

WSDOT FOP for ASTM D 6931

Standard Test Method for Indirect Tensile (IDT) Strength of Asphalt Mixtures

WSDOT has adopted ASTM D 6931 as published at wwwi.wsdot.wa.gov/MatsLab/BusinessOperations/ASTMLogin.htm with the following changes:

6. Specimens

6.1 Laboratory-Molded Specimens – Prepare the 150 mm (5.9 in) laboratory-molded specimens in accordance with WSDOT FOP for AASHTO T 312, to a height of 62 ± 1.0 mm (2.44 ± 0.04 in). A minimum of three replicates shall be prepared for each mixture.

6.1.1 Air void (Va) of test specimen shall be 7.0 ± 1.0 %.

7. Procedure

7.1 Section 7.1 shall be deleted in its entirety.

8. Calculation

8.1 Calculate the IDT strength as follows:

$$S_T = \frac{2F}{3.14 (hd)}$$

Where:

- S_T = Indirect tensile strength (psi)
- F = Total applied vertical load at failure (lbs)
- h = Height of specimen (inches)
- d = Diameter of specimen (inches)

Tester Qualification Practical Exam Checklist

Determining Indirect Tensile Strength of Compacted Bituminous Mixtures

FOP for ASTM D 6931

Participant Name: _____ Exam Date: _____

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

Procedure Element	Trial 1	Trial 2
1. The tester has a copy of the current procedure on hand?	_____	_____
2. All equipment is functioning according to the test procedure, and if required, has the current calibration/verification tags present?	_____	_____
3. Specimen height is 62 ± 1.0 mm (2.44 ± 0.04 in) or 38.1 mm (1.5 in) minimum for cores?	_____	_____
4. Specimen meets air void tolerance of $7.0 + 1.0$ %?	_____	_____
5. Specimen placed in water bath at $77 + 2^\circ\text{F}$ ($25 + 1^\circ\text{C}$) for a minimum of 30 minutes but not longer than 120 minutes?	_____	_____
6. Press turned on and operating at a deformation rate of 2 in per minute?	_____	_____
7. Specimen placed on lower loading strip?	_____	_____
8. Upper loading strip lowered onto specimen with light contact?	_____	_____
9. Upper and lower loading strips parallel with each other?	_____	_____
10. Load applied at 2 in per minute?	_____	_____
11. Total applied vertical load recorded?	_____	_____
12. Indirect tensile strength in psi calculated and recorded correctly?	_____	_____

Comments: First Attempt: Pass _____ Fail _____ Second Attempt: Pass _____ Fail _____

Examiner Signature: _____ WAQTC #: _____

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