

Binder

Lab

General Description

The viscosity of a binder is one of its main properties, as it has a strong impact on the mixing and forming steps of the electrode production, and ultimately on the final electrode quality. The viscosity is a function of the temperature. Defining its value for given temperature levels is the basis to determine the optimum mixing and forming temperatures to obtain a constant green paste viscosity.

The measurement is conducted with the EXT-100 apparatus, where a given quantity of binder is first heated in an external oven and then placed into the viscosimeter at a regulated temperature level. A spindle turns in the molten sample while the torque on the spindle is used for the calculation of the viscosity in centipoise (cP). Several temperature levels, usually between 140°C and 180°C, are measured to determine the temperature at which a given viscosity level is reached.



Technical Information

Standard Method	ASTM D5018
Property	Viscosity [cP]
Maximum Temperature	300°C
Sample	9 g of pitch (< 4mm)
Process Time	~ 2 hours
Installation	Workbench under fume hood
Dimensions (LxWxH)	28 x 56 x 56 cm
Weight	10 kg
Electrical Property	230 V 1/N/PE, 50 Hz 0.3 kW, 1.3 A
Certified Reference Material	RDC 1100
Database Connection	No

Additional Recommended Equipment

Weighing scale with an accuracy of 0.1 g
Oven (min. temperature 180°C)

Certified Reference Material



RDC 1100

Weight per unit	200 g
Number of tests	22