Minimum Film Forming Temperature Tester - Temperature Range -10C°~+60°C

BGD 452

Product Description

BGD 452 Minimum Film Forming Temperature Tester - Temperature Range -10C°~+60°C

As the most important component--emulsions for coatings and polymer dispersions for coatings and plastics polymer, its film-forming property has important influence on final products drying property. Thus, knowing its MFT is very important. In a certain temperature, emulsions or polymer dispersions, if the temperature is not high enough, then can't let the polymer particles polymerize. Now, all polymer particles can't get together any more and then form incontinuous and non-transparent white mass; If the temperature is high enough and it will let the particles get together, and then it can form a continuous and transparent film.

Standards

- ISO 2115
- ASTM D 2354

Technical Specification

The BGD 452 can measure the following parameters:

- White Point Temperature: The dividing temperature when non-transparent film change to transparent film.
- Minimum Film-forming Temperature: The lowest temperature when forming continuous, uniform and no-crack film

Generally speaking, the so-called White Point Temperature will be several degrees lower than MFFT.

The BGD 452 Minimum Film-Forming Temperature MFFT Testers' main structure is a metal copper platen with an electronically imposed temperature gradient. Built in temperature sensors monitor the temperature across the platen, a graph of the gradient is displayed on the touch screen. A cooling source and a heating source are located separately on the two ends of platen to produce different temperature gradient through metal heat conduction theory.

Applicate a continuous and uniform thickness wet film of emulsion or dispersions on the temperature gradient platen, then dry it by dry air, with temperature of platen influence, the water of sample would evaporate and form film. Due to different temperature on the platen, the film-forming position is also different. Find the dividing point between continuous

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transparent film with white non-transparent film, thus this point which also can be read from touch screen of tester is MFFT.
In accordance with ISO 2115, ASTM D 2354 standards, and can test minimum film temperatures of emulsion polymers easily and accurately.

- Small size, high precision, intelligent operation, easy to use and maintenance.
- Color touch screen+ menu operation system, all parameters can be shown in real time
- High precision digital temperature sensor, ensure the temperature error is less than 1°C
- Chiller included in the package
- Optional: Dry Air Generator which can produce dry dew point air, and can ensure sample can dry completely and test results will not be affected by environment hudmidity.
- Removable scale is convenient for operator to read any point temperature on the gradient platen. Operator can move the scale freely, then tester can identify automatically current position and show relevant temperature of this position.
- Monitors automatically cooling water temperature and flow, tester would stop working automatically once any exceptional conditions.
- Platen Temperature gradient is made of copper with special process, fast heat conduction and strong stability.
- System reminds operator automatically about the testing progress.
- Seven work conditions for selection, convenient to measure different film-forming temperature sample.
- 16 high temperature sensors is distributed on the gradient platen.
- BGD 203/3 cube applicator included, which can get the 100 micron continuous and uniform wet film with 22mm width

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Main Technical Parameters

Working temperatur range of gradient platen: *	-10°C~+60°C
Number of inspection points of gradient platen:	16 points
Interval distance of gradient:	20 mm
Test channels:	6 pcs (width 22mm)
Gradient platen size:	447mm x 210mm
Power supply:	220V 50Hz AC
Tester size (mm):	528x430x194
Chiller size (mm):	560x240x200
Dry Air Generator size (mm):	555x255x525
Weight (MFFT Tester + Chiller + Dry Air Generator):	86 KG
Weight (MFFT Tester):	25 KG
Power:	750 W
Ordering Information: • BGD 452: Minimum Film-Forming Temperature Tester • BGD 1490: Dry Air Generator (750W)	

*when cooled with normal tapwater

Disclaimer

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