

SANDY LOAM OVER POORLY STRUCTURED RED CLAY

General Description: *Hard loamy sand to sandy loam over a coarsely structured red clay, generally calcareous at depth.*

Landform: Flats and lower slopes.

Substrate: Fine to medium grained alluvial sediments.

Vegetation:



Type Site:	Site No.:	MO021	1:50,000 mapsheet:	6727-4 (Monarto)
	Hundred:	Monarto	Easting:	327300
	Section:	195	Northing:	6115690
	Sampling date:	1976	Annual rainfall:	415 mm average

Creek flat, 1% slope. Hard setting surface, no stones.

Soil Description:

Depth (cm)	Description
0-9	Dark reddish brown massive soft sandy loam. Clear to:
9-18	Reddish brown massive hard sandy loam, sporadically bleached at base. Clear to:
18-40	Dark reddish brown hard medium clay with moderate coarse subangular blocky structure. Gradual to:
40-300	Reddish brown hard massive clay.



Classification: Eutrophic, Subnatric, Red Sodosol; medium, non-gravelly, loamy / clayey, very deep



Summary of Properties

Drainage: Moderately well drained. Water perches temporarily on top of the clayey subsoil, but the profile rarely remains saturated for more than a week following heavy or prolonged rainfall.

Fertility: Inherent fertility is moderate, a function of neutral pH and favourable clay content. Nitrogen and phosphorus deficiencies are usual, with trace elements (mainly zinc) likely to be required occasionally.

pH: Neutral at the surface, alkaline with depth.

Rooting depth: Not recorded. Estimate 80 cm in pit, with some roots extending lower.

Barriers to root growth:

Physical: The clayey subsoil affects root growth to some extent.

Chemical: There are no apparent chemical barriers, data below 50 cm are required to confirm.

Waterholding capacity: Approximately 100 mm in the rootzone.

Seedling emergence: Satisfactory to fair, depending on the degree of hard setting and surface sealing

Workability: Fair to good, depending on surface organic matter levels.

Erosion Potential:

Water: Moderately low.

Wind: Low.

Laboratory Data

Depth cm	Coarse sand %	Fine sand %	Silt %	Clay %	pH H ₂ O	CO ₃ %	EC 1:5 dS/m	Cl mg/kg	CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
										Ca	Mg	Na	K	
0-9	28	53	6	14	7.0	0	0.07	<50	5	2.6	0.51	0.07	1.1	1.6
18-31	21	39	5	34	8.3	0	0.09	86	9	3.1	3.3	1.2	1.3	13.5
40-50	10	31	6	48	8.8	0	0.31	372	18	4.7	7.3	3.2	2.4	18.2

Note: CEC (cation exchange capacity) is a measure of the soil's capacity to store and release major nutrient elements. CEC at this site is estimated from the sum of exchangeable cations.

ESP (exchangeable sodium percentage) is derived by dividing the exchangeable sodium value by the CEC.

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

