PARAM® FT-F1 Fogging Tester

PARAM FT-F1 Fogging Tester is designed to evaluate the evaporation of the high-temperature volatile constituents of the cabin decoration components in automotives and aircrafts, including automotive cabin plastic decoration components, polyurethane, textiles, leather, adhesives, non-woven and thermal forming elastomers and etc., as well as for the fogging test of front high-intensity-discharge (HID) lamp for automotives.

Features

6 test chambers, simultaneous specimen test and blank test

Stable operation, accurate data

High precision temperature control

Principle

The specimen is heated in the glass beaker and begins to evaporate; the volatile constituents condense on the glass plate or foil that has been cooled by the cooling chamber. After the cooling process, take off the glass plate or the foil. Measure the fogging value or the weight of the condensed constituents on the glass plate or the foil by comparing the data before and after condensation to obtain the volatility of the specimen.

3 Testing Methods

Gloss Method: the specimen is heated in the glass beaker and its volatile constituents are condensed on the low temperature glass plate. By calculating and comparing the gloss values before and after condensation, the fogging value of the specimen can be obtained.

Fogging Method: the specimen is heated in the glass beaker and its volatile constituents are condensed on the low temperature glass plate. By calculating and comparing the fogging values before and after condensation, the fogging value of the specimen can be obtained.

Weighing Method: the specimen is heated in the glass beaker and its volatile constituents are condensed on the low temperature foil. By calculating the changes in the weight of the foil before and after condensation, the weight of the condensed constituents can be obtained.

Structure

PARAM FT-F1 Fogging Tester consists of constant high-temperature bath, constant low-temperature bath, cooling plate, glass beaker, glass plate, meters, sample cutter and other accessories, and accomplishes processes of sampling, heating, condensation and testing.

Operation Demo

Prepare samples -- Switch on constant high-temperature and low-temperature bath -- Clean the glass beakers and the glass plates -- Place specimens -- Place glass plates or aluminum foils -- Place cooling blocks -- Run test for a specified period of time --Take the glass plates or aluminum foils down and wait for a specified period of time -- Measure the gloss value or the fogging value of the glass plates or measure the weight of the aluminum foils -- Compare data to obtain test results

Technical Indexes

High-temperature bath range: room temperature~150ºC

(optional: room temperature~280ºC)

Resolution of high-temperature bath: ±0.1ºC (150ºC)

Low-temperature bath range: 0ºC~100ºC

Resolution of low-temperature bath: ±0.1ºC

Dimensions of high-temperature bath: 670mm(L) x490mm(B)x 540mm(H)

Dimensions of low-temperature bath: 400mm(L)x 220mm(B)x 520mm(H)

Net weight of high-temperature bath: 32kg (excl. heat-transfer medium)

Net weight of low temperature bath: 15kg (excl. heat-transfer medium)

Power: AC 220V 50Hz

Standards

DIN 75201, ISO 6452, SAE J1756, QB/T 2728, BS EN 14288, PV 3920, PV 3015, ES-X83231, NES M0161, D45 1727, GM 9305P, TSM 0503G

Configuration

Standard: mainframe, constant temperature controller, sample presser, glass beakers, fluorine rubber sealing ring, metal ring, square glass plate, round glass plate, aluminum foil, aluminum foil sample cutter, lid, glass plate shelf, sample cutter, gloss meter, heat medium oil, DOP, accessory shelf.

Optional: glass beakers, fluorine rubber sealing ring, square glass plate, round glass plate, aluminum foil, aluminum foil sample cutter, glass plate shelf, heat medium oil, gloss meter, electronic balance (0.01mg), DIDP, DOP, accessory shelf.