ATLAS
MATERIAL TESTING SOLUTIONS

ACCELERATING YOUR EXPERTISE

SEPAP MHE

Accelerated Photoaging
Test Instrument

AMETEK®
MEASUREMENT & CALIBRATION
TECHNOLOGIES

SEPAP MHE FEATURES AND BENEFITS

The SEPAP MHE is designed to perform accelerated photoaging of polymers with the aim of understanding the aging mechanisms of polymers exposed outdoors and examining the chemical evolution at a molecular level.

Using a mercury vapor lamp, the SEPAP MHE is able to replicate and accelerate the chemical mechanisms responsible for the gradual loss in properties of polymers during their lifetime. The SEPAP MHE is capable of operating in an accelerated and ultra-accelerated mode by controlling the irradiance between 90 W/m² and 300 W/m² (290-420 nm).

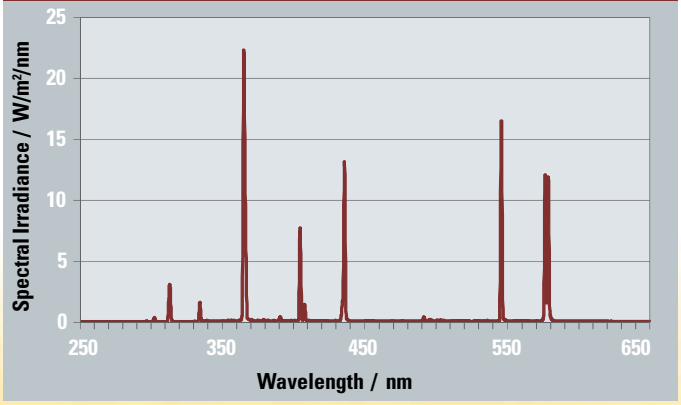
This latest generation of SEPAP was developed in cooperation with the National Center for the Evaluation of Photoprotection (CNEP) at the University Blaise Pascal, Clermont-Ferrand, France, which has conducted photoaging experiments since the 1970s.

- 1 x 1000 W mercury vapor lamp
- Irradiance range of 90 - 300 W/m² (290 nm - 420 nm)
- 1040 cm² exposure area
- Full color multi-lingual user interface
- Radio-controlled on-rack light and BST monitor XENOSENSIV
- Precise control of irradiance, Black Standard Temperature (BST) and chamber temperature
- Relative humidity control using ultrasonic humidifiers (SEPAP MHE+)
- Specimen spray with 60 liter integrated water reservoir (SEPAP MHE+)

Standards SEPAP MHE

EN	16472	13655
	50289-4-17	14932
	13206	15534-1
	13207	
NF	C32-062-1	AC T51-808
	F 01.281-1	XP F51.201-2
Peugeot	D27 5435	
Renault	D27 3064	
ISO	10640 (Methodology for assessing polymer photoaging)	
	12856-1	

Spectral Power Distribution



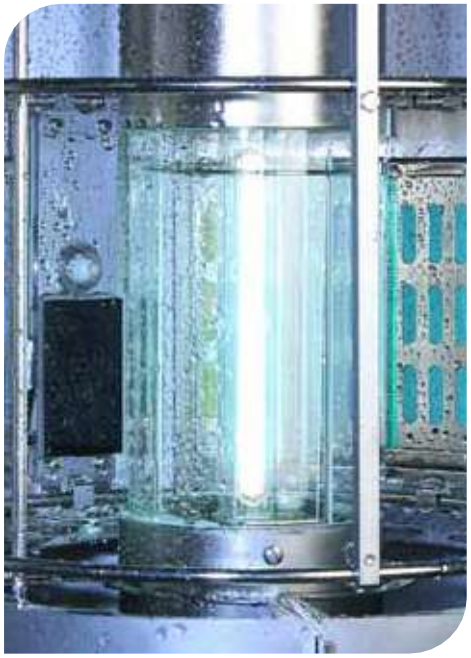
The specially designed mercury vapor lamp emits discrete radiation at 296, 302, 313, 365, 405, 436, 547 and 579 nm. Extensive studies of polymeric formulations demonstrate that this type of light source is capable of inducing the same photo-chemical processes as daylight at a significantly accelerated rate.

Touch Screen Control

- 5.7" TFT full color touch screen multi-lingual control panel
- Storage for 10 user-defined test methods
- Graphical display of the test parameters
- Easy data acquisition and software updates
- Software add-ons for online programming and monitoring

Irradiance Control

The irradiance and Black Standard Temperature (BST) is on-rack controlled by a wireless XENOSENSIV light and BST monitor. This ensures accurate conditions on the sample level.



BST Control on Sample Rack, Integrated Specimen Spray System

Humidity Control SEPAP MHE+

The SEPAP MHE+ humidifiers are optimized to reduce water consumption while guaranteeing the highest uniformity. To enable continuous operation, the humidity/spray is linked to an integrated 60 liter water reservoir.

Specimen Spray SEPAP MHE+

To simulate the effects of water, the SEPAP MHE+ is equipped with a specimen spray system.

SEPAP MHE Specimen Rack

Temperature Control

Temperature has a significant impact on the degradation rate of polymers. The SEPAP MHE chambers control BST on sample surface level precisely and within very narrow tolerances. All SEPAP MHE instruments control both BST and CHT simultaneously to achieve ideal test conditions.

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Atlas offers more than testing instruments.
From technical advice to final test method implementation, Atlas provides the support you need when determining the right weathering testing solution for your products. For more information, please contact your local Atlas sales office or visit us at www.atlas-mts.com

Technical Data

	MHE	MHE+
Mercury Vapor Lamp	1000 W	1000 W
Specimen rack capacity	1040 cm^2	1040 cm^2
Specimen holders	15 cm	15 cm
Specimen holder size	14.5 x 4.8 cm	14.5 x 4.8 cm
Test positions for foils (1.2 x 4.0 cm)	135	135
Light monitor (on-rack)	XENOSENSIV	XENOSENSIV
Irradiance range (290-420 nm)	90-300 W/m^2	90-300 W/m^2
BST range*	20-100 °C	20-100 °C
CHT range*	20-70 °C	20-70 °C
Simultaneous BST+CHT control	automatic	automatic
Humidity range*	–	10-95 %
Specimen spray	–	●
Integrated water reservoir	–	60 litre
Touch screen control panel	●	●
Parameter check for set values	●	●
Memory card interface	●	●
Ethernet interface + Add-ons	●	●
Serial interface	●	●

* Ranges depending on laboratory ambient conditions and instrument parameter set points.
● Standard

Physical & Electrical Data

	MHE / MHE+
Width x Depth x Height	90 x 78 x 180 cm
Weight	290 kg
Electrical	230 V ±10%, 50/60 Hz
Maximum power consumption	approx. 2.8 kVA
Amperage	12 A

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