

## BLEACHED SILICEOUS SAND

**General Description:** *Very thick bleached sand, organically darkened at the surface, over a brown or yellow slightly more clayey subsoil*

**Landform:** Flat to very gently undulating plain with frequent low sandhills, isolated stony rises and swamps in depressions

**Substrate:** Windblown Molineaux Sand.

**Vegetation:** Mallee heath



<b>Type Site:</b>	Site No.:	MM103	1:50,000 mapsheet:	6826-2 (Culburra)
	Hundred:	Richards	Easting:	397950
	Section:	35	Northing:	6019450
	Sampling date:	10/03/1993	Annual rainfall:	500 mm average

Sandhill on gently undulating plain. Soft surface, no stones.

### Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-13	Dark greyish brown loose sand. Clear to:
13-22	Brown loose sand. Gradual to:
22-40	Very pale brown (bleached) loose sand. Diffuse to:
40-70	Very pale brown (bleached) loose sand. Clear to:
70-110	Very pale brown loose sand with lamellae of orange hard sandy clay loam. Sharp to:
110-165	Orange friable sandy loam with lamellae of yellowish red hard massive sandy clay. Diffuse to:
165-220	Yellow soft sand with lamellae of brownish yellow friable massive light sandy clay loam.



**Classification:** Basic, Argic, Bleached-Orthic Tenosol; medium, non-gravelly, sandy / sandy, very deep



## Summary of Properties

- Drainage:** Rapidly drained. The soil never remains wet for more than a few hours.
- Fertility:** Inherent fertility is very low, as indicated by the exchangeable cation data. Phosphorus, nitrogen, copper and zinc deficiencies can be expected. Manganese is required by lupins. Concentrations of all tested elements are satisfactory at the sampling site (No N test). Organic carbon concentrations are low.
- pH:** Neutral to slightly acidic at the surface, neutral at depth.
- Rooting depth:** 100 cm (lucerne) in pit.
- Barriers to root growth:**
- Physical:** No physical barriers.
- Chemical:** No chemical barriers. Low nutrient retention capacity is the main reason for lack of root penetration.
- Waterholding capacity:** 60 mm in rootzone.
- Seedling emergence:** Satisfactory, but usually reduced by water repellence in dry years.
- Workability:** Soft / loose surface is easily worked.
- Erosion Potential:**
- Water:** Low.
- Wind:** Moderately high.

## Laboratory Data

Depth cm	pH H <sub>2</sub> O	pH CaCl <sub>2</sub>	CO <sub>3</sub> %	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	6.7	6.1	<1	0.07	0.59	0.7	15	120	0.42	0.23	-	2.1	0.81	5.5	3.47	0.56	0.07	0.40	1.3
0-13	6.5	5.8	<1	0.07	0.64	0.7	17	140	0.39	0.16	-	2.0	0.68	3.7	2.92	0.54	0.07	0.43	1.9
13-22	6.3	5.6	<1	0.03	0.27	0.2	12	<40	0.13	0.063	-	0.22	0.07	1.9	1.46	0.25	0.07	0.21	na
22-40	6.4	5.8	<1	0.02	0.22	<0.1	8	<40	<0.02	<0.05	-	0.08	<0.06	1.1	0.69	0.16	0.06	0.15	na
40-70	6.6	6.2	<1	0.02	0.28	<0.1	7	43	<0.02	<0.05	-	0.07	<0.06	1.0	0.64	0.16	0.07	0.17	na
70-110	7.0	6.5	<1	0.03	0.31	<0.1	11	110	0.07	<0.05	-	<0.06	<0.06	1.9	1.21	0.32	0.09	0.31	na
110-165	7.1	6.5	<1	0.08	0.91	<0.1	<2	240	0.52	<0.05	-	0.16	<0.06	7.8	4.52	2.25	0.20	0.76	2.6
165-220	7.4	6.7	2	0.04	0.48	<0.1	<2	110	0.15	<0.05	-	0.31	<0.06	5.2	2.71	1.32	0.13	0.32	2.5

**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](#)

