into a building. To eliminate this passage, during construction of the structure a barrier piece 63 including a flanged hole 64 is fitted to the conduit 62, such that there is an interference fit between the flange 64 and conduit 62. Following pouring of the slab 61 the flange 64 is bonded to the conduit 62 and the circumferential portion of the barrier piece 63 is bonded to the top of the slab 61.

Figure 7 depicts a concrete slab 65 on which an upstanding exterior wall 66 is positioned, such that the exterior face 66a of the wall 66 is generally flush with the end face 65a of the concrete slab. A first edge portion 68 of a termite barrier strip 67 is

secured between the wall 66 and the concrete slab 65 by means of an ant/termite impervious silicon based adhesive. Typically, the barrier strip first edge portion 68 will be secured by parging it to the top of the concrete slab 65 with the adhesive before placing the wall 66 over the barrier strip first edge portion 68. The barrier strip 67 is placed such that the second edge portion 69 of the strip 67 protrudes beyond the wall exterior face 66a.

An external surface coating 70 is then applied to the wall exterior face 66a and the concrete slab end face 65a. The surface coating will typically be a cement based render, however any form of surface coating is envisaged. The protruding width of the barrier strip second edge portion 69 and the thickness of the surface coating 70 closely match such that the barrier strip second edge portion 69 is generally flush with the exterior face 70a of the surface coating 70. Accordingly, any potential termite attack underneath the surface coating exterior face 70a is forced into clear view on the surface coating exterior face 70a, facilitating visual inspection.

All of the barrier strips 3, 14, 31, 41, 51, 67 and the barrier piece 63 as used in the preferred embodiments are constructed of an entirely continuous marine grade aluminium sheet material with a thickness of at least 0.5 mm. The most preferred material is marine grade series 5005 aluminium. The barrier strips are all bonded into position as described utilising an ant/termite resistant silicon based adhesive. Other forms of securing the barrier strips to structure sections, such as by mechanical fastening may also be employed in conjunction with the silicon based adhesive however care must be exercised to ensure no paths are provided for passage of termites between successive fasteners. Fasteners are best utilised in association with the adhesive to ensure the positioning of the strip during adhesive cure.

The silicon based adhesive should most preferably have a room temperature cure possible in wet or moist conditions. The adhesive should be resistant to pH levels of less than 4 and greater than 11. A particularly suitable silicon based adhesive having these properties is "Alterm Termite Proof Silicon", available from the present applicant.

CLAIMS:

1. A method of ant/termite proofing a structure which includes two adjacent substantially ant/termite impervious sections, said method comprising securing respective opposing edge portions of a strip of continuous marine grade aluminium sheet material to the respective adjacent sections such that an integral barrier is formed therebetween, at least one of said opposing edge portions being secured to its respective adjacent section by means of an ant/termite impervious silicon based adhesive.
2. The method of claim 1 wherein said marine grade aluminium sheet material is at least 0.5 mm thick.
3. The method of either of claims 1 or 2 wherein one of said adjacent sections is a concrete slab.
4. The method of any one of claims 1 to 3 wherein one of said adjacent sections is an upstanding wall.
5. The method of any one of claims 1 to 4 wherein one of said adjacent sections is a conduit passing through the other said adjacent section.
6. The method of any one of claims 1 to 5 wherein one of said edge portions is embedded in its respective adjacent section.
7. The method of any one of claims 1 to 6 wherein said adhesive is "Alterm Termite Proof Silicon".
8. The method of any one of claims 1 to 7 wherein said marine grade aluminium sheet material is marine grade series 5005 aluminium sheet material.
9. A method of anti/termite proofing a structure which includes a concrete slab and an upstanding exterior wall positioned on said slab with the exterior face of said wall being generally flush with an end face of said slab, said method comprising the steps of:
 - securing a strip of continuous marine grade aluminium sheet material between said wall and said concrete slab by means of an ant/termite impervious silicon based adhesive with an edge portion of said strip protruding beyond said wall exterior face; and
 - providing a surface coating on said wall exterior face and said concrete slab edge face, said surface coating having a thickness such that said strip edge portion is generally flush with the exterior face of said surface coating.
10. The method of claim 9 wherein said strip of continuous marine grade aluminium sheet material is secured to said concrete slab by means of said ant/termite impervious silicon based adhesive.

11. The method of either of claims 9 or 10 wherein said surface coating is a cement based render.
12. The method of any one of claims 9 to 11 wherein said marine grade aluminium sheet material is at least 0.5 mm thick.
13. The method of any one of claims 9 to 12 wherein said adhesive is "Alterm Termite Proof Silicon".
14. The method of any one of claims 9 to 13 wherein said marine grade aluminium sheet material is marine grade series 5005 aluminium sheet material.