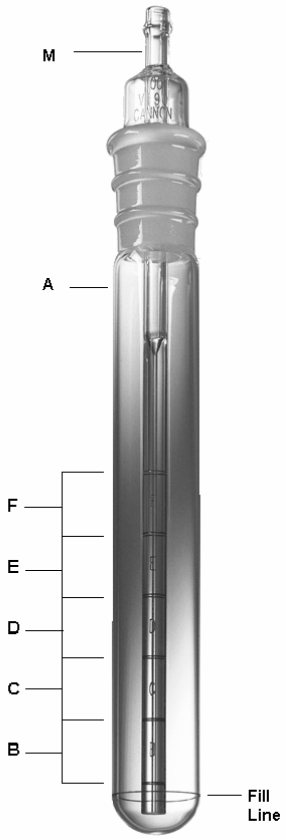
Instructions for the use of the Modified Koppers Vacuum Viscometer

See also ASTM D 2171



Modified Koppers Vacuum Viscometer

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. Remove the capillary tube (M) from the outer filling tube (A) and charge the viscometer by filling tube A within 2 mm of the fill line. Replace the capillary tube.
3. Insert the viscometer in a holder, and place in a constant temperature bath. Position the viscometer vertically in the bath so that the uppermost timing mark is at least 2 cm 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 timing marks of segment B; and with a second stop watch, marks for segment C; etc. 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.

RECOMMENDED VISCOSITY RANGES FOR THE MODIFIED KOPPERS VACUUM VISCOMETERS

Size	Viscosity Range, Pa·s		
25	4.2	to	80
50	18.0	to	320
100	60.0	to	1280
200	240.0	to	5200
400	960.0	to	20000

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

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