PARAM® FT-F1 FOGGING TESTER

FT-F1 is professionally applicable to the fogging characteristics evaluation of volatile constituents of decorating materials used in cars and aircrafts, e.g. plastic articles, polyurethane, textiles, leather, adhesives, nonwovens and thermal forming elastomers at high temperature conditions. It also could be used for the fogging phenomenon test of front high intensity discharge (HID) lamps of cars.

Professional technology

- Wide range and high precision of temperature control device to support the combinations of non-standard test conditions
- 6 test stations can perform specimen test or blank test simultaneously
- This instrument ensures accurate and reliable test data through stable running condition

Test principle

The preconditioned specimen is heated and evaporates in the beaker; the volatile constituents condense on the glass plate or aluminum foil treated in cooling chamber. Take off the glass plate or aluminum foil when the condensation process is finished. The fogging characteristics could be obtained by measuring condensed constituent weight and fogging value on the glass plate or aluminum foil and comparing with the data before condensation process.

This instrument conforms to the multiple international and national standards: ISO 6452, DIN 75201, SAE J1756, QB/T 2728, BS EN 14288, PV 3920, PV 3015, ES-X 83231, NES M0161, D45 1727, GM 9305P, TSM 0503G

Three test methods

Gloss Method
The specimen is heated in the beaker and its volatile constituents are condensed on the cooling glass plate. The fogging value could be obtained by calculating and comparing the gloss values occurred before and after condensation process.

Haze Method
The specimen is heated in the beaker and its volatile constituents are condensed on the cooling glass plate. The fogging value of the specimen could be obtained by calculating and comparing the fogging values occurred before and after condensation process.

Weighing Method
The specimen is heated in the beaker and its volatile constituents are condensed on the cooling aluminum foil. The fogging value-the weight of condensed constituents could be obtained by analyzing the weight changes of aluminum foil occurred before and after condensation process.

Instrument structure

The instrument mainly consists of constant high-temperature bath, constant low-temperature bath, cooling plate, beaker, glass plate, meter, sample cutter and other accessories, through which it can perform the processes of sampling, heating, condensation and test.

Operation process

Prepare specimens-switch on high and low temperature baths-clean beakers and glass plates-place specimens-place glass plate or aluminum foil-place cooling chamber-perform test for a specified period of time-take off glass plate or aluminum foil and place certain time-measure the gloss value, fogging value of glass plate or weight value of aluminum foil-compare the data and obtain test results.

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Proven quality

Applications

Basic applications	
Decorating Articles of Cars	Test the volatility of car decorating articles, e.g. instrument boards, knobs, seat cushions, floor leather and ceiling materials at high temperature
Plastic Particles	Test the volatility of plastic particles at high temperature

Extended applications	
Carpets	Coefficient of static and dynamic friction tests at higher temperature
Leather	Test the volatility of leather at high temperature
Sponge, Rubber and EPE Thermal Insulation Materials	Test the volatility of sponge, rubber and EPE thermal insulation materials at high temperature
High Intensity Discharge Lamps	For the fogging test of front high intensity discharge lamps of cars
Adhesive Products	Test the volatility of adhesive products at high temperature

TECHNICAL SPECIFICATIONS	
Temperature Range of High Temperature bath	Room temperature~150°C (room temperature~280°C is optional)
Accuracy	±0.1°C (150°C)
Temperature Range of Low Temperature Bath	0~100°C
Accuracy	±0.1°C
Size of High Temperature bath	670 mm (L) x 490 mm (W) x 540 mm (H)
Size of Low Temperature bath	400 mm (L) x 220 mm (W) x 520 mm (H)
Net weight of High - Temperature Bath	32 kg (except the weight of heat conducting medium)
Net Weight of Low-Temperature Bath	15 kg (except the weight of heat conducting medium)
Power Supply	AC 220V 50 Hz

CONFIGURATIONS	
Standard configurations	Mainframe, Constant Temperature Control Device, Gloss Meter, Sample Clamp Ring, Beaker, Fluorine Rubber O-ring, Rubber Fixing Ring, Rectangular Glass Plate, Round Glass Plate, Aluminum Foil, Round Sample Cutter of Aluminum Foil, Lid, Stand of Glass Plate, Round Sample Cutter, DOP and Accessory Stand
Optional Parts	Haze Meter, Analytical Balance(0.01 mg), Beaker, Fluorine Rubber O-ring, Rectangular Glass Plate, Round Glass Plate, Aluminum Foil, Round Sample Cutter of Aluminum Foil, Stand of Glass Plate, Heating Fluid, DIDP and DOP

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