

DEEP BLEACHED SILICEOUS SAND

General Description: *Very thick bleached sand over a brown slightly more clayey subsoil, calcareous with depth*

Landform: Gently undulating dunefields

Substrate: Windblown Molineaux Sand, with minor fine carbonate accumulations

Vegetation: Mallee



Type Site:	Site No.:	MM014	1:50,000 mapsheet:	6827-1 (Karoonda)
	Hundred:	Hooper	Easting:	393450
	Section:	66	Northing:	6103300
	Sampling date:	07/10/1991	Annual rainfall:	380 mm average

Low sandhill. Loose surface, no stone

Soil Description:

Depth (cm)	Description
0-9	Dark grey brown loose sand. Clear to:
9-52	Very pale brown (bleached) loose sand. Diffuse to:
52-74	Reddish yellow and pale brown loose sand. Sharp to:
74-93	Yellowish red soft loamy sand with 20-50% lamellae of light sandy clay loam. Abrupt to:
93-111	Reddish yellow soft loamy sand with minor lamellae (as above). Diffuse to:
111-129	Reddish yellow soft sand. Sharp to:
129-136	Light brown highly calcareous sandy loam. Sharp to:
136-179	Very pale brown highly calcareous loamy sand. Abrupt to:
179-195	Reddish yellow moderately calcareous sandy loam.



Classification: Calcareous, Argic, Bleached-Orthic Tenosol; thin, non-gravelly, sandy / sandy, deep



Summary of Properties

Drainage:	Rapidly drained. The soil never remains saturated for more than a couple of hours.
Fertility:	Inherent fertility is very low, according to the exchangeable cation data. Low clay and organic matter contents limit nutrient retention capacity. Phosphorus, nitrogen, copper and zinc deficiencies are likely.
pH:	Neutral at the surface, alkaline with depth.
Rooting depth:	52 cm in pit.
Barriers to root growth:	
Physical:	No physical barriers.
Chemical:	No chemical barriers other than low nutrient status and retention capacity.
Waterholding capacity:	30 mm in rootzone.
Seedling emergence:	Satisfactory, although reduced in dry seasons by water repellence.
Workability:	Good.
Erosion Potential:	
Water:	Low.
Wind:	Moderate to moderately high.

Laboratory Data

Depth cm	pH H ₂ O	pH CaCl ₂	CO ₃ %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	Boron mg/kg	Trace Elements mg/kg (DTPA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
										Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
Paddock	7.0	6.3	<1	0.05	0.38	0.6	10	130	<0.50	<0.05	10	2.7	0.13	3.1	2.79	0.57	0.20	0.39	6.5
0-9	6.9	6.4	<1	0.05	0.44	0.6	12	77	<0.50	<0.56	8.9	3.0	0.14	3.3	3.30	0.65	0.16	0.14	4.8
9-30	7.1	6.5	<1	0.02	0.16	0.1	3	71	<0.50	<0.05	6.3	0.51	<0.06	1.9	1.47	0.36	0.14	0.12	na
30-52	7.5	6.8	1	0.02	0.12	<0.1	<2	81	<0.50	<0.05	3.5	0.13	<0.06	1.6	1.27	0.34	0.16	0.13	na
52-74	7.7	7.0	2	0.02	0.13	<0.1	2	77	<0.50	<0.05	3.3	0.14	<0.06	1.8	1.43	0.40	0.16	0.13	na
74-93	8.1	7.2	2	0.03	0.27	<0.1	<2	78	<0.50	<0.05	5.8	0.14	<0.06	6.2	4.17	2.00	0.23	0.18	3.7
93-129	8.4	7.4	5	0.02	0.17	<0.1	<2	84	<0.50	<0.05	3.0	0.45	<0.06	3.4	2.62	1.44	0.21	0.16	6.2
129-136	9.1	8.1	4	0.07	0.30	0.1	<2	97	0.54	0.10	3.4	0.27	<0.06	4.4	4.26	1.40	0.20	0.21	4.5
136-179	9.3	8.3	4	0.07	0.27	<0.1	<2	87	0.69	0.06	2.4	0.38	<0.06	3.4	3.77	1.15	0.19	0.22	5.6
179-195	9.3	8.3	1	0.09	0.28	<0.1	<2	210	1.1	0.09	2.8	0.39	<0.06	5.1	4.23	2.02	0.32	0.48	6.3

Note: Paddock sample bulked from cores (0-10 cm) taken around the pit.
CEC (cation exchange capacity) is a measure of the soil's capacity to store and release major nutrient elements.
ESP (exchangeable sodium percentage) is derived by dividing the exchangeable sodium value by the CEC.

Further information: [DEWNR Soil and Land Program](#)

