

Approval & Reception Procedure

DG – Geotechnical Department	
Bituminous Concrete Reception Tests	Document no. ARP/DG/06
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1. Reference standard

ASTM C136, ASTM D1559, ASTM D2041, ASTM D2172, ASTM D2726, ASTM D3549.

2. Approval procedures

Bituminous Concrete material must be approved before (See approval & reception procedure ARP/DG/05).

3. Reception procedure

3.1 Sampling and Laboratory Tests

For Hot Mixed Asphalt Concrete samples (in-situ), the minimum mass of the sample for testing shall be 10.0 kg and this sample shall be collected during construction of pavement, the following laboratory tests shall be performed, 1 test per 1000 m² or in one day:

Particle Size Distribution Test (ASTM C136)

Bitumen Content Test (ASTM D2172)

Specific Gravity Test (ASTM D2041, ASTM D2726)

Marshall Test (ASTM D1559, ASTM D3549)

Temperature of the hot mixture must be taken each period of work, at least.

Taking core samples for verifying Thickness and Degree of Compaction, 1 test per 1000m² at each layer.

4. Acceptance criteria

For Particle Size Distribution Test, the material shall be continuously well graded within the limits specified in specification or in the Table below.

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Percentage by weight of material passing square-mesh sieve

Base Course			Wearing Course		
Sieve Designation mm	Range Requirement		Sieve Designation mm	Range Requirement	
25.0	100	100	12.5	80	95
19.0	85	100	9.5	70	90
12.7	73	87	4.76	50	70
4.76	45	60	2.00	32	46
2.00	32	46	0.42	16	27
0.42	16	27	0.177	9	18
0.177	9	18	0.075	6	10
0.075	5	10			

For Marshall Test, test result shall comply with the requirement of specification (or shall comply with the value specified in the Table below if not specified).

Level	Air Voids (%)	Degree of Saturation (%)	Loading (kg)	Deformation (mm)	Loading/Deformation (kg/mm)
Base Course	3 - 6	75 - 85	> 1000	< 3.5	> 200
Wearing Course	4 - 6	72 - 82	> 1200	< 3.5	> 250