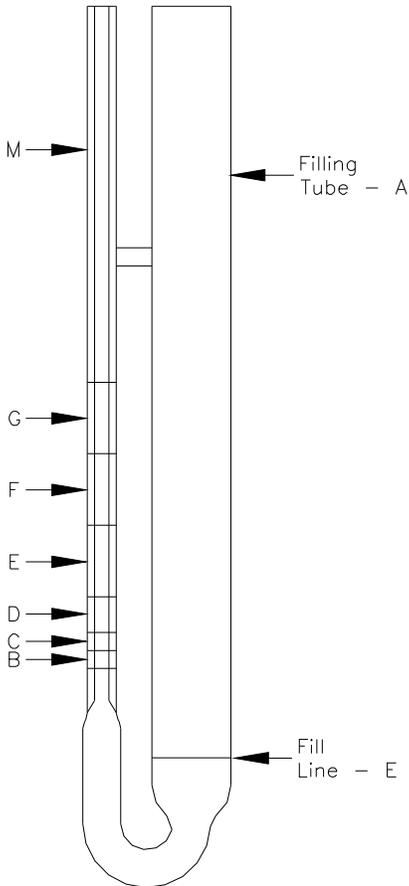


Instructions for the use of the Asphalt Institute Vacuum Viscometer (Roofing Design sizes 400R and 800R)

See also ASTM D 2171



1. Clean the viscometer using suitable solvents, and by passing clean, dry, filtered air through the instrument to remove the final traces of solvents. Periodically, traces of organic deposits should be removed with chromic acid or non-chromium cleaning solution.
2. Charge the viscometer by pouring the sample into filling tube A to ± 2 mm of fill line.
3. Insert the viscometer in a holder, and insert viscometer into a constant temperature bath. Position the viscometer vertically in the bath so that the uppermost timing mark is at least 20 mm below the surface of the bath liquid.
4. Establish a 40.0 kPa (300 mm Hg) vacuum in the vacuum system and connect the system to Tube M of the viscometer with a 3-way toggle valve closed in the line leading to the viscometer. Excellent pressure regulators are available from the Cannon Instrument Company.
5. After the viscometer has been in the bath for 30 minutes, start the flow of sample upward through capillary M by opening the toggle valve to the vacuum system.
6. Measure to within 0.1 second the time required for the leading edge of the meniscus to pass between pair of timing marks for each segment. Close the toggle valve.
7. Calculate the viscosity of the sample in poise by multiplying the fill time for each bulb by the viscometer constant for each bulb.
8. A check run may be made by repeating steps 1 thru 7, or in a duplicate viscometer.
9. For convenience, it is recommended to keep the flow times between 60 and 400 seconds.

Asphalt Institute Vacuum Viscometer

NOTE: The lowest 20-mm segment has been subdivided into three segments labeled "B", "C", and "D". The segment "BCD" shown on the reverse side of this sheet is equivalent to the lowest 20-mm segment, and may be used instead of individual "B", "C", and "D" segments.

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RECOMMENDED VISCOSITY RANGES FOR THE ASPHALT INSTITUTE ROOFING DESIGN VACUUM VISCOMETERS

Size	Viscosity Range, Pa·s	
400R	960	to 140,000
800R	3,800	to 580,000

THIS PRODUCT WAS CALIBRATED WITHIN A QUALITY SYSTEM WHICH IS REGISTERED TO ISO 9001:2000.

CANNON INSTRUMENT CO.

STATE COLLEGE, PA. 16803

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