FLORIDA DEPARTMENT OF TRANSPORTATION
State Materials Office
5007 NE 39th Avenue
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Florida Method of Test
For
Resistance to Abrasion of Small Size Coarse Aggregate by Use of the Los Angeles Machine

Designation: FM 1-T 096

FM 1-T 096 is identical to AASHTO T 96 except for the following provisions:

1. Replace all occurrences of “R 90” with FM 1-R 090.

2. Replace all occurrences of “R 76” with FM 1-R 076.

3. Add the following sentence to the end of **Note 8**:

   “If the test sample is washed before the test is performed, then the sample must be washed after the test is complete, however, if the washing is waived, then the sample must not be washed after completion of the test.”

4. Add the following sections after Section 10:

3.1 MODIFIED LOS ANGELES ABRASION TEST - (Standard Specifications, Subarticle 901-4).

3.1.1 Determine the dry-loose unit weight (U_L) of the lightweight aggregate.

3.1.2 Assume the average unit weight of conventional aggregate to be 90 pcf.

3.1.3 Reduce the lightweight aggregate sample by the following formula:

$$U_L/90 = X/C$$

Where: U_L = loose unit weight of lightweight aggregate in pcf,
C = weight of conventional aggregate required for grading in standard test methods,
X = reduced lightweight aggregate sample charge.

3.1.4 Reduce the abrasive charge by the following formula:

$$U_L/90 = X_1/C_1$$

Where: U_L = loose unit weight of lightweight aggregate in pcf,
C_1 = weight of abrasive charge required for grading in standard test methods,
X_1 = reduced abrasive charge for lightweight aggregate.

3.1.4.1 Proceed according to standard test method.

Note 10: This modification is necessary for lightweight aggregate to avoid an excessive volume of material in the testing machine.

Note 11: Since it is usually impossible to obtain the exact abrasive charge with the steel balls available, obtain the closest abrasive charge possible to the reduced value and then adjust the weight of the sample in proportion to the new abrasive charge.

3.2 MODIFIED LOS ANGELES ABRASION TEST - Fine Aggregate

3.2.1 Abrasive Charge - Six steel spheres as for grading D and conforming to 5.4.1 shall be used.

3.2.2 Test Sample - The test sample shall consist of clean (washed) aggregate representative of the material under test. The aggregate shall be dried to constant mass (see Section 2, AASHTO T 96-94), separated into individual size fractions, and the test sample selected to comply with Table II. The weight of the sample prior to test shall be recorded to the nearest 1.0 gram.

TABLE II
Grading of Test samples - Fine Aggregate

Passing mm	Retained On mm	J Mass of Indicated Sizes, g Sieve Size Grading	K Mass of Indicated Sizes, g Sieve Size Grading
4.75 (No. 4)	1.18 (No. 16)	5000 ±10	---
1.18 (No. 16)	0.600 (No. 30)	----	5000 ±10

3.2.3 Procedure is the same as 9.1 except that a 0.300 mm (No. 50) sieve shall be used instead of a 1.70 mm (No. 12) sieve for sieving. The washing of the test sample after abrading is eliminated.

3.2.4 Calculation - Determine the percentage of wear as in 9.1.