AASHTO T 90-22 – Determining the Plastic Limit and Plasticity Index of Soils

Sect.		***Sample***
5.1	1.	If only the plastic limit is being tested, obtain an approximate 20 gram sample of minus #40 material obtained in accordance with R58.
5.1	2.	Mix sample with enough distilled or demineralized water until the mass becomes plastic enough to easily shape into a ball.
5.2	3.	Obtain a sample of about 10 grams from the mass, or if the liquid limit is being tested, obtain an about 10 gram sample from the mass in AASHTO T 89.
Sect.		***Procedure***
6.2	4.	Select a 1.5 to 2.0 gram portion from the 10 g mass of soil taken in accordance with section 5. From the selected portion into an ellipsoidal mass.
6.3	5.	The rate of rolling is between 80 to 90 strokes per minute *(a stroke is the complete motion of the hand forward and back to starting point).*
6.3.1	6.	Roll the mass between the palm or fingers and a ground glass plate or a piece of paper laying on a smooth horizontal surface with sufficient pressure to roll the mass into a thread of uniform diameter throughout its length.
6.3.1	7.	The thread shall be further deformed on each stroke so that its diameter reaches 3mm, taking no more than 2 minutes.
6.4	8.	When the diameter of the thread becomes 3mm, squeeze the thread into a roughly ellipsoidal shape between the thumb and fingers.
6.4	9.	Continue this alternate rolling to a thread, gathering together, kneading and re-rolling, until the thread crumbles and can no longer be rolled into a thread.
6.5	10.	The portions of the crumbled soil are gathered together, placed into a weighed container. Container is immediately covered.
6.6	11.	Repeat the operations described until the entire specimen is completely tested.
6.7	12.	Determine the moisture content of the soil in the containers in accordance with AASHTO T 265.