

July 4th, 2024.

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Carbosoil Product Specifications



	Parameter	Method	Unit	Value	Range	Comment
Carbosoil defining parameters	Water holding capacity (WHC)	DIN EN ISO 17828: 2016-05	% (w/w)	184.5	180-190	Permanent, long-term stability guarantees that the WHC and CEC will remain for the lifetime (100+ years).
	Water holding capacity (WHC)	DIN EN ISO 17828: 2016-05	% (v/v)	59	57-61	
	Cation exchange capacity (CEC)	Rayment & Lyons 2011 - 15D3	cmol/L	17.2	>16	
	pH (in CaCl ₂)	DIN ISO 10390: 2005-12		7.0	<8.5	Nutrient is made available despite pH value up to 8.5. Reject if pH above 8.5.
	Conductivity	1:10 solid:water method	dS/m or mS/cm	1.5	<1.75	Mostly potassium salts. Reject if above 1.750 dS/m.
	Soluble salt content (dry basis)	BGK III. C2: 2006-09	g/kg	5.78	<10	Mostly potassium salts. Reject if above 10 mg/kg.
	H/Corg ratio (molar)	Mass balance		0.5	<0.7	Indicates the long-term stability. Meets EBC-Agro Organic standard.
	Material stability	BC ₁₀₀₊ (%) = -74.3.(H/Corg)+110.2	% 100+ years	73	>58	Percentage of carbon predicted to remain after 100 years. IBI standard.
Secondary physical parameters	Bulk density (dry basis)	VDLUFA-Method A 13.2.1	g/mL	0.399	0.30-0.50	
	Moisture content	Drying method	(% v/v)	50	30-60	
	Typical bulk density (moist basis)	DIN EN ISO 17828: 2016-05	g/mL	0.598	0.50-0.70	
	Specific surface area (BET)	DIN ISO 9277: 2014	m ² /g	38.5		
	Particle size		mm	<4	<10	
	Ash content (550°C)	DIN 51719: 1997-07	% (w/w)	45.4	<50	Comprised mostly of slow release calcium/magnesium phosphate and silicate species.
	Total organic carbon	DIN 51732: 2014-07	% (w/w)	40.1	35-45	Organic carbon locked in the soil.
	Total organic matter	Mass balance	% (w/w)	68	>55	
	Particle size	Sieve test	mm	<4	<10	
Nutrients		Total, including long-term release (% w/w)		Readily available (mg/kg)		Part of the nutrients are readily available by being bound to the surface exchangeable sites and as suspended salts. The other part is trapped inside deeper pores or in insoluble form, which will take longer time to be released.
	Nitrogen	(3-5) as N	4.08	N	802	
	Phosphorus	(5-7.5) as P ₂ O ₅	6.79	P	2084	
	Potassium	(0.7-2) as K ₂ O	1.46	K	5602	
	Calcium	(5-10) as CaO	7.67	Ca	2144	
	Magnesium	(2-5) as MgO	2.75	Mg	1869	
	Sulfur	(0.3-1) as SO ₃	0.66	S	748	
	Iron	(0.5-2) as Fe	1.48	Fe	16	
	Manganese	(0-0.3) as Mn	0.12	Mn	73	
	Sodium	(0.4-1) as Na ₂ O	0.68	Na	499	
	Zinc	(0-0.2) as Zn	0.11	Zn	90	
	Copper	(0-0.2) as Cu	0.02	Cu	2.6	
	Metal or organic contaminants	< thresholds				All below permissible thresholds.