

PERFORMANCE EXAM CHECKLIST

**Specific Gravity and Absorption of Fine Aggregate
FOP for AASHTO T 84**

Participant Name _____ Exam Date _____

Record the symbols “P” for passing or “F” for failing on each step of the checklist.

Sample Preparation

	Trial 1	Trial 2
1. Sampled according to AASHTO T 2?	_____	_____
2. Sample reduced according to AASHTO T 248 to approximately 2000 g?	_____	_____
3. Dried to a constant mass at 230 ±9° F, cooled to a comfortable handling temp.?	_____	_____
4. Addition of 6% moisture to sample?	_____	_____
5. Allowed to stand 15 – 19 hours?	_____	_____
6. Uniformly dried by a current of warm air, with frequent stirring?	_____	_____
7. Mold placed on flat, non-absorbent surface and filled to over-flowing?	_____	_____
8. Sample compacted with 25 light drops of tamper from 0.2” above top of sample?	_____	_____
9. Tamper allowed to fall freely under gravitational attraction?	_____	_____
10. Loose sand removed from around bases and mold lifted vertically?	_____	_____
11. Sample fails to slump on the first test?	_____	_____
12. If it does slump, is water added, sample covered and allowed to stand 30 minutes?	_____	_____
13. Drying continued, and test repeated at frequent intervals until sample slumps slightly? Slight slump is when there is some evidence of slumping around the circumference of the cone?	_____	_____

Testing Procedure

1. Split out two 500 gram samples that weigh within 0.2 grams of each other.	_____	_____
2. 1000 ml Pycnometer partially filled with water and first sample added?	_____	_____
3. Second sample dried back to constant mass?	_____	_____
4. Pycnometer filled to 90 % of calibrated capacity and agitated to eliminate air bubbles?	_____	_____
5. Temperature adjusted to 73.4 ±3° F.?	_____	_____
6. Water level brought to calibrated capacity and agitated to eliminate air bubbles?	_____	_____

- 7. Second sample cooled in air at room temperature for 1.0 ±0.5 hr. and weighed?
- 8. Pycnometer calibrated mass determined?
- 9. All masses determined to nearest 0.1 g?
- 10. Calculations performed and values rounded correctly?

_____	_____
_____	_____
_____	_____
_____	_____

Formulas for Specific Gravities and Absorption

Bulk Specific Gravity $\frac{A}{B+S-C}$

Bulk Specific Gravity (SSD) $\frac{S}{B+S-C}$

Apparent Specific Gravity $\frac{A}{B+A-C}$

Absorption, percent $\frac{(S-A)}{A} \times 100$

where:

- A = mass of oven-dry specimen (second sample) in air, g;
- B = mass of pycnometer filled with water, g;
- C = mass of pycnometer with specimen and water to calibration mark, g; and
- S = mass of saturated surface-dry specimen (weight of first sample), g.

Comments: First attempt: Pass Fail Second attempt: Pass Fail

Examiner Signature: _____ Sampler / Tester Qualification # _____