STANDARD METHOD OF MECHANICAL ANALYSIS OF SAND OR OTHER FINE HIGHWAY MATERIAL, EXCEPT FINE AGGREGATES USED IN CEMENT CONCRETE[1]

Serial Designation: D 7 – 27

This method is issued under the fixed designation D 7; the final number indicates the year of original adoption as standard or, in the case of revision, the year of last revision.

ADOPTED, 1911; REVISED, 1916, 1918, 1927.

Sampling.

1. A representative test sample of the aggregate weighing 50 g. shall be taken.

Treatment of Sample.

2. The sample shall be dried to constant weight at a temperature not exceeding 110° C. (230° F.).

Procedure.

3. (*a*) The sample shall be passed through each of the standard sieves specified in Table I.[2]

TABLE I.—REQUIREMENTS FOR SIEVE OPENINGS AND WIRE DIAMETERS WITH PERMISSIBLE VARIATIONS.[2]

Mesh Designation, U. S. Standard Sieve Series Number	Sieve Opening		Wire Diameter		Tolerance in Average Opening, per cent	Tolerance on Wire Diameter, per cent		Tolerance in Maximum Opening, per cent
	mm.	in.	mm.	in.		Under	Over	
10	2.00	0.0787	0.76	0.0299	±3	15	30	10
20	0.84	0.0331	0.42	0.0165	±5	15	30	25
30	0.59	0.0232	0.33	0.0130	±5	15	30	25
40	0.42	0.0165	0.26	0.0098	±5	15	30	25
50	0.297	0.0117	0.188	0.0074	±6	15	35	40
80	0.177	0.0070	0.110	0.0047	±6	15	35	40
100	0.149	0.0059	0.102	0.0040	±6	15	35	40
200	0.074	0.0029	0.053	0.0021	±8	15	35	60

NOTE.—The order in which the sieves are to be used in the process of sieving is immaterial and shall be left optional; but in reporting results the order in which the sieves have been used shall be stated.

(*b*) The percentage by weight retained on each sieve shall be determined and the sieving on each sieve shall be continued until

[1] Under the standardization procedure of the Society, this method is under the jurisdiction of the A.S.T.M. Committee D-4 on Road and Paving Materials.

[2] The dimensions and tolerances for these sieves conform to the requirements of the Standard Specifications for Sieves for Testing Purposes (Serial Designation: E 11) of the American Society for Testing Materials, see p. 917.