

STANDARD TEST METHOD

RESIN FLOW TEST – INCLINED PLATE METHOD

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SCOPE:

This procedure specifies a method for the determination of the flow distance of powdered heat-setting phenolic resins.

APPARATUS:

1. Analytical Balance - accurate to 0.01g
2. Cylindrical pellet press – for production of pellets 12.5 ± 0.3 mm in diameter and 5.6 ± 0.2 mm thick.
3. Smooth glass plate - of a suitable size to fit in the oven and the tilting device (100 x 150 x 2.4mm). The glass plate must be clean, smooth and free of scratches.
4. Oven - with natural ventilation capable of maintaining a temperature of $125 \pm 1^\circ\text{C}$. The oven must be perfectly horizontal.
5. Thermometer – of range 0 to 200°C in 1°C divisions. The thermometer is positioned in the oven so that the bulb is 12 mm above the glass plate when in position over the pivoting line of the tilting mechanism.
6. Brass inclining apparatus.
7. Stop watch & ruler graduated in millimetres.

REFERENCES:

ISO8619:2003 (E)

PROCEDURE:

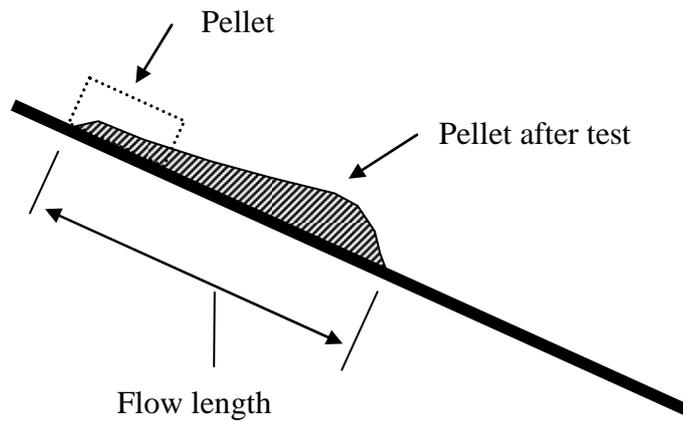
1. Dry test specimens in a dessicator to constant mass before testing, if required.
2. Weigh $0.50\text{g} \pm 0.01\text{g}$ of powdered resin into the pellet mould and press into a pellet. (Pellet mould #1 is used unless otherwise specified) Make two pellets in this way.
3. Place the pellets onto a **cold** glass plate at least 1 cm apart and at least 1 cm away from the edges of the glass plate.
4. Put the tilting device in the horizontal position and place the tilting device in the oven at $125^\circ\text{C} \pm 1^\circ\text{C}$ for at least 60 minutes. Or until it has reached a constant $125^\circ\text{C} \pm 1^\circ\text{C}$.
5. Open the oven door, and within 5 seconds, place the glass plate onto the tilting device (in the horizontal position) and close the oven door.

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	7.	Converted from WordPerfect. Converted to Electronic Distribution	11.10.00			
	8.	Changed test method name to Resin Flow Test – Inclined Plate Method. Revised method to be closer to ISO8619:2003(E) method.	06.05.11	KR	GM	DRG. No B8E1-10

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6. Keep the plate in the horizontal position for 3 minutes \pm 3 seconds. Then lower the shelf and glass plate to 60° and continue heating for twenty (20) minutes.
7. Remove the glass plate from the oven and cool to room temperature.
8. Measure the distance in millimetres from the upper point of the original position of the pellet to the point of extreme flow and record as the flow. Express results as the arithmetic mean of the two flow distances.



9. If a pellet slipped after the plate was tilted, measure the distance from the point where it started to flow. Calculate the arithmetic mean of the two distances. If the measurements differ by more than 5% repeat the test.

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