RICHGRO
SINCE 1916

PRODUCT SPECIFICATION

AUSTRALIAN STANDARD AS 4454-2012
COMPOSTED MULCH

Product Name: Exotic Mulch **Issue date: May 2022**
Product Code: SAM0950
Product Description: Composted, fine blended mulch suitable for placing on soil surface.

Characteristic & Unit		Requirement From AS 4454-2012	Typical Analysis
Description		**Conforms**	
pH		5.0 to 8.0	7.0 - 8.0
Electrical Conductivity	dS/m	10 (Refer to Table 3.3)	1.5 - 2.0
Phosphorus, soluble	mg/L	≤ 5 for P sensitive plants	2.0
Phosphorus, total	%	≤0.1 for P sensitive plants	0.38
Ammonium-N	mg/L	<200	<2.0
Nitrate-N	mg/L	≥10	<1.0
Ammonium-N plus nitrate-N	mg/L	Level appropriate for application	-
Nitrogen, total	%	≥0.8	1.5
Total Organic Carbon	%	≥20	25
Organic matter content	%	≥20	40
Carbon:Nitrogen Ratio (C:N)	%	Level appropriate for application	17
Potassium K	%	Level appropriate for application	0.25
Calcium Ca	%	Level appropriate for application	3.2
Magnesium Mg	%	Level appropriate for application	0.21
Sulphur S	%	Level appropriate for application	<0.01
Iron Fe	mg/kg	Level appropriate for application	16000.0
Manganese Mn	mg/kg	Level appropriate for application	58.0
Sodium Na	%	< 1	0.10
Wettability	Minutes	< 5	<1 min
Plant growth test (Bioassay)	mm	≥ 60	120
Particle size grading: Maximum size Tolerance	% mm % mass	 ≤16 ≤ 20 % retained by sieve	Mulch
Total $CaCO_3$ equivalent	%	To be determined and stated if pH > 8.0	-
Chemical Contaminants (Inc. Heavy Metals)		State guidelines for unrestricted use	Passed
Organic Contaminants		State guidelines for unrestricted use	Passed
Pathogens (Plant & Human Pathogens)		State guidelines for unrestricted use	Passed
Moisture Content	%	Minimum 25	30 – 40%
Contaminants Glass, metal and rigid plastics >2mm Plastics- light, flexible or film >5 mm Stones and lumps of clay ≥ 5 mm	%	 ≤ 0.5 ≤ 0.05 ≤ 5	 <0.5 <0.05 <5

Note: Detailed test results continued on next page

STANDARD MARK AS 4454-2012
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Characteristic & Unit	Requirement From AS 4454-2012	Typical Analysis
Constituents	**Maximum allowable concentration in mg/kg dry solids**	**mg/kg**
Chemical Contaminants:	**Grade C1 Biosolids**	
Arsenic mg/kg	20	<5
Cadmium mg/kg	1	0.50
Chromium mg/kg	100	18
Copper mg/kg	100	52
Mercury mg/kg	1	<0.02
Nickel mg/kg	60	5
Lead mg/kg	150	10
Zinc mg/kg	200	70
Molybdenum mg/kg	4	<1
Selenium mg/kg	5	<1
Boron B mg/kg	100	15
Organic Contaminants:	**Grade C1 Biosolids**	
OCOP and PCB		
Aldrin mg/kg	0.02	<0.01
BHC Total mg/kg	0.5	<0.01
Bifenthrin mg/kg	0.2	<0.2
Bromophos Ethyl mg/kg	0.05	<0.05
Chlordane mg/kg	0.02	<0.01
Chlorpyrifos mg/kg	0.02	<0.02
Dieldrin mg/kg	0.02	<0.01
DDT/DDD/DDE Analogs mg/kg	0.5	<0.01
Heptachlor mg/kg	0.02	<0.01
HCB (Hexachlorobenzene) mg/kg	0.02	<0.01
Lindane mg/kg	0.02	<0.01
Diazinon mg/kg	0.2	<0.2
Ethion mg/kg	0.05	<0.05
Fenitrothion mg/kg	0.05	<0.1
Malathion mg/kg	0.1	<0.1
PCB Total mg/kg (as Aroclor Ind)	0.2	<0.2
Pathogen Test:	**Grade P1 Biosolids**	
Phytophthora (fungal plant pathogen)	N/A	Not detected
Pythium (fungal plant pathogen)	N/A	Not detected
Salmonella sp. (human pathogen)	<1 Salmonella per 50 g	Not detected
Thermotolerant coliforms (E-coli) (human pathogen)	<100 Thermotolerant cfu/g	<100
Maturity Index:		
Solvita – Maturity Index	≥ 5 or 6	6
Nitrogen Drawdown Index (NDI)	>0.2	0.25

Authorised by: Maria Sevo, Quality Manager