

**PART R82**  
**SUPPLY AND INSTALLATION OF GABIONS, RENO MATTRESSES AND MESH PANELS**

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**1. GENERAL**

- .1 This Part specified the requirements for the supply and installation of gabions, reno Mattresses and mesh panels, collectively referred to as "Mattresses" in this part.
- .2 Mattresses shall be "Aussie Steel", "Macaferrri" or equivalent, and shall be installed at the locations shown on the drawings and/or sketches.
- .3 Gabions shall be of a woven, double twist 80 mm x 100 mm hexagonal mesh. Reno Mattresses and mesh panels shall be of woven, double twist, 60 mm x 80 mm hexagonal mesh. Mesh wire shall be galvanized in accordance with AS4680 and PVC coated.
- .4 The following documents are referenced in this Part:
  - (a) AS 1152
  - (b) AS 4680

**2. ROCK FILL**

- .1 The rock fill used shall be quarried stone and shall conform to the requirements outlined in Table 2.1.1.

**Table 2.1.1 Rockfill Gradings**

<b>MATTRESSES</b>		<b>GABIONS</b>	
Sieve Size	% Passing	Sieve Size	% Passing
150 mm	100	200 mm	100
125 mm	40 – 100	150 mm	75 - 85
100 mm	20 – 50	75 mm	0 - 5
75 mm	0 – 5		

- .2 Square aperture sieves conforming to AS 1152 "Specification for Test Sieves" shall be used for the determination of grading for particle sizes 75 mm and finer. Coarser sizes shall be determined by linear measurement. Refer Clause 8 "Verification Requirements and Records" for Los Angeles Value and Degradation Factor requirements.

**3. EXCAVATION AND BACKFILL**

- .1 Excavation shall be carried out to the extent necessary to allow placement of the Mattresses to the final levels and shape detailed on the drawings and or sketches. After placement of Mattresses, the excavation shall be backfilled using excavated material placed in layers of depth not greater than 200 mm loose and compacted to not less than 90%. Compaction within 1 m of the rear of the gabions shall be achieved using hand operated vibrating plate compactors.

**4. INSTALLATION**

- .1 Before placing Mattresses, the surface on which they are to be placed shall be shaped and compacted to not less than 90% and filter cloth shall be placed as shown on the Drawings. The filter cloth shall be Bidim A24, or similar approved, and shall be placed and joined in accordance with the manufacturer's instructions.

- .2 Mattresses shall be formed and installed in accordance with the manufacturer's instructions. All wiring shall be done as a continuous operation, not with individual twists at intervals. Tightness of the mesh and wiring is essential at all times. The Contractor shall cut or fold Mattresses where required to achieve the configuration and dimensions shown on the Drawings where manufactured units do not comply. The Mattresses which are cut shall be fixed so that they have the same integral strength as the uncut Mattresses.

**5. PLACEMENT OF ROCK FILL**

- .1 The placement of rock fill shall be carried out to the manufacturer's instructions and in a manner that will avoid damage to the Mattresses.
- .2 Rock filling shall be firmly packed into the Mattresses. Some hand placing of stone will be required to achieve suitable packing.

**6. TOLERANCES**

- .1 Tolerances for the final placement of Mattresses shall be as follows:
  - (a) Horizontal Placement ± 40 mm.
  - (b) Vertical Placement ± 40 mm.

**7. TEST PROCEDURES**

- .1 The Contractor shall use the test procedures outlined in Table 7.1.1 (refer [http://www.dpti.sa.gov.au/contractor\\_documents](http://www.dpti.sa.gov.au/contractor_documents) for further information) to verify conformance with the Specification.

**Table 7.1.1 Test Procedures**

TEST	TEST PROCEDURE
Gradings	TP 134
Los Angeles Value	AS 1141.23
Degradation Factor	AS 1141.25

**8. VERIFICATION REQUIREMENTS AND RECORDS**

- .1 The Contractor shall supply written verification that the requirements outlined in Table 8.1.1 have been complied with and supply the verification with the lot package.

**Table 8.1.1 Verification Requirements**

CLAUSE REF.	SUBJECT	PROPERTY	TEST PROCEDURE	TEST FREQUENCY	ACCEPTANCE LIMITS
2	Rockfill	Grading	TP 134	One test per 50 cubic metres.	Refer Table 2.1
		Los Angeles Value	AS 1141.23; using laboratory crushed aggregate, conforming to AS 1141.23 grading A.	One test per 50 cubic metres.	Not more than 45%
		Degradation Factor	AS 1141.25.	One test per 50 cubic metres.	Not less than 30

**9. HOLD POINTS**

- .1 There are no hold points referenced in this Part.