Viscosity of Polymers (ASTM D2857, D4603) Inherent, Intrinsic, Relative Viscosity

Scope:

Dilute Solution Viscosity is used as an indication of the molecular weight of polymers. The results of the test are expressed in Relative Viscosity, Inherent Viscosity, or Intrinsic Viscosity. It is used for polymers that dissolve completely without chemical reaction or degradation and can provide an excellent determination of lot-to-lot consistency or be used to compare molded parts to original resin for determinations of degradation from molding.

Test Procedure:

The polymer is first weighed and then dissolved in an appropriate solvent. The solution and viscometer are placed in a constant temperature water bath. Thermal equilibrium is obtained within the solution. The liquid is then brought above the upper graduation mark on the viscometer. The time for the solution to flow from the upper to lower graduation marks is recorded. This test is done on ABS and PS polymers.