



RESISTANCE TO INTERIOR WEATHERING

Application

This procedure is used to determine the effects of simulated weathering on interior trim materials using a controlled irradiance water/air cooled Xenon Arc with filters and auxiliary lantern. This method is not a standalone method but supplemental to SAE J2412 – Accelerated Exposure of Automotive Interior Trim Components Using a Controlled Irradiance Xenon-Arc Apparatus.

Apparatus Required

Xenon Arc Test Cabinet**Atlas Ci Series Xenon Arc Weather-Ometer®**

Models: Ci 4000 or Ci 5000 or equivalent

Auxiliary Lamp Filter Lantern

Part Number: 20909900 for model Ci 4000 or equivalent

Part Number: 20293100 for model Ci 5000 or equivalent

Available from:

Atlas Material Testing Technology LLC
1500 Bishop Court
Mount Prospect, IL 60056
<http://atlas-mts.com>

Q-SUN Xe Series Xenon Test Chambers

Models: Xe-2 or Xe-3 or equivalent

Auxiliary Lamp Filter Lantern

Part Number: X-10857-K for model Xe-3

Part Number: XR-11726-K for model Xe-2

Available from:

Q-Lab Corporation
800 Canterbury Rd
Westlake, OH 44145
<http://www.q-lab.com>

Auxiliary Lantern Filter

The Auxiliary Lantern Filter is a 335 nm long pass filters (SF-5 Filters) or equivalent provided the transmission spectrum is within 95% of the SF-5 filter transmission at all wavelengths as note in Table 1. The filters are reversible unless otherwise marked by a coating or etching.

Date	Action	Revisions	Rev 03
2018 03 12	Revised	See Summary of Revisions	J. Crist, NA
2013 10 04	Editorial	Updated title and added websites	J. Soreide, NA
2005 05 06	Activated		C. Leslie

**Lamp Sensor Irradiance Filter**

420 nm Irradiance Filter

Calibration Filter/Lamp

The calibration lamp/calibrator module must be calibrated to 420 nm with the lantern assembly removed per manufacturer's recommendation.

Test Conditions

Testing conditions such as black panel temperature, dry bulb temperature, humidity, and light cycle times are equivalent to those outlined in SAE J2412 – Accelerated Exposure of Automotive Interior Trim Components Using a Controlled Irradiance Xenon-Arc Apparatus, *Table 1, Section 6.1.5* with the exception of the dark cycle time of 50 minutes instead of 60 minutes. One day exposure 75.2 kJ/m² should include five 3.8 hours light, four 50 minutes dark cycles and end on the last light cycle (~23 hours).

<u>Light Cycle:</u>	<u>Target</u>	<u>Tolerance</u>
Cycle time:	15.06 kJ/m ²	0.03 kJ/m ²
Black Panel Temperature	89 °C	+/- 2.5 °C
Dry Bulb Temperature	62 °C	+/- 2.0 °C
Relative Humidity	50%	+/- 10%
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<u>Dark Cycle:</u>	<u>Target</u>	<u>Tolerance</u>
Cycle time:	50 minutes	+/- 6 minutes
Black Panel Temperature	38 °C	+/- 2.5 °C
Dry Bulb Temperature	38 °C	+/- 3.0 °C
Relative Humidity	95%	+/- 10%

Note: Exposures are monitored based on measured light at 1.10 W/m²at 420 nm

Place the 335 nm long pass filters into the Auxiliary Lantern Filter assembly. The Auxillary Lamp Filter is placed outside the Quartz/Type "S" Borosilicated Filter called out in SAE J2412 - Accelerated Exposure of Automotive Interior Trim Components Using a Controlled Irradiance Xenon-Arc Apparatus and must the meet the Spectral Power Distribution requirements called out in Table 1.

Calibration**Equipment Calibration**

As per SAE J2412 – Accelerated Exposure of Automotive Interior Trim Components Using a Controlled Irradiance Xenon-Arc Apparatus, *Appendix B*.

Maintenance**Equipment Maintenance**

As per SAE J2412 – Accelerated Exposure of Automotive Interior Trim Components Using a Controlled Irradiance Xenon-Arc Apparatus, *Appendix B*.