

TECHNICAL STANDARD**PACKING SAND**
(Pipe embedment and trench fill sand)

Issued by: Manager Engineering Services

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MAJOR CHANGES INCORPORATED IN THE JUNE 2004 EDITION

The following lists the major changes to the June 2004 edition of TS 4, which have been incorporated in this edition:

- 1.

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Referenced Documents

Animal and Plant Control Act

Section 1: Quality of Material

The characteristics required of pipe embedment sand are that: (a) it will compact easily enough that the required density can be achieved all around the pipe without damaging or displacing the pipe – despite the restricted access normally encountered in a pipe trench; (b) that it will not mechanically damage the pipes or fittings or their protective coatings during placement or compaction; and (c) that it will not be corrosive to the pipes or fittings.

The sand shall be obtained from pits or sand dunes.

The sand shall be free, to the satisfaction of the Superintendent's Representative, from:

- cohesive and organic lumps
- rocks or other sharp particles likely to damage pipes or protective coatings
- dangerous and noxious weeds or their seeds as proclaimed in South Australia by regulations under the Animal and Plant Control Act with amendments.

The sand shall comply with the criteria detailed in Table 1.1 of this Specification.

Table 1.1: Essential Criteria.

Test	Description	Specification	Procedure
Particle Size Distribution	Sieve Size (mm)		AS 1141.11 (Including Clause 5.6 – Washing)
	9.5	100	
	6.7	95 – 100	
	2.36	90 – 100	
	1.18	80 – 100	
	0.600	50 – 100	
	0.300	20 – 100	
	0.150	5 – 55	
	0.075	0 – 10	
Resistivity	(ohm metre)	≥ 50	AS 1289.4.4.1
pH	–	≥ 5.0	SAW.SC.01 (Same as superseded AS 1289.D3.2)
Plasticity Index	(%)	Non Plastic	AS 1289.3.3.1

Note: The criteria in Table 1.1 do not always guarantee sand that will compact easily enough for use as pipe embedment sand. For example, sands that contain carbonate fines (lime) or that are unusually well-graded may be difficult to compact if their moisture content is even slightly above optimum and/or such sands may not drain well once wetted.

Section 2: Samples

When requested by the Superintendent's Representative, a 25 kg sample of packing sand shall be submitted with each tender and sent for testing to a laboratory nominated by the Superintendent's Representative.

Each sample shall be clearly marked with the following information:

- (1) Specification TS 4
- (2) Type of Material
- (3) Contract Number
- (4) Name of Tenderer
- (5) Origin of Supply

The sample of material from the successful tenderer will be retained for reference throughout the Contract.

Section 3: Testing

When requested by the Superintendent's Representative, test results shall be supplied to prove compliance with the criteria detailed in Table 1.1.

Testing shall be carried out by a NATA registered laboratory or a laboratory approved by the Superintendent's Representative. All relevant test certificates shall be submitted to the Superintendent's Representative immediately they become available.

The Superintendent's Representative reserves the right to carry out independent audit testing. The costs of such audit testing shall be borne by the Principal, except for all audit tests that indicate failure to meet the specified criteria, in which case the costs shall be borne by the Contractor.

Section 4: Rejection

Any material that is not of the required quality of grading, or is in any other way not in accordance with this Specification or has a moisture content greater than 8 percent will be rejected.

No payment will be made for rejected materials.