

Equipment Checklist

ASTM C-173 Air Content of Freshly Mixed Concrete by the Volumetric Method

| | | P | F | N/A |
|---------------------------------|---|---|---|-----|
| Air Meter | | | | |
| 1. | The measuring bowl and top sections shall be of sufficient thickness and rigidity to withstand rough field use. | | | |
| 2. | The material shall not be attacked by high pH cement paste, deform when stored at high temperatures in closed spaces or become brittle or crack at low temperatures. | | | |
| 3. | A watertight seal must be obtained when the top section is attached to the measuring bowl. | | | |
| 4. | The measuring bowl shall have a diameter equal to 1 to 1.25 times the height and be constructed with a flange at or near the top surface. | | | |
| 5. | Measuring bowls shall not have a capacity of less than 0.075 ft ³ [2.0 L]. | | | |
| 6. | The top section shall have a capacity at least 20 % larger than the measuring bowl and shall be equipped with a flexible gasket and a device to attach the top section to the measuring bowl. | | | |
| 7. | The top section shall be equipped with a transparent scale, graduated in increments not greater than 0.5 % from 0 at the top to 9 %, or more, of the volume of the measuring bowl. Graduations shall be accurate to ± 0.1 % by volume of the measuring bowl. The upper end of the neck shall have a watertight cap that will maintain a watertight seal when the meter is inverted and rolled. | | | |
| Scoop | | | | |
| 8. | Of a size large enough so each amount of concrete obtained from the sampling receptacle is representative and small enough so it is not spilled during placement in the measuring bowl. | | | |
| Funnel | | | | |
| 9. | A funnel with a spout of a size permitting it to be inserted through the neck of the top section and long enough to extend to a point just above the bottom of the top section. | | | |
| 10. | The discharge end of the spout shall be so constructed that when water is added to the container there will be a minimum disturbance of the concrete. | | | |
| Tamping Rod | | | | |
| 11. | A round, smooth, straight steel, high density polyethylene, or other plastic rod of equal or greater abrasion resistance with a $\frac{5}{8}$ inch ± $\frac{1}{16}$ inch [16 ± 2 mm] diameter. The length of the tamping rod shall be at least 4 inch [100 mm] greater than the depth of the measuring bowl in which rodding is being performed, but not greater than 24 inch [600 mm] in overall length. | | | |
| 12. | The rod shall have the tamping end or both ends rounded to a hemispherical tip of the same diameter as the rod. | | | |
| Strike-off Bar | | | | |
| 13. | A flat, straight steel bar at least $\frac{1}{8}$ by $\frac{3}{4}$ by 12 inch [3 by 20 by 300 mm] or a flat straight high-density polyethylene bar or other plastic of equal or greater abrasion resistance at least $\frac{1}{4}$ by $\frac{3}{4}$ by 12 inch [6 by 20 by 300 mm]. | | | |
| Calibration Cup | | | | |
| 14. | A metal or plastic cup either having a capacity of or being graduated in increments equal to 1.00 ± 0.04 % of the volume of the measuring bowl of the air meter. The calibrated cup is only to be used to add water when the concrete air content exceeds 9 % or the calibrated range of the meter. | | | |
| Syringe | | | | |
| 15. | A rubber syringe having a capacity of at least 2 oz. [50 ml]. | | | |
| Pouring Vessel for Water | | | | |
| 16. | A container of approximately 1 qt [1 L] capacity. | | | |
| Isopropyl Alcohol | | | | |
| 17. | Verify the isopropyl alcohol is 70 % by volume [approximately 65 % by weight]. | | | |
| Mallet | | | | |
| 18. | A mallet with a rubber or rawhide head with a mass of approximately 1.25 ± 0.5 lb [600 ± 200 g] | | | |

Remarks:

Date: _____ Technician: _____ IA Observer: _____

Technician's E-mail Address: _____

Employer's/Supervisor's E-mail Address: _____