



# VERMATE

Probiotic Microbes and Humates

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Voorkomende Gesondheid - Pro-active Health

*The pro-active approach  
towards animal health*

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## Thermal Mud

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### Introduction

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The development of humates and healthy soil micro-organisms in a concentrated form that can be applied externally opens up the option of using humates for the treatment of external wounds and injuries with great effect. The most outstanding aspect of using humates in a paste form is the immediate heat reaction that occurs when applied on wounds or areas where infection occurs. This led to the product being named Thermal Mud.

The heat reaction is a result of an increase in blood flow to the infected area in order to provide more white blood cells that can fight the infectious bacteria. Thermal Mud also makes use of a large variety of healthy soil micro-organisms that physically attack and kill infectious bacteria also adding to the immediate heat reaction that occurs. Healthy organisms also play an important role to “clean” out wounds and provide healing without the effect of scar tissue or “proud flesh”.

### Humates and the Healing Process

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It is a well known fact that micro-organisms are responsible for the breakdown of organic material in nature. It is a less known fact that humus is formed in the process and that humic acids are derived from humus. Humic acids are formed when the micro-organisms that feed on organic material dies off and mineralize. Various components such as DNA, RNA, mitochondria and other cellular components break down and rearrange themselves to form humic and fulvic acid molecules. Humic and Fulvic acid has proved to be one of nature’s most powerful organic electrolytes and it serves to balance cell life. When organic electrolytes are introduced, the individual cell is restored to its normal chemical balance and its electrical potential where otherwise disintegration and death would occur. Humates therefore helps to balance pH and electrochemical potential at a cellular level. The result is improved mineral transfer into the cell that result in improved nutrient uptake; improved restoration of damaged cells in the case of injury and also higher resistance against cell degradation.

### Humate Blood Properties

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Red blood cells have the ability to carry more oxygen when in the presence of humates. Healing of injuries as a result of additional oxygen is therefore much quicker. Humate molecules allow higher oxygen levels in the blood with a quicker breakdown of lactic acid in overworked and stiff muscles. Recovering from stiffness in hardworking horses is therefore much quicker when Thermal Mud is applied after hard work.

### **Mineral Transfer**

Humic acid allows easier transfer of minerals from the blood to the bone and tissue cells through the chelating or mineral carrying ability. Improved mineral transfer due to chelating properties of humates also means enhanced removal of metabolic waste and toxic elements in the body which is a key aspect in the healing of wounds and injuries.

### **Anti-inflammatory Properties**

Humic acids are known to exhibit anti-inflammatory properties. Not only do the humates relieve swelling from joint inflammation, it bonds to the collagen fibers to aid in repair of damaged tendons and bone. Recovery time for tendon injuries has been shown to increase by as much as 75% with localized humate treatments.

#### **For further enquiries, please contact:**

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