CONFIDENCE STARTS HERE

Termidor®

Termiticide

Australian Soil

Do you know the soils you are treating?

BASF

We create chemistry

TECHNICAL NOTE

Do you know the soils you are treating?

The Australian continent land mass covers an area of approximately 7.692 million square kilometers – an area almost the size of United States of America. Due to its size, climatic variation and geotechnical stability the Australian landscape and ecosystems supported are diverse and complex and range from fertile tropical rainforest, to unique desert environments.

Soils and associated land formations in Australia have evolved over many millions of years with our harsh climate significantly impacting their characteristics. This has resulted in a diverse range of soils across the continent with distinct physical and chemical structure formed over time by climate, leaching, weathering and microbial activity among other factors. These factors can change the structure of the soil and its ability to hold moisture.

Soils in Australia are represented by 14 unique soil classifications (Figure 1), each of which has defining attributes relating to colour, texture, porosity, and structure. Of these, six (6) soil types make up over 90% of all soils found in Australia with these soils being: Vertisols, Tenosols, Kandosols, Sodosols, Rodosols and Calcarsols.

Each of the six main Australian soil types have varying amounts of clay, silt, organic matter and sand. This influences their common description as being; sandy clay loams, clay loams, light clay, and heavy clay soils as they all have some clay in their content.

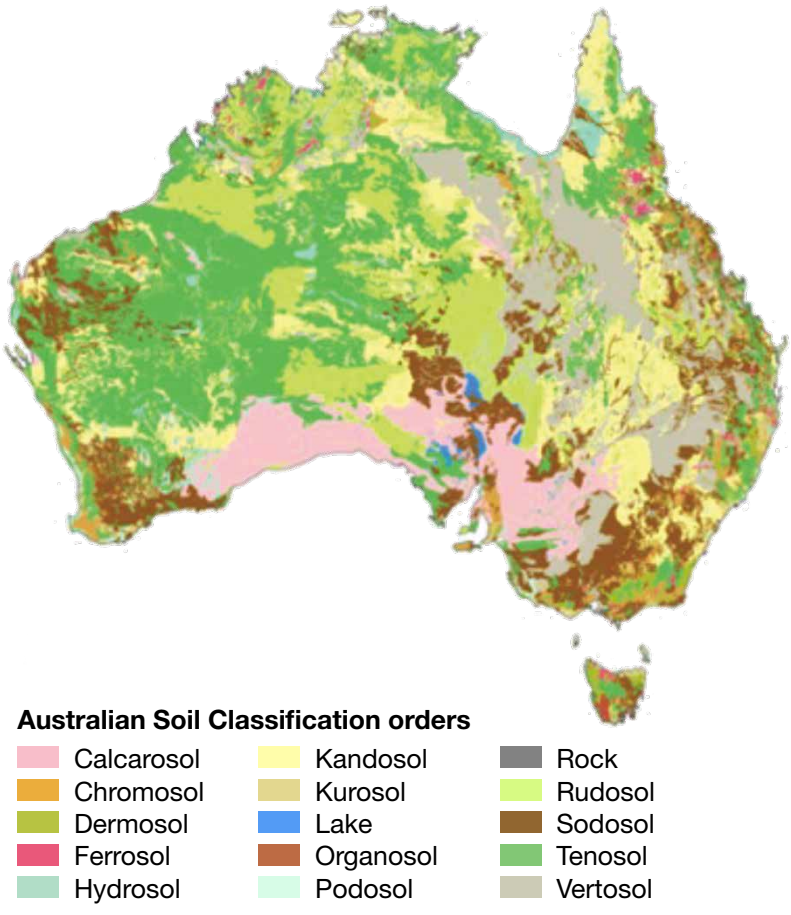
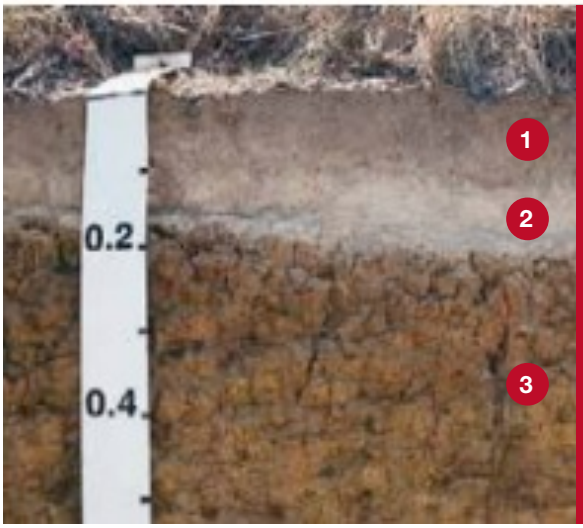


Figure 1: Soils types across Australia *Source - www.asris.csiro.au/themes/Atlas.html*

Relevance to Termite Management

When using liquid termiticides to develop a termite management system it is imperative to understand the soil types present on the site as soil types will have direct influence on how a termiticide can be applied. This is particularly critical when you consider that soils at a site are rarely, if ever, homogenous or represent a single type, as soil types will vary greatly with depth (down the profile) (Figure 2).



1. **Surface soil**
   Accumulation of organic matter causes darker colour
2. **Subsurface soil**
   Less organic matter, paler colour and may have less clay than surface soil. Note: Pale subsurface horizons are not present in all soils.
3. **Subsoil**
   Usually finer in texture (higher clay content) and stronger in colour (higher content of iron and other minerals) than horizons above.

Figure 2: In this soil profile example, we can see the different horizons (layers) in this soil profile at the top a surface soil (topsoil) this will normally contain a higher organic matter, a subsurface soil with less organic matter and then a sub soil usually finer texture generally with a higher clay content. Typically, all three layers can be present in the first 400mm of the soil profile. *Source - https://www.ipswich.qld.gov.au/__data/assets/pdf_file/0005/42557/soil-management-guidelines.pdf--*

It is therefore highly unlikely that soils, particularly in highly populated urban areas, can be described simply as Clays, Loams or Sands as they will likely be a combination of variable soils both across the site and down a soil profile. An added complexity for the Pest Manager is how important decisions regarding soils and liquid termiticides relate to when application needs to occur under concrete, where assessment of soil is more challenging.

For this reason, rather than providing instructions for soil applications based on soil types that don't really exist or are impossible to distinguish by the Pest Manager, BASF soil termiticides labels provide recommendation based on two distinct and easily distinguishable soil classes - Heavy Clay / Clays Soils and Other Soils. These two easily distinguishable classes have been determined through years of in field soil testing in Australian conditions, to determine how both Termidor® Residual Termiticide and Insecticide and Termidor® HE Residual Termiticide perform irrespective of the natural variation that occurs in soil across this vast country.

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Heavy clay or true clay soils are soils such as Vertisols which typically have 80+% clay content in the structure and can feel very sticky when wet as they can hold more water than most other soil types. As a result, when using Termidor Residual Termiticide and Insecticide as well as Termidor HE Residual Termiticide, application spacing reduces to ensure even soil distribution of termiticide (Table 1).

Comparison of soil and application spacing

Product	Other Soils	Heavy Clay/Clay Soils
Termidor	200mm	150mm
Termidor HE	450mm	350mm

When rodding through concrete with Termidor Residual Termiticide and Insecticide application spacings will reduce from 200mm in other soils to 150mm into heavy clays. Whilst for Termidor HE Residual Termiticide spacings will reduce from 450mm in other soils to 350mm in heavy clay soil applications.

All other soil types irrespective of their variations in silt, clay or sand are described simply as “other soils” and have a single application instruction for both Termidor Residual Termiticide and Insecticide and Termidor HE Residual Termiticide. This approach ensures simplicity for the Pest Manager but also mitigates risk of potential legal and insurance consequences related to improper soil classification.

On a typical liquid termiticide treatment, the application, (depending on depth) will result in the treatment of several soil types whether it is applied directly to soil in a trench or soil under concrete via injection (rodding) through concrete.

Pest Managers and homeowners in Australia can feel confident that unlike inferior copies, Termidor Residual Termiticide and Insecticide and Termidor HE Residual Termiticide have been tested in Australian conditions over many soil types and the performance of the product is consistent with the approved label, irrespective of onsite soil variation. Most importantly, Pest Managers can feel assured that they have applied BASF products correctly and to the label, so that their business and their customers most valuable asset are protected – that is peace of mind.

For more information on Termiticide visit crop-solutions.basf.com.au or call 1800 558 399

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