

Sweating Guarded Hotplate

TEST INSTRUMENT




SDL ATLAS[®]
TEXTILE TESTING SOLUTIONS

Sweating Guarded Hotplate

INNOVATIVE INSTRUMENT

Measurement, of Thermal Properties And Water Vapour Resistance under steady state conditions

Comfort is one of the most important attributes in clothing today. Garments such as light jackets, rain gear, protective clothing such as that worn by firefighters and high-end performance sportswear have increased the global demand for clothing comfort testing. SDL Atlas has introduced a range of instruments that objectively measures clothing comfort. One of the products in the SDL Atlas Comfort Series of instruments is the **Sweating Guarded Hotplate**.

The Sweating Guarded Hotplate simulates the heat and mass transfer processes which occur next to human skin.

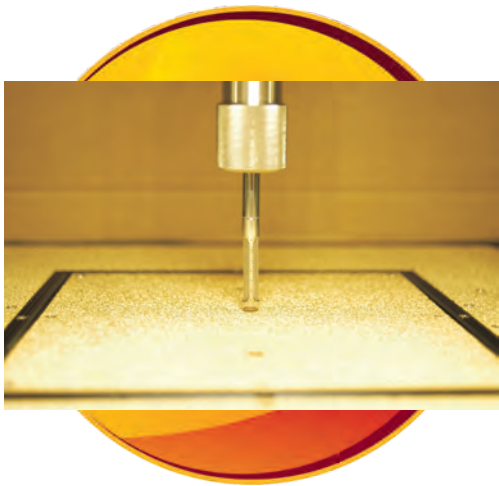
M259B

Sweating Guarded Hotplate

The specimen to be tested is placed on an electronically heated porous plate with conditioned air ducted to flow across and parallel to its upper surface.

Measurement of thermal resistance and water vapour resistance under steady state conditions of a range of products including fabrics, films, coatings, foams and leather including multi-layer assemblies.





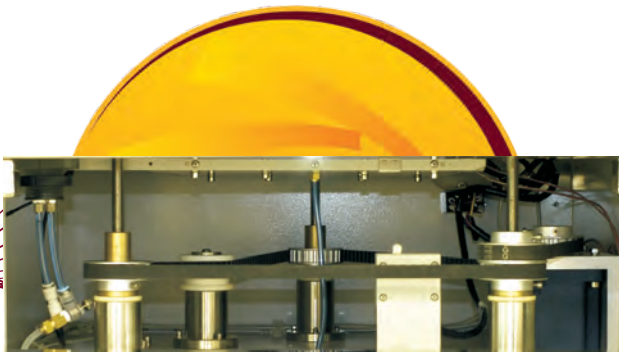
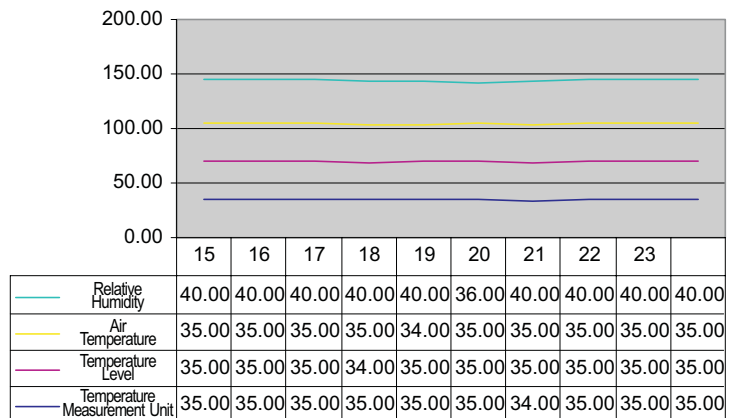
Instrument Features

- Porous metal plate fixed to an electrically heated metal block surrounded by a thermal guard housed in an integral conditioned cabinet.
- Both heated block and thermal guards are closely controlled for temperature.

The following parameters are monitored and controlled within the conditioned cabinet,

- air temperature
- air speed
- relative humidity
- heater power consumption

Test Conditions



Test samples up to 70mm thick can be accommodated by provision of a mechanism for adjusting the height of the porous plate and thermal guards relative to the measuring table.

M259B Sweating Guarded Hotplate

Testing Range & Precision

- Thermal Resistance Test Range: 0.001~2.0m².k/w
- Vapour Resistance Test Range: 1~1000 m².Pa/w
- Hotplate: 3mm porous bronze plate 250*250mm
temperature control at 35°C±0.1°C
- Thermal Guard: temperature control at 35°C±0.1°C
- Enclosure:
 - Conditioned air flows parallel to Hotplate and Thermal Guard
 - Air duct height: 55mm ±3mm above the working platform
 - Air temperature range 18°C-45°C
 - Relative Humidity 35-85% ±3%
 - Air Temperature accuracy during test±0.5°C for thermal resistance and vapor resistance <0.5m².K/W and 100m².Pa/W
 - Air flow speed: 1±0.05m/s, measured 15mm above the working platform at 20°C air temperature

Specifications

Dimensions (W*D*H)	126cmx95cmx180cm
Weight	500kg
Power	230Vac, 50/60Hz, 20A, Single Phase
Water	distilled water
Environment	20±1°C ambient temp, 65±3% relative humidity
Test specimen size	520mm*520mm for specimen thickness <5mm 420mm*420mm for specimen thickness from 5-70mm

Standard Accessories

M259B Sweating Guarded Hotplate
Two units External Reservoir (10 liters bottle)
Laptop Computer with Window XP and Office
One pack Cellophane Sheet (250)
One set Calibration Foams
Manual Syringe
CD for Instruction Manual
One pack of Spare Fuses (2pcs - 32A,
2pcs - 10 A and 1pcs - 0.5A)

Standards

- ASTM F1868
- GB /T11048
- ISO 11092

Optional Accessories

M259B1 540X540 Cellophane Sheets (250)
105279 Set of calibration foams
S259B08 Calibration standard fiber board
301101 Installation, Set-up, Operator Training

The Complete Source for Textile Testing Consumables

Today, standardized consumable materials play a critical role in many textile testing applications. Whether you need fabric, detergent or custom-prepared testing material, you can rely on the SDL Atlas testing and consumables divisions to provide a single source solution. Beyond consumables fulfillment, we offer technical expertise to help make your testing efficient, precise and compliant.



- Textile Innovators consumables including: multi-fiber, laundering, crockmeter accessories, bulk testing fabrics and wash ballast
- SDC consumables including: multi-fiber fabrics, detergents and rating and grading scales
- AATCC consumables including: multi-fiber fabrics, detergents and rating and grading scales
- WFK consumables including: soil fabrics, detergents and laundry testing
- SDL Atlas consumables including: Martindale testing accessories and cork liners



Our extensive inventory of consumables meet all of the accepted test methods and standards so a lab can be assured of a high quality and steady supply of all the consumables they need from a globally recognized source. We assure consistency by archiving every tested sample and documenting every lot.

Testing and Calibration

Every SDL Atlas product is subjected to complete testing and calibration to ensure highest possible performance and full compliance to international standards. In addition, UKAS accredited calibration services are available from the SDL Atlas TecNet, our technical solutions team. With accredited service engineers in three continents, we offer the best service available in the market. TecNet operates a working laboratory, offers presale product demonstrations and participates in standards development.



RELATED TEST PRODUCTS

Complete support: products, installation, consumables, training, and service

SDL Atlas offers a full line of laboratory testing equipment, products and consumables, backed by the support of a cross disciplined team of textile technologists, hardware and software engineers, mechanical and instrumentation engineers, calibration experts and installation and maintenance technicians.

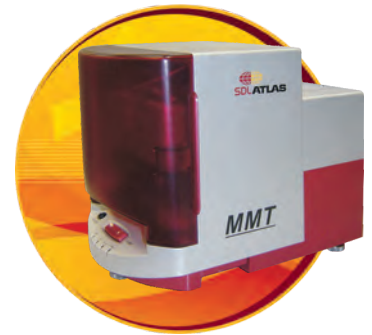
Hydrostatic Head Tester



The Hydrostatic Head Tester measures the resistance of a fabric to penetration by water under hydrostatic pressure. This new instrument is applicable to all types of woven, knitted, and nonwoven fabrics, including those with water repellent and waterproof finishes and complies with AATCC, ISO and BS testing standards. Specimens are subjected to increasing (dynamic) or static hydrostatic pressure, until 3 points of leakage occur. After a minimum of three specimens are tested, calculation of the average maximum hydrostatic pressure is reported in mBars or cm H₂O, to rate the fabric. This new Hydrostatic Head Tester offers increased capacities in both hydrostatic pressure and fabric thickness, greater efficiency through end-of-test alarms and auto head refills, preloaded test standards, and downloadable results.

Moisture Management Tester (MMT)

Beyond traditional absorbency and wicking evaluations, SDL's Moisture Management Tester (MMT) dynamically measures moisture transfer across knit and woven apparel materials. The instrument calculates the moisture absorbing rate of a fabric's inner and outer surfaces, one-way transportation capability from inner to outer surface and the moisture spreading rate.



Air Permeability Tester

The SDL Atlas Air Permeability Tester offers unmatched ease of use, efficiency, and reliability for air permeability tests. It automatically measures the flow of air through a given area of a fabric (set by a selected standard orifice) at a given pressure drop over this test area during the time called out by the accepted standard. Exclusive features include automatic detection of the test head size and an automatic ranging system that eliminates the need for a pretest to discover and then set the instrument range. The 50 cm test arm allows for simple testing on a large sample without having to cut multiple small specimens. The compact size and included casters permit the instrument to be setup quickly and easily wherever testing needs to be done, from the laboratory to the production floor.



SDL Atlas LLC

3934 Airway Drive Rock Hill, SC 29732-9200,
USA
Telephone: **+1 803 329 2110**
Facsimile: **+1 803 329 2133**
Internet: <http://www.sdlatlas.com>

SDL Atlas Ltd

1/F (South-East) & 2F, Shenjian Mansion,
Central District (West), Hi-Tech Park, Nanshan,
Shenzhen, 518057, P.R.C.
Telephone: **+86 (755) 2671 1168**
Facsimile: **+86 (755) 2671 1337**
Internet: <http://www.sdlatlas.com>

SDL Atlas Ltd

3J, Garment Centre, 576 Castle Peak Road,
Kowloon, Hong Kong.
Telephone: **(852) 3443 4888**
Facsimile: **(852) 3443 4999**
Internet: <http://www.sdlatlas.com>

Wherever people test textiles, you'll find SDL Atlas!