Gel Time Meter and System Components

The precise, convenient way to determine gel time of thermosetting compounds in accordance with ASTM D3056-85

- Ideal for production, quality control, and research work
- Simple, intuitive operation
- Determine precise gelation point for thermosetting compounds
- Reproducible results within ±1%
- Automatic shut-off at gel point for error-free testing
- Audible and visual indication at gel point
- Self-indicating to nearest second
- Portable design: compact and lightweight

98930-16

The determination of the gelation point for thermosetting compounds is critical in evaluating the rate of polymerization and is usually characterized by a sudden, pronounced increase in material viscosity (thickness). The gelation point can help determine shelf life of a substance by plotting the log of gel time vs. 1/t (absolute temperature). Simply determine gel times at two or more elevated temperatures and extrapolate to ambient. A gel time meter provides a highly reliable means for measuring the gel time, defined as the time for the material under test to reach the incipient gelled state at a constantly controlled temperature.

Gel Time Meter Process and Components

A typical process used to measure gel point consists of the following:

- The test sample is placed into a test tube and immersed within a constant temperature bath
- A rotating glass rod spindle is placed into the sample
- The glass rod is attached to a torsion wire being driven by a synchronous motor rotating at 1 rpm
- Timing commences, and the gel time meter monitors the test until the gel point has been reached
- The gel time is displayed, and an alarm and indicator light provide audible and visual indication of the gel time being reached

Catalog No.	Model No.	Description
TS-98940-16	22A	Gel time meter, 120 VAC, 60 Hz
TS-98940-17	22A/50	Gel time meter, 120 VAC, 50 Hz
TS-98940-18	22A-240	Gel time meter, 240 VAC, 60 Hz
TS-98940-19	22A-240/50	Gel time meter, 240 VAC, 50 Hz
Accessories		
TS-08526-65	—	Type K thermocouple with 5-ft (1.5-m) coil cord
TS-98943-20	22A Kit A	Start up kit: (12) test tubes (2232-5), (12) stirring rods (2242-1), (12) plastic sleeves, large & small (2242-2), (12) Allen set screws (2242-5), (1) Allen wrench small, (0.035") (2232-31)

Digital Temperature Controller

The temperature controller provides the ultimate in safe, automatic, variable temperature control. It is the ideal way to provide temperature bath control for gel time testing. Simply set the front panel to the desired set point and the controller maintains precise temperature regulation.

SPECIFICATIONS	
Display	LCD
Temperature range	−328 to 2502°F (−200 to 1372°C)
Accuracy	±0.1° of reading, 0.7°F (0.4°C)
Input sensor type	Type K thermocouple
Power	115 VAC, 50/60 Hz

Catalog No.	Description
TS-89810-01	Digital temperature controller