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APPARATUS / SECTION 6

1. Mold Assembly: As per clause 6.1? ……..... ____

    a. 4 in. Mold:

    - Inside diameter / average 101.6 ± 0.4 mm (4.000 ± 0.016-in.)? .. …….. ____
    - Height / 116.4 ± 0.5 mm (4.584 ± 0.18 in.)? ……..…….. ____
    - Volume / 943 ± 14 cm³ (0.0333 ± 0.0005 ft³)? …… ____

    b. 6 in. Mold:

    - Inside diameter / average 152.4 ± 0.7 mm (6.000 ± 0.026-in.)? ……. ____
    - Height / 116.4 ± 0.5 mm (4.584 ± 0.18 in.)? ……..…….. ____
    - Volume / 2124 ± 25 cm³ (0.075 ± 0.0009 ft³)? …….. ____

2. Rammer: As per clause 6.2

    - Shall free fall 304.8 ± 1 mm (12 ± 0.05 in.)? ……..…… ____
    - Mass 2.495 ± 0.009 kg (5.5 ± 0.2 lbf)? …….. ____
    - Strike face of hammer shall be planar and circular? …… ____

    Note: Please note exceptions in clause 6.2 and Note 7

    IN ADDITION:

    a. Manual Rammer:

    - Guide sleeve with at least 4 vent holes in accordance with clause 6.2.1? …… ____

    b. Mechanical Rammer-Circular Face:

    - Provides complete and uniform coverage of specimen surface? …….. ____
    - Shall meet the calibration requirements of ASTM D2168? …….. ____
    - Clearance between rammer and inside surface of mold at its smallest dia. shall be 2.5 ± 0.8 mm (0.10 ± 0.03 in.)? …….. ____

    or

    Mechanical Rammer-Sector Face (for 152.4 mm (6.0 in.)) mold:

    - Refer to clause 6.2.2.1 for details? ……..…… ____

3. Sample Extruder: A device capable of extruding compacted specimens from the mold? …… ____
4. Balance: Class GP5 as specified in D4753 for 1-g readability? …….. ____
5. Sieves: 19.0 mm, 9.5 mm and 4.75 mm / as per ASTM E11? ……..…… ____

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APPARATUS / SECTION 6 (CONTINUED)

6. Oven:

   - Capable of maintaining a uniform temperature of 110 ± 5.0ºC (230 ± 9°F)? …….. ____
   - Thermostatically controlled? …… ____

7. Straight Edge:

   - Made of metal not less than 254 mm (10 in.) in length? …… ____
   - Length machined straight to a tolerance of ± 0.1 mm (0.005 in.)? …… ____
   - Scraping Edge **beveled** if thickness greater than 3 mm (1/8 in.)?..... ____

STANDARDIZATION/CALIBRATION / SECTION 7

1. Balance, molds, manual / mechanical hammers calibrated in accordance with Section 7? ……..…….. ____

PREPARATION OF APPARATUS / SECTIONS 1 & 9 (In accordance with Test Method A, B or C)

Method A? …….. ____

- Material - P/4.75 mm sieve
- Mold - 101.6 mm
- Number of layers to be compacted - 3
- Blows per layer - 25
- Use and other Uses - Refer to clause 1.3.1.5 and 1.3.1.6

Method B? …….. ____

- Material - P/9.5 mm sieve
- Mold - 101.6 mm
- Number of layers to be compacted - 3
- Blows per layer - 25
- Use and other Uses - Refer to clause 1.3.2.5 and 1.3.2.6

Method C? ……. ____

- Material - P/19.0 mm sieve
- Mold - 152.4 mm
- Number of layers to be compacted - 3
- Blows per layer - 56
- Use - Refer to clause 1.3.3.5
- 1.3.4 The 152.4 mm mold is not to be used for Methods A or B

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PROCEDURE / SECTION 10

a. Compaction mold selected in accordance with Method A, B, or C? ..... ____
b. Soil specimen prepared in accordance with:

- Moist Preparation Method? ..... ____
- Dry Preparation Method? ..... ____

Moist Preparation Method (without previously drying the sample)

- Moist material passed through the 19.0 mm, 9.5 mm or 4.75 mm depending on Method used (Method A, B or C)? ..... ____
- Determined moisture content of processed material? ..... ____
- Prepared 5 test samples possessing water contents that bracket the estimated optimum water content? ..... ____

  Approximately 2.3 kg (5-lb) each using Method A or B
  Approximately 5.9 kg (13-lb) each using Method C

- 1st trial sample prepared as close as possible to the optimum moisture content? ____
- Two samples prepared on drier side of optimum and 2 on wetter side? ..... ____
- Moisture content of each specimen to indicate increments of approximately 2% ____
- Specimens that require drying to meet the incremental criteria can be by air drying at ambient temperatures or using an oven set at a temperature that does not exceed 60° C (140° F)? ..... ____
- Each specimen thoroughly mixed and allowed to cure (If required) in a separate container in accordance with ASTM D 698 Table 2? ..... ____

Dry Preparation Method

- Reduce moisture content by air drying at ambient temperatures or using an oven set at a temperature that does not exceed 60° C (140° F)? ..... ____
- Dried until sample becomes friable? ..... ____
- Pass material through the 19.0 mm, 9.5 mm or 4.75 mm depending on Method used (Method A, B or C)? ..... ____
- Prepared 5 test samples possessing water contents that bracket the estimated optimum water content? ..... ____
- 1st trial sample prepared as close as possible to the optimum moisture content? ____
- Two samples prepared on drier side of optimum and 2 on wetter side? ..... ____
- Moisture content of each specimen to indicate increments of approximately 2% ____
- Each specimen thoroughly mixed and allowed to cure (If required) in a separate container in accordance with ASTM D 698 Table 2? ..... ____

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PROCEDURE / SECTION 10 (CONTINUED)

3. Compaction (Same for Moist and Dry Preparation Methods)

- Mold assembly resting on rigid foundation? ..... ____
- Compacted specimen in approximately 3 equal layers? ..... ____
- Each layer compacted with the specified number of blows? ..... ____
- Compacted material in third layer does not exceed 6 mm (¼ in.) above the top of the mold? ..... ____

  Note: specimen shall be discarded if compacted third layer extends below the top of the compaction mold.

- After compaction, carefully removed collar and base plate from mold? ..... ____

  Note: Base plate may have to remain if soil is too wet or dry to be removed. Volume of mold must be recalibrated if base plate is to remain attached.

- Carefully trimmed the excess material above the mold with the straight edge to form a plane surface? ..... ____
- Fill any voids on the surface, by pressing in any excess materials with the fingers and then repeat the trimming process? ..... ____
- Determined mass of specimen, mold and base plate if necessary and record to the nearest g? ..... ____
- Obtained a moisture sample from compacted specimen? ..... ____

  1. Used entire sample? ..... ____
  2. Representative portion – slicing axially through centre to obtain an approximately 500 g of material? ..... ____

CALCULATIONS / SECTION 11

COMMENTS