

The Best on Earth

John Ferguson
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Report to: Austra Hort

Reference: Austra Blend Super Sorb Oxidised Rock Mineral - Palagonite

Dear Sir

Palagonite is a basalt igneous rock formed by the alteration of volcanic lava as it flows into a lake or other wet, swampy location.

While it is similar to many other quarried basalt stone, it has a much finer texture with a higher clay content and increased moisture holding ability.

It is frequently used as a base for organic fertilizer mixes in the landscape and agriculture industry as its nutrient and holding ability is highly regarded and accepted.

No known problems from its use has been documented and the small trace of the D.D.T. chemical and T.P.H and BTEX slight content would be coming from machinery and water suppression of dust during quarry and screening operations during production.

Regards

John Ferguson

John Ferguson

Date 16-9-2010

John Ferguson
Soil Consultant

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Laboratory Report to: **Austra Hort**
Location: **Production Factory**
Sample Submitted by: **Mr S Black**
Date Sampled: **23rd August 2010**
Laboratory No: **7982**
Sample Type: **Austra Blend Super Sorb Oxidized Rock Mineral – Palagonite**

Laboratory Analysis

Nitrogen	%	0.38	pH	Units	8.5
Phosphorous Available	%	0.96	Boron	mg/kg	49
Potassium	%	0.41	Molybdenum	mg/kg	11
Calcium	%	2.70	Cobalt	mg/kg	180
Magnesium	%	0.79	Selenium	mg/kg	3
Silica	%	5.90	Sodium	mg/kg	29
Carbon	%	0.41	Chloride	mg/kg	8
Sulphur	%	0.47	Paramagnetism	Reading	820
Iron	%	1.30			
Manganese	mg/kg	1890			
Zinc	mg/kg	405			
Copper	mg/kg	97			
Phosphorous Water Soluble	%	0.31			
Phosphorous Citrate Soluble	%	0.65			
Phosphorous Insoluble	%	0.11			
Phosphorous Total	%	1.07			

"Trace" or "<" –symbol indicates a level below an acceptable laboratory reading

Effective Neutralising Value – 42 Value

Remarks: This material has an even balance of all nutrients required by plants and its fine gritty texture would make it suitable as a soil conditioner while the fine clay particles would hold excellent amount of moisture along with any added fertilizer nutrients. Nothing could be found in this material that would impede the growth of plants.

The above Paramagnetism Reading was carried out with a Dr. P Callahan designed P.C.S.M. Meter.

Signature: John Ferguson

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LABORATORY PARTICLE SIZE COMPOSITION % Passing By Mass

% Passing	A.S. Sieve	9.5 mm	
% Passing	A.S. Sieve	6.7 mm	
% Passing	A.S. Sieve	4.75 mm	
% Passing	A.S. Sieve	2.36 mm	
% Passing	A.S. Sieve	1.18 mm	100
% Passing	A.S. Sieve	0.600 mm	91
% Passing	A.S. Sieve	0.425 mm	79
% Passing	A.S. Sieve	0.300 mm	47
% Passing	A.S. Sieve	0.150 mm	21
% Passing	A.S. Sieve	0.075 mm	8
% Passing	A.S. Sieve	0.002 mm	0.3

"Trace" or "<" –symbol indicates a level below an acceptable laboratory reading

Remarks: This material has a fine even distribution of its particle sizes.

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LABORATORY ANALYSIS for Heavy Metals and Chemical Residue

Characteristic		Laboratory Reading	Maximum Limit	Remarks
Arsenic	mg/kg	<1	20	Pass
Cadmium	mg/kg	NIL	3	Pass
Chromium	mg/kg	NIL	100	Pass
Copper	mg/kg	97	100	Pass
Lead	mg/kg	NIL	150	Pass
Mercury	mg/kg	NIL	1	Pass
Nickel	mg/kg	8	60	Pass
Selenium	mg/kg	3	5	Pass
Zinc	mg/kg	405	400	Satisfactory
DDT-DDD-DDE	mg/kg	0.02	0.5	Pass
Aldrin	mg/kg	NIL	0.02	Pass
Dieldrin	mg/kg	NIL	0.02	Pass
Chlordane	mg/kg	NIL	0.02	Pass
Heptachlor	mg/kg	NIL	0.02	Pass
Hexachlorobenzene (HCB)	mg/kg	NIL	0.02	Pass
Lindane (gamma HCH)	mg/kg	NIL	0.02	Pass
BHC	mg/kg	NIL	0.02	Pass
PCBs	mg/kg	NIL	0.03	Pass

Characteristic		Laboratory Reading	Maximum Limit	Remarks
Faecal Coliforms	MPN/gram	<1	<1000	Pass
E.Coli	MPN/gram	NIL	<100	Pass
Salmonella SP	50 grams	NIL	NOT DETECTED	Pass
Enteric Viruses	4 grams	NIL	<1 MPN	Pass
Helminth Ova (Ascaris SP & Taenia SP)	4 grams	NIL	<1	Pass
T.P.H	mg/kg	0.009	1	Pass
B.T.E.X.	mg/kg	0.006	1	Pass
pH	Units	8.5	5.0-7.5	Pass

M.P.N. = Most Probable Number T.P.H. Total Petroleum Hydrocarbons.

B.T.E.X. = Total Benzene, Toluene, Ethylbenzene, Xylene.

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Analysis Required: *Water Holding Capacity*

Laboratory Result

Water Holding Capacity = 68.2%

Analysis Required: *Cation Exchange Capacity (C.E.C.)*

Laboratory Result

Cation Exchange Capacity Reading = 120

Remarks: I hereby certify that the above testing was carried out within the guidelines as set out in the Australian Laboratory Handbook of Soil and Water Methods.

Signature: John Ferguson

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