

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES

LS-602-R30 ____
C136-14 ____

APPARATUS

1. Sieves - See General Apparatus sieve page.
2. Balance:
MTO & ASTM: For fine agg: Readable to 0.1 g, accurate to 0.1% of test load?..... ____.
For co. agg: Readable to 0.5 g and accurate to 0.1% of test load?..... ____.
3. Mechanical sieve shakers (Optional), meet adequacy of sieving requirements?..... ____.
4. Oven, maintains $110 \pm 5^\circ\text{C}$?..... ____.
5. Splitter(s): with a minimum of three pans ____.

Splitter 1: No. Chutes: ____ Chute width: ____ Condition: ____
No. Pans: ____ Condition: ____

Splitter 2: No. Chutes: ____ Chute width: ____ Condition: ____
No. Pans: ____ Condition: ____

(Fill in Y for Yes - N for NO - NA for Not Applicable. (**Note:** N or NA require comment below)

6. Sieving Sufficiency:

Type of shaker: _____ Sieve: _____

Time m/s	Mass after sieving, g	% Capacity	Test Mass, g	Mass Passing, g	% Test Mass	Meets? Y/N

Comments:

Type of shaker: _____ Sieve: _____

Time m/s	Mass after sieving, g	% Capacity	Test Mass, g	Mass Passing, g	% Test Mass	Meets? Y/N

Comments:

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Table 1: Maximum Allowable Quantity of Material Retained on a Sieve, kg.

Sieve Opening Size, mm	Nominal Dimension of Sieve				
	203.2 mm dia. (8-inch)	254 mm dia. (10-inch)	304.8 mm dia. (12-inch)	350 x 350 mm (14 x 14-inch)	372 x 580 mm (16 x 24-inch)
	Sieving Area, m ²				
	0.0285	0.0457	0.0670	0.1225	0.2158
125	c	c	c	c	67.4
100	c	c	c	30.6	53.9
90	c	c	15.1	27.6	48.5
75	c	8.6	12.6	23.0	40.5
63	c	7.2	10.6	19.3	34.0
50	3.6	5.7	8.4	15.3	27.0
37.5	2.7	4.3	6.3	11.5	20.2
26.5	1.8	2.9	4.2	7.7	13.5
19.0	1.4	2.2	3.2	5.8	10.2
13.2	0.89	1.4	2.1	3.8	6.7
9.5	0.67	1.1	1.6	2.9	5.1
4.75	0.33	0.54	0.80	1.5	2.6

c Sieves indicated have less than five full openings and should not be used for sieve testing except as provided for in ASTM C 136, 8.6

PROCEDURE

Sampling

1. **Sampled in accordance with LS-625, ASTM D75?**.....
2. **Where no specification, sample four times minimum mass given in Table 1?** ..

Coarse Aggregate

1. If whole field sample is not used, is test sample obtained by MTO LS-600 (ASTM C702)? ..
2. Sample dried to constant weight at 110 ± 5°C or sieved surface dry? ..
3. Minimum sample weight: **except as noted in paragraph 4.4 of Test Method?** ..

Nom.Max.Size	Min. Mass, kg	Nom.Max.Size	Min. Mass, kg
9.5 mm	1	26.5 mm	10
13.2 mm	2	37.5 mm	15
16.0 mm	3.5	53.0 mm	20
19.0 mm	5	63.0 mm	25
		75.0 mm	45

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4. If hand sieving, particles not forced to pass through openings?
5. Sieving continued until not more than one weight % of the residue on any individual sieve passes that sieve in one minute?*
6. Residue on each sieve weighed to 0.1% of original dry weight?
7. Sieves not overloaded - Weight of residue on each sieve is not greater than:
2.5 x (sieve opening in mm) kg/m² of sieving surface area per Table 1?
8. Total weight of material after sieving agrees with weight before sieving to within 0.3 %
(If not, do not use for acceptance testing)?
9. Percentages calculated and reported to nearest 0.1%?

Fine Aggregate

1. Sample obtained by MTO LS-600 (ASTM C702)?
2. **Sample mass 250 - 300g, 125 - 150 for fine sand, e.g. 100% passing 600um?**
3. (a) Is MTO LS-601 (ASTM C117) used?
- (b) If so, is a 75 µm sieve included in the dry nest?
4. Sample dried to constant weight at 110 ± 5°C?
5. Sieving continued until not more than one weight % of the residue on any individual sieve passes that sieve in one minute?*
6. Residue on each sieve weighed to 0.1% of original dry weight?
7. Sieves are not overloaded - Weight of residue on each sieve (4.75 mm or finer) is less than 6 kg/m² of sieving surface (200 g for 8-in. diameter sieve)?
8. Total weight of material after sieving agrees with weight before sieving to within 0.3 %
(If not, do not use for acceptance testing)?
9. Percentages calculated and reported to the nearest 0.1 %?
10. Percentage calculations based on original dry sample weight, including the passing 75 µm fraction?

* Technician to check by hand with 8-in. diameter sieve.

Comments: