

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

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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 must be "Aussie Steel", "Macafferri" or equivalent, and must be installed at the locations shown on the drawings and/or sketches.
- .3 Gabions must be of a woven, double twist 80 mm x 100 mm hexagonal mesh. Reno Mattresses and mesh panels must be of woven, double twist, 60 mm x 80 mm hexagonal mesh. Mesh wire must be galvanized in accordance with AS4680 and PVC coated.

2. ROCK FILL

- .1 The rock fill used must be quarried stone and must conform to the following:

TABLE 2.1 ROCKFILL GRADINGS			
MATTRESSES		GABIONS	
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" must be used for the determination of grading for particle sizes 75 mm and finer. Coarser sizes must 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 must 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 must 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 must be achieved using hand operated vibrating plate compactors.

4. INSTALLATION

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

- .2 Mattresses must be formed and installed in accordance with the manufacturer's instructions. All wiring must 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 must 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 must 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 must be carried out to the manufacturer's instructions and in a manner that will avoid damage to the Mattresses.
- .2 Rock filling must 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 must be as follows:
- (a) Horizontal Placement ± 40 mm.
- (b) Vertical Placement ± 40 mm.

7. TEST PROCEDURES

- .1 The Contractor must use the following test procedures (refer http://www.dpti.sa.gov.au/contractor_documents) to verify conformance with the Specification:

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 must supply written verification that the following requirements have been complied with and supply the verification with the lot package.

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