

## DEEP SILICEOUS SAND

**General Description:** *Thick bleached sand, organically darkened at the surface, grading to a yellower sand with depth*

**Landform:** Undulating rises and low hills overlain by low to moderate sandhills.

**Substrate:** Windblown Molineaux Sand.

**Vegetation:** Mallee (Euc. incrassata, Euc. diversifolia)



**Type Site:** Site No.: MM088

1:50,000 sheet: 6826-4 (Binnie)

Hundred: Jeffries

Annual rainfall: 465 mm

Sampling date: 1992

Landform: Crest of low sandhill

Surface: Loose with no stones

### Soil Description:

Depth (cm)	Description
0-10	Dark greyish brown loose sand. Clear to:
10-22	Brown loose sand. Clear to:
22-60	Yellowish brown, yellowish red and light grey (bleached) loose sand. Diffuse to:
60-100	Brownish yellow, yellowish red and light grey (bleached) loose sand. Diffuse to:
100-210	Brownish yellow and yellowish red loose sand.



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

## Summary of Properties

<b>Drainage</b>	Rapidly drained. The soil never remains wet for more than a few hours.
<b>Fertility</b>	Inherent fertility is very low, as indicated by the exchangeable cation data. Phosphorus, nitrogen, copper and zinc deficiencies can be expected. Manganese required by lupins. Phosphorus, copper and manganese appear to be deficient at the sampling site. Organic carbon concentrations are adequate.
<b>pH</b>	Acidic to neutral at the surface, neutral to slightly alkaline at depth.
<b>Rooting depth</b>	100 cm in pit.
<b>Barriers to root growth</b>	
<b>Physical:</b>	No physical barriers.
<b>Chemical:</b>	No chemical barriers. Low nutrient retention capacity is the main reason for lack of root penetration.
<b>Water holding capacity</b>	60 mm in root zone.
<b>Seedling emergence:</b>	Satisfactory, but can be reduced by water repellence in dry years.
<b>Workability:</b>	Soft / loose surface is easily worked.
<b>Erosion Potential</b>	
<b>Water:</b>	Low.
<b>Wind:</b>	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	6.4	6.0	<1	0.02	0.22	0.7	10	48	<0.40	0.06	19	0.63	0.61	2.4	1.83	0.36	0.05	0.06	na
0-10	6.7	6.1	<1	0.03	0.3	0.7	8	73	<0.40	<0.05	19	0.66	0.57	2.3	1.51	0.35	0.13	0.14	na
10-22	6.6	6.2	<1	0.02	0.16	0.3	6	<40	<0.40	<0.05	25	0.18	0.06	1.9	1.42	0.31	0.09	0.03	na
22-60	6.9	6.5	1	0.02	0.14	0.1	5	<40	<0.40	<0.05	17	0.06	<0.06	1.1	0.77	0.25	0.06	0.06	na
60-100	7.0	6.8	1	0.01	0.11	<0.1	3	54	<0.40	<0.05	8.8	<0.06	0.11	1.3	0.78	0.32	0.08	0.09	na
100-150	7.3	7.0	1	0.02	0.12	<0.1	<2	84	<0.40	<0.05	6.6	0.08	<0.06	1.8	0.87	0.49	0.10	0.17	na
150-210	7.4	7.1	1	0.03	0.12	<0.1	<2	79	<0.40	<0.05	7.1	0.22	<0.06	1.7	0.67	0.60	0.08	0.16	na

**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.