



PALAGONITE

CHALKMINE

is a natural basalt rock dust soil re-mineraliser



Soil support -
Rock Mineral Dust

PALAGONITE

WHAT IS PALAGONITE?

Palagonite is a rich and readily available source of amorphous nutrients and trace elements, that are now recognised as essential for plants, animals and humans.

Palagonite was created by a rare geological process called Palagonisation. This unique process has resulted in a largely amorphous volcanic material that occurs mainly as a sandy rind on our basalt gravels.

Amorphous in this case means lacking crystallinity and indicating ready bioavailability.

MAJOR BENEFITS

- Palagonite has abundant amounts of most of the 22 essential plant nutrients - only Nitrogen, Sulphur, and Boron are low.
- High Levels (22%) of plant available Amorphous Silica.
- Better nutrition provides improved resistance to pathogens and pests.
- Smarter and longer term alternative to lime or dolomite -No Co2 release for acid soils.
- Improves soil structure, Cation Exchange Capacity (CEC) and Aeration.
- Increased essential nutrient density in produce, fodder, meat and dairy – If the nutrients are not in the soil –how can they be in the food?
- Enriches soluble chemical fertilisers and composts to create a truly complete fertiliser with high Amorphous Silica content.

- Palagonite is the most cost effective and only known source of all of the 22 essential plant nutrients and trace elements in a readily available amorphous form and in one complete organic package.
- Captures and holds moisture and soluble nutrients in the soil for slow release to plants as required – less/reduced leaching or runoff of soluble nutrients.
- Increased soil moisture content means less irrigation and improved resistance to heat, drought and salt stresses.
- Reduced toxicity from nutrients applied in excess (N and P).
- Ameliorates herbicide residual toxicity in soils.
- Certified organic by Australian and US Dept of Agriculture Certification Agencies for use as a soil remineraliser and as a stock feed mineral supplement.





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COMPARING PALAGONITE WITH ZEOLITE

Palagonite has a similar water holding capacity to zeolite (25-40%) and this relates to the smectite content of the product. Palagonite also has a substantial advantage over zeolite in the wide range of additional plant available macro and micro nutrients and does not contain any quartz which in a powdered form is a known health hazard if inhaled. The dominant exchangeable cations in palagonite are calcium and magnesium with minor sodium and potassium. Natural Australian zeolites on the other hand have sodium as the dominant exchangeable cation.

APPLICATION

- To fully remineralise garden soil – apply 2kg/m², mix into the top 250mm of soil.
- To use with soluble chemical fertilisers, reduce fertiliser manufacturers recommended application rates by 50% while ensuring sufficient Nitrogen, Sulphur and Boron for the intended crop are provided.
- With a high analysis composted manure product, add 1 part Palagonite to 1 part compost, apply at a rate of 3kg/m².

ANIMALS

- To restore the balance of minerals and trace elements. Add sufficient quantity to make up to 5% of an animals daily

TURF

- Established lawns - Apply 3kg/m² - as a top dressing and water in.
- New lawns – Apply 3kg/m² - incorporate into top 250mm at preparation stage.
- Always apply with an adequate source of NPK, Sulphur and Boron to restore mineral and trace elements

MACRO ELEMENTS TYPICAL ANALYSIS

Silicon	22.30%
Titanium	1.44%
Aluminium	7.70%
Iron	10.10%
Manganese	0.23%
Magnesium	3.30%
Calcium	5.10%
Sodium	2.36%
Phosphorous	0.24%
Potassium	0.77%

MICRO ELEMENTS TYPICAL ANALYSIS

Cobalt	60.0 ppm
Copper	40.0 ppm
Nickel	90.0 ppm
Zinc	170.0 ppm
Molybdenum	1.0 - 3.0 ppm
Selenium	0.3 - 0.8 ppm



ALLOWED INPUT 10575