

CCIL / LABORATORY INSPECTION CHECKLIST

**Preparation of Marshall Specimens (from bituminous mixes)
ASTM D6927-06**

APPARATUS

- 1. Breaking Head / Clause 4.1 _____
- 2. Compression Loading Machine / Clause 4.2
 - a. Load – uniform vertical movement maintained at 50 ± 5 mm/min _____
- 3. Load Measuring Device / Clause 4.3
 - a. Dial indicator graduated in increments of 0.00025 mm (0.0001 in.) or finer _____
- 4. Flowmeter / Clause 4.4
 - a. Graduation of the flowmeter gauge 0.25 mm (0.01) or finer _____
- 5. Water Bath / Clause 4.5
 - a. Water level maintained at a minimum of 30 mm above the top of specimens _____
 - b. Thermostatically controlled to $\pm 1.0^{\circ}\text{C}$ (2.0°F) at any point in the tank _____
 - c. Perforated false bottom or shelf to support specimens 50 mm (2.0 in) above tank bottom _____
 - d. Equipped with a mechanical water circulator _____
- 6. Oven / Clause 4.6
 - a. Able to maintain the specified temperature at $\pm 1^{\circ}\text{C}$ (2°F) _____
- 7. Thermometers / Clause 4.8
 - a. Calibrated thermometers readable to 0.2°C (0.4°F) _____

PROCEDURE / Clause 5.0

- a. Minimum of 3 specimens tested (per mixture)? _____
- b. After compaction, specimens cooled to room temperature on a smooth, flat surface? _____
- c. Thickness of specimen measured according to ASTM D3549? _____

Note 1: laboratory molded specimens shall comply with the thickness requirements of 63.5 ± 2.5 mm.

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PROCEDURE (continued)

- e. Specimens conditioned to specified temperature
 - Temperature set at $60 \pm 1^\circ\text{C}$ ($140 \pm 2^\circ\text{C}$) for water bath or oven _____
 - Placed in water bath for 30 to 40 minutes _____
 - Placed in oven for 120 to 130 minutes _____

Note 2: Specimens can be conditioned for testing once they reach ambient room temperature (clause 5.3).

- f. Cleaned and lubricated guide rods of testing head _____
- g. Testing head assembly between 20 to 40°C (70 to 100°F) _____
- h. Specimen removed from conditioning and placed in testing head assembly ... _____
- i. Flowmeter positioned over guide rod and adjusted to zero _____
- j. Applied load to specimen at $50 \pm 5\text{mm/min.}$ until load begins to decrease _____
- k. Elapsed time specimen removed from conditioning to final load determination completed within 30 s _____
- i. Testing completed within 24 hr after compaction _____

CALCULATIONS / Clause 6.0

- a. Correction factor based on volume or thickness _____

Example: $A = B \times C$

Where: A = corrected stability,
B = measure of stability (load),
C = correlation ratio from Table 1 (Reference ASTM D6926 - 06 / Pg 7)

REPORTING / Clause 7.0

- a. Type of sample (laboratory, plant or core specimen) _____
- b. Nature of bituminous mixture, aggregate type, grading, binder grade and binder content – if available? _____
- c. Individual and average BRD's? _____
- d. Height of specimens to the nearest 0.25 mm (0.01 in.)? _____
- e. Individual and average Marshall Flow values (clause 7.1.6)? _____
- f. Test temperature to the nearest 0.2°C (0.4°F)? _____

COMMENTS:
