Gardco Gel Timer Hot Pot Instruction

Gel Timer Recorder Measures and Records Gel Timing of all types of Resins, Adhesives and More

Gel time is the time it takes a mixed resin system to gel or become so high in viscosity that it can no longer be considered workable or able to be handled without impeding the curing process. The Gardco GT-H is a device for determining the gel time of resinous plastics, adhesives, drying oils and two component elastomers and paints at ambient or heated temperatures (125-425° F).

The Gardco GT-H consists of a wire stirrer hooked onto a stepper motor and placed in an aluminum cup that holds the sample. The motor will spin the stirrer in the sample until gel occurs, at which the motor will stop spinning and display the time "Gel Time" which it took for gelation. The GT-H also offers the option to heat the sample and keep it at a constant temperature.

Ensure to conduct all Gel Timing tests in a well-ventilated area as some epoxy and resin fumes may be toxic during the mixing & curing processes. Use proper protective equipment if prolonged contact is needed around hazardous material. The Hot Pot at the bottom of the GT-H is designed to heat up during the testing process. Never touch the hot pot when the heating element is on or when the pot is above 120° F (both indicated when Red Light is on around the Temp button). If you need to handle the stirrer, sample, or cup immediately after or during a heated test ensure you have the appropriate protective equipment to handle hot temperatures.

Operating Controls Gardner GT-H

Power Switch

The power switch is located on the back of the instrument and turns the unit on and off.

Run Button

To begin measuring your sample press the Run button. When pressed, the timer will reset, the stirrer will begin spinning and a solid green light will illuminate around the button. A flashing green light will begin to illuminate around the button when your sample has hit the torque threshold and the timer will stop to tell you your gel time. Pressing the Run button again will reset the timer and begin a new test. If the Run button is pressed during a measurement this will stop the test and the unit will stop spinning and the timer will reset.

Temp Button

To turn on the heating element press the Temp button. This will be indicated by the set Temp being displayed on the screen. Once the heating element is turned on a solid red light will illuminate around the Temp button. The machine will tell you both the “set” temperature and the “now” temperature, **anytime** the “now” temperature is above 120° F a solid red light will illuminate around the Hot button, regardless of if the heating element is turned on or off. This indicates that the pot is hot, and the user should be careful around the instrument. Press the hot button again to turn off the heating element and the word “Temp” in the top right will disappear signifying the heating element is off.

To set the desired temperature, turn on the heating element, the set temperature defaults to 125° F. Next, hold down the Temp button, *this brings you to the heating setting function*, and both the "now" temperature and "Temp" will disappear leaving just the "set" temperature. From here you can press the hot button to increment the "set" temperature in 25° F increments, the temperature range of the unit is 125-425° F. Once the desired temperature is reached, hold the hot button again and your selection will be saved. Press the Temp button again to turn on the heating element and your new "set" temperature will be displayed and the unit will begin heating up to the newly programmed temperature. *Note*: the heating element turns off whenever the "set" temperature is being adjusted.

To change the temperature units from Fahrenheit to Celsius, *navigate to the heating setting function*. This can be done by turning on the heating element and then holding down the Temp button. From here both the "now" temperature and "Temp" will disappear leaving just the "set" temperature. The units of the instrument can be altered between Fahrenheit and Celsius by simply pressing the Run button when in the heating setting function. When in Celsius the temperature increments will be 10° C and the min/max temp range will be 50-220° C.

Button Lights Information

Solid Green: The unit is spinning, and the timer is counting.

Flashing Green: The unit has reached its torque threshold, stops spinning, and the timer stops. The time displayed on the screen is your gel time.

Solid Red: The Heater is turned on and heating up OR the temperature of the hot pot is above 120° F and considered hot to touch and the user needs to be careful around the hot pot.

Instructions for Use

1. Secure one aluminum sample cup into the gel timer pot. Press down around the cup to ensure it is secure.
2. If heating is desired, turn on the heating element and wait until the pot reaches the desired temperature.
3. Pour 3 fluid ounces of your sample into the aluminum cup.
4. Insert the wire stirrer down into your sample and hook it through the hole on the head of the gel timer.
5. Press the run button and the timer will begin counting.
6. When the sample has reached the torque threshold indicating the gel has hardened, the light will begin flashing green and the timer will have stopped. The time shown on the instrument is the gel time of the sample, note the gel time.
7. Remove the stirrer, sample & aluminum cup from the pot of the gel timer. Ensure to discard these in the proper waste area.
8. Clean inside and around the Hot Pot of any spillage from the sample during the test. Ensure the inside of the cup is completely clean after each test. The unit is now ready for another test.

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