

WSDOT FOP for AASHTO T 89

Determining the Liquid Limit of Soils

WSDOT has adopted the published AASHTO T 89-13 (2021).

AASHTO Test Methods cannot be included in *Materials Manual* due to copyright infringement.

WSDOT employees can access AASHTO and ASTM test methods in the following web address:

<http://wwwi.wsdot.wa.gov/MatsLab/BusinessOperations/ASTMLogin.htm>

Non-WSDOT employees can order AASHTO's *Standard Specifications for Transportation Materials and Methods of Sampling and Testing*, using the following web address: <https://store.transportation.org>

Performance Exam Checklist

Determining the Liquid Limit of Soils AASHTO T 89 (Method B Only)

Participant Name _____ Exam Date _____

Preparation

Yes No

- | | | |
|--|-------|-------|
| 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. Sample obtained using AASHTO R 58? | _____ | _____ |
| 4. Minimum sample mass meets requirement of AASHTO T 89 Method B? | _____ | _____ |
| 5. Sample mixed with 8 to 10 mL of distilled or demineralized water? | _____ | _____ |
| 6. Additional water added at 1 to 3 mL as necessary until mass is uniform and of a stiff consistency? | _____ | _____ |
| 7. No dry soil added after test has begun? | _____ | _____ |
| 8. If soil was too wet, was sample discarded or allowed to dry? | _____ | _____ |

Procedure

Yes No

- | | | |
|---|-------|-------|
| 1. Sample placed in cup and spread to 10 mm maximum thickness? | _____ | _____ |
| 2. Care taken to avoid entrapment of air bubbles? | _____ | _____ |
| 3. Soil in cup divided through centerline of follower to the bottom of the cup in no more than six strokes? | _____ | _____ |
| 4. Liquid Limit Device counter zeroed and base checked for level? | _____ | _____ |
| 5. Was cup lifted and dropped at two revolutions per second until gap at bottom of groove closed about 0.5 in (13mm) in 22 to 28 blows? | _____ | _____ |
| 6. Blows to closure recorded? | _____ | _____ |
| 7. Was closure in acceptable blow count material? | _____ | _____ |
| 8. Was material removed from cup and placed in a covered container? | _____ | _____ |
| 9. Was procedure repeated a second time from step 1-6 without adding water? | _____ | _____ |
| 10. Was second closure within two blows of first closure? If not was test rerun? | _____ | _____ |
| 11. Was sample removed from device and moisture content determined per T 265? | _____ | _____ |
| 12. Were all calculations performed correctly? | _____ | _____ |

First Attempt: Pass Fail Second Attempt: Pass Fail

Signature of Examiner _____

Comments: